NEAR EAST UNIVERSITY

Faculty Of Economics And Administrative Sciences

Department Of Computer Information Systems

2003 Summer Term CIS 400 (Graduation Project)

Property Management System

Submitted to: DR. Yalçın Akçalı Miss Nadire Çavuş

Submitted by : Muazzez Bengisu ~ (20002050)





CONTENTS

1.	AC	KNOWLEDGEMENTS	1
2.	AB	STRACT	2
3.	INT	FRODUCTION	
3.	1.	Company Overview & System Analysis	
3.	.2.	Determining the purpose of the Database	4
3.	3.	"The Property Management Database" Maintenance Aim	4
3.	4.	Business Objectives	5
4.	Exp	planation Of The System	6
4.	.1.	System Block Diagram	
4.	.2.	Creating Tables	
4.	.3.	Relationship of Tables	
4.	.4 H	Iow do relationships work?	
5.	US	ER MANUAL	
6.	Pro	gram Flow charts	
7.	RE	FERENCE	
8.	Co	nclusion	

1. ACKNOWLEDGEMENTS

I have taken a lot of care and attention in preparing this project, it is a reflection of my System Analysis, Management information & Programming skills which I have encountered throughout my Computer Information System BSC at Near East University.

I'd like to thank all of my teachers at the University who have helped me gather and maintain the knowledge that I have gathered throughout my degree. In preparing this project I'd like to reserve a space and Thank Miss Nadire Çavus and Dr. Yalcın Akçalı who have taken the responsibility to assist us in preparing and documenting our Final Project. Their assistance and help will be greatly remembered by me and others.

I would also like to thank Assoc. Prof. Ilham Huseynov who taught me Access and helped me become a competent Access Database designer, and for all of his good nature and will.

To finalize I would like to say that this project has assisted me to maximize my database and system analysis skills, and has prepared me for a post in this field.

2. ABSTRACT

The final year project of the BSc Computer Information System is based on The Real Estate Agency which is located in Girne. The main idea of the project is to dedicate how the designed system will improve the business operations and the activities of the company by removing the current paper based system. Therefore the project entails the investigation of the current business environment and designs a new system for the business requirements which have been implemented by using MsAcess 2000.

3. INTRODUCTION

3.1. Company Overview & System Analysis

The "Property Management System" is designed to computerize the manual work done at Real Estate Agency. The Business carries out the main tasks involved in an Estate Agency. The staff Buy, Sell and Rent properties in Northern Cyprus. They also buy and sell Land around Northern Cyprus. Before they can do this they need to follow the Government procedures for this, so all staff at the business are fully trained to follow Governmental procedures, and have been trained to maximize their Sales and Communication Skills.

The Company earns commission on each business deal done. The Commission differs on each property & business type. At the moment there is one flaw in the Administrative work done at the office. There is no centralised database system to keep records of the files. The company deals with huge amounts of documented paper work which requires lots of storage space within the office. Therefore the company cannot maintain information which has been held for many long periods.

The Administrative work done at the office consists of regular work done at all Property Estate Agencies. They keep records of the properties that they have to Sell, Rent, leased out or which they have bought, along with Land that they may have business deals with! Details and description of the property are kept alongside with it's location & address. Also the 'Deed' details must also be kept for each property or land and who it is currently owned buy. Each business type has an earned commission rate and price at which it shall be done. For example if the business type is rental there is a fixed price in which the commission rate will calculate the amount earned on it for the company.

My aim is to design a database System with processes and interrelated sub-processes to keep this data organized and easy to maintain. The data must be easily retrievable and the database should be reliable enough to produce valid information. (Access turns the Data into information via queries and outputs them to the user via reports.)

Real Estate Agency have been operating sine April 20002. Already they have realized the importance of Computerization, as this will reduce time when dealing with customer queries, make their data more secure and they will have the satisfaction of using technology while at work.

3.2. Determining the purpose of the Database

A Database must be designed to maintain the Business needs and to keep records of their data and transactions.

The first step in designing a database is to determine its purpose and how it's to be used. You need to know what information you want from the database. From that, you can determine what subjects you need to store facts about in the tables (or database).

Talk to people who will use the database. Brainstorm about the questions you and they would like the database to answer. Sketch out the reports you'd like it to produce. Gather the forms you currently use to record your data. To do this efficiently I have examined well-designed databases similar to the one that I will be designing.

The decided project to design is a "Property Management System". Which will be a relational database that will store data in a tabular form. Each file will be implemented as a table. Each field is a column in the table. Each record in the file is a row in a table. Related records between two tables (e.g Client & Property) are implemented by intentionally duplicating columns in the two tables (in our case PID).

3.3. "The Property Management Database" Maintenance Aim

The Database aims to manage and maintain the following in it's design:

0	Add, Upgrade,	Delete, Find	details of	
	1. Customers	2.Business	3.Business Deal	4.Property
	5. Location	6.Pafta	7.Landroute	8.Currency
	9.Commission		10.Transaction	

• Produce Reports on the following:

- 1. Available Property Report
- 2. Property by Location & Business
- 3. Property by Dönüm & Business
- 4. Property by Price & Business
- 5. Property by Business Deal
- 6. Property by Customer ID

3.4. Business Objectives

The opportunities for an information system to improve the business operation are as follows.

• Implementing a system streamline business operations and activities by eliminating part of the current paper based system.

The designed system will eliminate most of the current paperwork of the business, however not all. In the current business environment, all the data is saved and filed inside the files, which take up space and organizing. Because of this the company cannot generate any reports to evaluate business performance in order to carry out future changes to the business. Moreover this results in poor data mining in order to satisfy customers and partners of the Property Estate industry.

- Improve the work flow of information in the company by using an automated system
- Automate the storing of data about Customers, their Reg. No's and Transaction details

The designed database for the system will enhance the business's data storage. Most of the information about the business issues such as Transaction, Customer, location will be held in the database. This again enables the data to be easily retrieved from the database.

• To reduce the time wasted when carrying out the business operations and the activities.

The designed system will increase the speed of the business operations and the activities. During most of the activities and operations, the staff spent a lot of time with the writing of documentation, removing and filing of the manual paper based system.

In addition to this the searching for required documentation takes a large amount of time which causes delays for all business operations. Therefore the database had to be developed to enable information for each client to be automated instantly. The sub forms and reports provided this facility.

4. Explanation Of The System

A Data Flow Diagram (DFD), is a tool that depicts the flow of data through a system and the work or processing performed by that system. DFD designing begins after gathering information about existing system's problems and requirements and determination DFD is a model, which define how data flow through an information, the relationships among the data flows, and how data come to be stored. DFDs also show the processes that change or transform data.

DFD 1 illustrates the 'Context Diagram' (The highest-level view of the 'Property Management System'), DFD 2 explains how the main processes are inter-related, and DFD 3 to DFD 5 show how the sub-process work.



DFD 1

7





9

DFD 3







System Block Diagram Of The Property Management System

DFD 6

4.1. System Block Diagram

DFD 6 Shows the system as whole as a hierarchical model.

4.2. Creating Tables

The Property Management System consists of 10 Tables. Illustrations of each of the tables are shown below. Each table has to have a Primary Key which is shown by a key next to the field.

BUSINESS DEAL : 1	Table					
Field Name	Data Type AutoNumber Text	Description	Field Name IDB BUSINESS	Data Type AutoNumber Text	Description	
	Field Properties			Field Properties	5	
General Lookup) Field Size Format Input Mask Caption Default Value Validation Rule Validation Rule Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 >?????????????????;o;_ Business Deal No No No No Yes	A field name cen be up to 64 characters long, including spaces. Press F1 for help on field names.	General Lookup Field Size Format Input Mask Caption Default Value Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 >????????????????????;_ Business No No Yos (Duplicates OK) Yes		A field name can be up to 64 characters long, including spaces. Press F1 for help on field names.

Table 1 Business Deal & Properties

Table 2 Business & Properties

COMMISSION : Ta	ble			CURRENCY : Ta	ble		
Field Name COM_ID COMMISION RATE	Data Type AutoNumber Number	Description		Field Name IDC CUR	Data Type AutoNumber Text	Description	
	Field Properties		~		Field Properties	L	-
General Lookup Field Size Format Decimal Places Input Mask Caption Default Value Validation Rule Validation Rule Validation Text Required Indexed	Double Percent 1 0 No No			General Lookup Field Size Format Input Mask Caption Default Value Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 Currency No No Yes		

Table 3 Commission & Properties

Table 4 Currency & Properties

HARITA : Table		
Field Name IDH HARITA NO	Data Type AutoNumber Text	Description
	Field Properties	~
General Lookup Field Size Format	50	-
Input Mask Caption Default Value	00:?0;0;_ Harita	
Validation Rule Validation Text Required	No	
Allow Zero Length Indexed	No No	
oncode compression	res	

IDCATION : Table		
Field Name DL LOCATION	Data Type AutoNumber Text	Description
	Field Properties	-
Fierd Size Format Input Mask Caption Default Value Validation Rule Validation Text Required Allow Zero Length	50 >777777777777777777777777777777 Location	J;_
Indexed Unicode Compression	Yes (Duplicates OK) Yes	

Table 6 Location & Properties

Table 5 Harita & Properties

CONTOWING JUNE			I COSTOMER - Toble		- 🗅 🗙	Elaid stores	I Date Date 1	Des de la
Field Name	Data Type	Description	Field Name	Data Terrer f	Description	2 CID	Late type	Description
CID	AutoNumber		CID CID	AutoNumber	and a second s	C ID	Taxe	
C ID	Tarxt		C ID	Text		CUETOMED MANE	TELL	
STOMED NAME	Taut		CUSTOMED NAME	Taut		CUSTOMER NAME	1ext	
ISTOMED STIDATAME	Text		CUSTONER SUDVANE	Text		CUSTOMER SURNAME	Text	
JOINTER SURMANE	rext		ADDONEST SURVIVIEL	rext		ADDRESS	Text	
DURCOS	rext		ADDRC35	1 4000		CONTACT NO	Text	
JNTACT NO	Text		LONTACT NO	Text		E-MAIL	Text	
MAIL	Text	*	E-MAIL	Text	~			
	Field Properties			Field Properties			Field Properties	
						General Lookup		
eral tookup			General Lookup			Field Size	30	1
Size	20	A Bull	Field Size	50	A Buld	Format		A nex
het		A MARC	Format		PS FIDICA	Town & Banada		name ci
t Made	1)/000073 70000 000011	name can	Jonut Mask	>2222222222222222222222	neme can	Inpuk Mask		be up t
dae .	WARA (000/ 0000/)	De UD CO	Cashing	source (contraction)	De up to	Caption	Email	64
June	Contact No	64	Caption	Customer Sumame	04	Default Value		charact
uit value		criaractor	Derauk Value		character	Validation Rule		s long
lation Rule		s ionig,	Validation Rule		s long,	Validation Text		Includin
lation Text		including	Validation Text		mauding	Registed	Ma	spaces
dred .	No	spaces.	Required	No	spaces,	Alter Tree Longth	No	Press F
Zong Langth	41-	Press P1	Allow Zong Langth	41-	Press P1	Allow Zaro Langth	No	for help
v Zero Length	NO	For help	Padeva de Dengori	NO	For help	Indexed	No	on field
TXING C	No	on field	thoexed	No	on field	Unicode Compression	Yes	names
ode Compression	No	Olamos,	Unicade Compression	Yes	names,			1
					a season of comp	W COSTOMER - T	able	
STOMUL - Laiste			TERCORTONNE TO	-the		Protisionance in	Deta Type	Description
STOMUL - Lable	Dote Type		THE STORES	stela		PERSONAL PROPERTY OF THE PROPE	e Date Type AutoNumber Text	Description
STOMUL - Table Field Name	Dote Type Autobamber	- X	TO CUSTOMUSE T	e Data type	Description	Picto Field Nor V CD CSD CSD	e Data Type AutoNumber Text Text	Description
STOMULE Facilit Field Hame	Deta Type AufoRander Text	- C X	THE CUSTORIUS TO	e Dato Type AutoType	Description	PLOSTOWER MARK	e Data Type AutoNamber Text Text	Description
STOMULE - Table Field Name D	Doka Type Autokumbor Text	Creat dan	TICUS FOMULE TO Pick Norm	s Dela Type Autolianber Text	Description	E CIVINO MARRO T Field Nor CIVINO CIVINO CUSTOMER NAME CUSTOMER SURV	Dete Type AutoNumber Text Text Text Text	Description
FlatStame	Data Type AutoNamber Fext Fext	Description	Pedrama	e Data Type Addolariber Text Text	Description	TOTISTOMPROT	Autonomic Autonomic Text Text Text Text Text	Description
STOMUL - Tac.in Bold Name O TOMER NAME TOMER SURNAME DEPS	Data Type AutoNumber Text, Text, Text,	Decipition into	PICUS TOMUS	e Deta Type Autolianiber Teck Fect Fect	Description	TO CITY THE AND THE AN	e Dete Typo AutoNamber Text Text Text Text	Description
STOMUT - Table Pold Hame DOMER NAME TOMER SURNAME RESS TAGET NO	Data Type AutoNamber Text Text Text Text	- C X Drogolin		e Deta Type Add Samber Text Text Text Text Text	Desception		e Deta Typo AutoNumber Text Text Text Text Text Text Text	Description
Field Hame Field Hame DOMER NAME RESS TACT NO	Data Type AutoShabbe Text Text Text Text Text	- 5 X	COSTORIATE T CD CD CCD CLOSTORER NAME CLOSTORER NAME CLOSTORER SAME	e Deta Type ActoRube Toot Vet Toot Toot Toot Toot	Description	IT CLINE MARKET V CD Cold Customer Name Customer Name Customer Same ADDRESS Contract No E-MAIL	Bate Dete Type AutoNumber Text Text Text Text Text Text Fold Propertie	Description
Paid tame Paid tame Tomer Name Ress Ress Tact No NaL	Data Type AutoNamber Text Text Text Text Text Text Text	C C X	CUSTONUE CLSTOPER NAME CLSTOPER NAME CLSTOPER SIRNA ADDRESS CONTACT NO	e Deta Type Add Marber Text Text Text Text Text Text	Description	T LEVEL MATE T Field to Conference Conf	e Dete Type Autohanber Text Text Text Text Text Fext Fext Fext Fext	Description
COMPLET TALAM Red Tome OMER NAME COMER SURNAME RES SURNAME TACT NO NU	Data From Autohmber Text Text Text Text Text Text Text Text	Drarghan A	COSTORUE CO CLO CLO CLO CLO CLO CLO CLO CLO CLO	e Data Type Add Type Tod Marber Tod Tod Tod Tod Ted Field Properties	Description	T ULINI MARTE I Q CDP Q CDP Q CDP Q CDP Q CDP NAVE Q CDP CAR SUM ADDRESS CONTACT NO E-MAIL General Lookup	Adde AddRunber Foxt Foxt Text Text Fed Propertie	Description
FINIS LEADER FINIS LEADER FOMER NAME FOMER SURNAME RESS TACT NO NIL	Data Type AutoNamber Text Text Text Text Text Text Text Text	Conception of the second secon	CUSTORER SENA CLO CLO CLO CLOTORER SENA ADDRESS CONTACT NO CONTACT NO	e Deta Type Addataber Tock Fext Fort Freid Properties	Description	TI VEN'N MUTE V CD CUSTOVER NUME CUSTOVER NUME	afile a Deta Type Autonumber Text Text Text Text Text Feed Propertie 50	Description
COMMIL: Lacker Field Home COMER NAME RESS TACT NO NIL Lookup	Dota Fyoe AutoNumber Taxt Taxt Taxt Taxt Taxt Taxt Taxt Taxt	Unarphan ~	CUSTORICE TO CD CD CD CD CD CD CD CD CD CD CD CD CD	e Deta Type Autofanber Ecst Foto Toot Foto Properties	Description	If IT I I'V I MATE I Peel Real Controlment water Controlment water Controlment water Controlment water Controlment water Controlment Controlment Controlment Field Size Field Size Field Size	Addin B AutoNumber Text Text Text Text Feld Propertie 50	Description
CIONALII - Caldon Field Iteme COMER NAME COMER NAME SESS SESS SESS IL COMER SILENAME SESS SESS IL COMER SILENAME SESS IL COMER SILENA IL COMER SILENAME SESS IL COMER SILENAME SESS IL COMER SILENAME SESS IL COMER SILENAME SESS IL COMER SILENA IL COM	Data Type AutoNarobe Text Text Text Text Text Text Text Tex	Dengtilan	Elisticity Peld Neme 2 OP Cutorio Review CLSTOPER NAME CLSTOPER NAME CUTOPER NAME CLSTOPER NAME CUSTOPER NAME CUSTOPER NAME CLSTOPER NAME CUSTOPER NAME CUSTOPER NAME CUSTOPER NAME CUSTOPER NAME CUSTOP	Additionable Additionable Text VE Text Text Text Text Text Text Text Text So	Description A field	T TUNN MATT I V COP CoP CoP CoP CoP CoP CoP CoP Co	Altitude Altitude Altitude Text Text Text Text Fed Propertie 50 >777-000,0;	Description
COMULE CALLAN Red Name Contra Name Contra Name RESS Contra Name RESS Contra Name Al Lookup Sto	Data Type AutoNumber Text Text Text Text Text Fext Properties 50	Description	CLISTONUE TO CD CLID CLID CLIDTORE NAME CLISTORE NAME CLISTORE NAME CLISTORE NAME CLISTORE NAME CLISTORE NAME CLISTORE NAME CLISTONUE TO CONTACT NO	e Duta Type Additarber Text Fext Fext Fext Fed Properties 50	Description	TO CLEVE AND THE THE CLEVE AND	Pate Type AutoNumber Text Text Text Text Text Text Feid Propertie S0 >777,400,05, Cudrone ID	Description
STOMMIC: FAILAR Field Hame Comer Name Tomer Name Ress TACT No NIL Contap A Lookap A Mode	Data Type Automber Fox Text Text Text Text Text Feld Properties 50	Drangelan	CLASTORIAL T CD CLO CLO CLO CLASTORER NAVE CLASTORER NAVE NAVE NAVE NAVE NAVE NAVE NAVE NAVE	Data Type Actolk Type Actolk Type Text Text Text Field Properties 50 >1777777777777777777	A field cen be cen	T ULINI MARTE I T ULINI MARTE I COP COP COP COP COP COP COP COP	Alter AutorNumber AutorNumber Text Text Text Text Text Feld Propertie 500 >777(1400,8);_ Custome ID	Description
Reid Hamm Reid Hamm Tomer Name Tomer Name Ress Tomer Surname Ress Tomer Surname Ress Head	Data Type AutoNambe Text Text Text Text Text Text Text Tex	And here can be co	CUSTORUE DA	e Deta Type Additistation Text Text Text Text Text Text Text Text	A field comb a u ta didad	TI VEIN'S MATTER V CD CLOP	alian Additivender Text Text Text Text Text Text Text Text Text So >7774-000,65, Customer ID	Description
FIGHTIE: LACAR FIGHTIERS TACT NO NIL 4 LORAD 800 800 800 800 800 800 800 800 800 80	Data Type AutoNumber Taxt Taxt Taxt Taxt Taxt Taxt Taxt Taxt	A field A field A mer can be up to 6 de	CLISTONLIET T CONTRACTOR NAME CONTRACTOR NAME CONTRACTOR NAME CONTRACTOR NAME CONTRACTOR FILES See Format Trock Mak Copilon Orde X valar	e Deta Type Autofaniber Tect Tect Tect Tect Tect Tect Tect Tect	A field control of the second	If the local set of the set	Adde Dete Type AutoNumber Tot Tot Tot Ted Ted Ted Ped Properts 50 >777.400,0;- Customer ID	Description
Pied tame Pied tame Concer Name Tomer Name Ress Survawe RESS Survawe RESS Survawe RESS Survawe RESS TACT NO ALL Cookap See X Mosk Mosk N N K Yalan	Data From AutoNanber Text Text Text Text Text Text Text Text	And And And And And And And And And And	COSTORE TO COSTORE ANNE CLOTORE NAME CL	rt la Red Stanber Text Text Text Text Text Text Text Sol >1777777777777777777777777777777777777	Desurption A A field Common Co	T VUNN MARTI I V CDP COP COP COP COPER NAME COPER SAME ADDRESS COPICAC NO E4MAI FIND FIND FIND FORM Locate Formal Vadiation Rut Vadiation Test	Aller a Deta Type Admonoer Fed Fed Text Text Text Text Text So >777-000,6; Customer ID	Description
SUDMULT Taldar Bald Stamm D Tomer Name Tomer Sunname Tomer Sunname Tomer Sunname Tomer Sunname Taldar No Name Name Name Name Name Name Name Name	Data Type AutoNamber Text Text Text Text Text Text Text Text	A field benzeiten	CUSTONUE TO THE Mark CLD CLD CLD CLD CLD CLD CLD CLD	e Deta Type Addataber Teck Fest Fest Fest Fest Pest Pest So So So So So So So So So So So So So	A field Personation A field a man a field a man a field a man a field a man a field a man a field a f	TI VEN'IN MUTE V CD CUSTOVER NAME CUSTOVER NAME CUSTOVER SURV CONTACT NO CONTACT NO	vitie Deta Type Autonumber Text Text Text Text Text Text Text Text Text So >77(+000, 0;- Customer ID No	Description
Read Same Read Same TodeR Numer TodeR Numer Comers Surplane RESS TodeR Numer TodeR Numer TodeR Numer Same	Data Type AutoNumber Tank Tank Tank Tank Tank Tank Tank Tank	A feld A feld neme can be give de star s long, incluing	CUSTONICE IN CO CO CO CUSTONER NAME CUSTONER NAME CUSTONER NAME CUSTONER NAME CUSTONER NAME CONTACT NO CONTACT NO C	e Deta Type ActoRarber Foct WE Took Took Field Properties 50 >177777777777777707770, Customer Name	A field A f	If initial waters of Fred Rom Controlmers water Controlmers water Controlmers water Controlmers water Controlmers water Controlmers Controlm	Additude Additude Additude Text Text Text Feld Propertie 50 >771/400,0;_ Customer ID No No	Description
STUMUT: Local of Field Tione DTOVER JANKE TOVER JANKE TOVER JANKE ALSS ALSS ALSS ALSS ALSS ALSS ALSS ALS	Data Trans AutoNanhee Fext Text Text Text Fext Fext S0 >>>>>>>>>>>>>>>>>>>>>>>>>>>>	A faid Describes A faid nere can be can b	CLISTORUE TO TeleStern CLIC	Additionabor Text Text Text Text Text Text Text Text	A field come of the come of the come come of the come come come come come come come com	T LULINI MATTEL T V COD COD COD COD COD COD COD COD	diale ■ Data Type Text Text Text Text Text Text Text Text Text Text Text Text Text S0 >777,400,6; Customer ID No No No No	Description
Stributi Exclusion Field Stame Drokes Number Torkes Torkes Number Torkes To	Data Fyze AutoNumber Text Text Text Field Properbies 50 >>>>>>>>>>>>>>>>>>>>>>>>>>>>	A field A field A field A field A field A field A field A field A field A field B to Do G 4 field C 4 fiel	CLIS FONLOF TO CD CD C	e Deta Type Autofanber Ect Fot Tod Tod Tod S0 >17777777777777777777777,0, Cutomer Nama	A field Pescration A field Control Co	If the local state of the	ALCONUNCE Text Text Text Text Text Text Text Text	Pesotption
SIDUALITY Factor Preditions DIORER NAME TOORER SURVICE RESS RESS RESS RESS RESS RESS RESS RE	Data Train AutoAmber Text Text Text Text Text Text Text Text	A field Decorption A field mission bission divertion a biosysion divertion a biosysion divertion a biosysion divertion a biosysion divertion a biosysion divertion a biosysion divertion a biosysion divertion a biosysion divertion a biosysion divertion di divertion divertion divertion divertion di	COSTORE DE LE COSTORE NOVE CUTORE NOVE CUTORE NOVE CUSTORE NOVE CU	e Data Type Additanber Ted Autor Ted Ted Ted Ted Ted Field Properties 50 >1771777110711077770, Cutomer Nome No No No	A field A f	T ULINIH MARTE I Conformer Newson Conformer Newson Conformer Newson Conformer Newson Conformer Newson Conformer Newson Forma Fo	Alite Alite Type Alite Type Alite Type Text Text Text Text Text Text Text S0 S0 N0 N0 N0 N0 N0 Yes	Description
StriMitt Tort/Am Field/Hame D Charles Nave Toores Nave Toores Nave Toores Nave Toores Nave Toores Nave Nave Nave Nave Nave Nave Nave Nave	Data Type AutoNambe Text Text Text Text Text Text Text Tex	A field beografien be us to be us to che water be us to che water be to be to che water be to che water che	CUSE IONUU I I TeleS Term C.D C.C C.D C.C C.C C.C C.C C.C	Additional type Additional type Additional type Additional type Text Text Text Text Text Text Text Tex	A field nome exh be divect mrs brock broch	T LULININ MUTTER T V CD0 CLIDINE CLIDIN	Alfonation Alfonation Text	Description

Table 7 Customer & corresponding Properties for each field

III PAFTA : Table			# PROPERTY : Table	9		×
Field Name	Data Type AutoNumber Text	Description	Field Name	Data Type AutoNumber Text	Description].
	Field Properties	1		-		
General Lookup				Field Properties		
Field Size Format Input Mask Caption Default Value Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 >?????;0;_ Pafta No No No Yes		General Lookup Field Size Format Input Mask Caption Default Value Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 >7????????????????????????????????????	;0;_	

Table 8 Pafta & Properties

Table 9 Property & Properties

TRANSACTION :	Table	
Field Name	Data Type	Description
REF NO	AutoNumber	Description
DATE	Date/Time	
IDB IDB	Number	
IDP	Number	
IDL	Number	
Donum	Text	
EVL	Text	
AY2	Text	
M2	Text	
BED ROOM	Text	
FURNISHED	Yes/No	
IDPF	Number	
Consult Lookup	Field Properties	
Display Control Row Source Type	Combo Box Table/Query	A field
Row Source	SELECT DISTINCTROW [IDB].	BUSINESS be up to
Bound Column	1	64
Column Count	2	characters
Column Heads	No	long,
Column Widths	0cm:5.082cm	including
List Rows	8	spaces.
List Width	4 501cm	Press F1
Limit To List	Vec	for help on
	103	names.

Table 1 Transaction & Properties

4.3. Relationship of Tables

Each field in a table has corresponding properties as shown for table 7 [Customer]. They have the General and Lookup Properties.

Table 10 shows the Lookup properties for Field Name IDP showing that the field in the table is designed as a Combo Box.

Tables are used & designed by the programmers. The end users should not interact with this interface.

After you've set up different tables for each subject in your <u>Microsoft Access database</u>, you need a way of telling Microsoft Access how to bring that information back together again. The first step in this process is to define relationships between your tables. After you've done that, you can create queries, forms, and reports to display information from several tables at once. For example, this form includes information from ninetables: (5 are shown. All list Box entries are data retrieved from the corresponding tables. List Box has an arrow adjacent to the box.)



As you can see nine of the tables are all joined with their Primary & corresponding Foreign Keys to the Main Table 10. which is the transaction table which makes The Property Transaction Form Figure 7.1b.



Figure 9 RELATIONSHIPS

4.4 How do relationships work?

The fields in the ten tables must be coordinated so that they show information about the same order. This coordination is accomplished with <u>relationships</u> between tables. A relationship works by matching data in key fields — usually a field with the same name in both tables. In most cases, these matching fields are the <u>primary key</u> from one table, which provides a unique identifier for each record, and a <u>foreign key</u> in the other table. For example, customer can be associated with Ref No's they're assigned for by creating a relationship between the Customer's table and the Transaction table using the CID fields.

primary key One or more fields (columns) whose value or values uniquely identify each record in a table. A primary key cannot allow Null values and must always have a unique index. A primary key is used to relate a table to foreign keys in other tables.

foreign key One or more table fields (columns) that refer to the primary key field or fields in another table. A foreign key indicates how the tables are related. The data in the foreign key and primary key fields must match, though the field names do not have to be the same. For example, the Transaction table might contain the foreign key CID, which relates to the primary key CID in the Customers table.

5. USER MANUAL

1. In order to gain access to the Real Estate Agent Program you Must First click the shortcut on the Desktop.

My Documents Ashiag ICQ Like First Her Fred Come	~
My Computer insuzazz License ALLL-SIDE -15	
My Network Online project astricy	1.1
Recycle Bin Proje QuickTime CMDB	19 A.
Internet Get QuickTime Shottout to VCD_PLAY Evolutioner Prio PPIQUECT-2	
Image Image Image Microsoft Sony Intel/fideo Student-proc Dulook Image/Station Student-proc Student-proc	
Setup MSN Shotcut to My Windows icolife Internet A. Connection Medie Player	÷
WinZp Shotcut to Acrobit OFFECAL e3d3 Reader 4 0	10
Convect to the HP Desklet Dutlock Stretcus to Internet 610C Seres Express Real Estate	
Figure 2. Desktop	
Click This Shortcut Located in your Desktop	

2. Straight after the Password Box appears. You must type in the correct password to enter in to the Database Environment.



Figure 3 Password Dialogue Box

3. [The Switchboard Manager is used to create the switchboard which makes it easy to navigate between the forms and reports in an Access Database. A preview of the main switchboard is shown below.]

At the next stage the programs main menu appears. Here you have a list of options to choose from.



4. [Enter Business Related Option] This section deals with inputting the Estate Agents Business related Data which is assigned and determined by the manager as a task to the User's of the Program.

Performs Real Estate Agency-Northam Enter New /Edit Business Type Enter New /Edit Location Enter New /Edit Location Enter New /Edit Commission % Enter New /Edit Currency Return to Main Menu	Enters Fig 4.1a Enters Fig 4.1b Enters Fig 4.1c Enters Fig 4.1d Enters Fig 4.1e
	Returns to main menu

Figure 5.1 Business Related Menu

5. If you select option [Enter New/Edit Business Type] Fig 4.1a opens which is the [Enter Business Type Form]. Click this button to go to a

		new empty location & enter details required on form
BUSINESS BUSINESS BUSINESS Record	Add New Record SID SID N/A Sid N/A Save Record Upgrade Record 1 Find Record Delete Record 1 N/A	Click this button to save details inputted on record Click this button once upgraded details on record to save the ungrade Click this button to delete required records
Closes Form & returns to fig 4.1	Click this option to find records(s)	

6 The Find Dialogue Box is as follows.



Figure 6. Find Dialogue Box

6. Select option [Enter New/Edit Property] to input property types you deal with at the Estate Agency. These property types will then be listed in the transaction form when dealing with Customer transactions fig.

•	Duon auto Tra	nut Earm	
	Property Ing	out rorm	
PROPERTY ID		1 Add New Record	
PROPERTY	TARLA	Delete Record	
		Save Record	
Close Form	Find Record	Upgrade Record	
		L of 10	1 () () () () () () () () () (

Figure 4.7b Property Input Form

7. Select option [Enter New/Edit Location] to input Locations that you will deal with at the Estate Agency. These Property types will then be listed in the Transaction form when dealing with Customer transactions fig .

{Please recall step 4 pg to view command button operations} {Please recall step 5 pg to view Find Record Button Dialogue Box}

Ĺ	ocation Input	Form	
dire de .	and the second	Add New Record	
LOCATION ID		Delete Record	
LOCATION	ÇATALKÖY	Save Record	
Close Form	Find Record	Upgrade Record	

Figure 4.1c Location Input form

8. Select option [Enter New/Edit Commission] to input Commission Rates that you will deal with at the Estate Agency. These commission rates will then be listed in the Transaction form when dealing with Customer transactions fig .

Comm	ission	Rate (%) Inp	ut Form	
			Add New Record	
Commission	n ID		Dalata Pasard	
Commission	n Rate	5,0%	Delete Record	
3 5 3			Save Record	
Close	e Form	Find Record	Upgrade Record	

Figure 4.8d Commission Rate Input Form

9. Select option [Enter New/Edit Business Deal] to input Business Deals that you will deal with at the Estate Agency. These Business Deal types will then be listed in the Transaction form when dealing with Customer transactions fig .

{Please recall step 4 pg to view command button operations} {Please recall step 5 pg to view Find Record Button Dialogue Box}

BUSINESS DEAL		
Business	Deal Input Form	
		Add New Record
bUSINESS DEAL ID		Delete Record
BUSINESS_DEAL	AVAILABLE	Save Record
Close Form	Find Record	UpgradeRecord
	Eletter	

Figure 4.1e Business Deal Input Form

10. Select option [Enter New/Edit Currency] to input Currency types that you will deal with at the Estate Agency. These Currency types will then be listed in the Transaction form when dealing with Customer transactions fig .

Commission	n Rate (%) Inp	ut Form_
	Conde -	Add New Record
Commission ID		Delete Record
Commission Rate	5,0%	Sava Pacand
	1 Aller	Save Recolu
Close Form	Find Record	Upgrade Record

Figure 4.1f Commission rate Input Form

11. Select option [Enter map related menu] to go to fig 6. Map related Menu. Here you can select to enter Landroute Input Form or Pole Input Form .



Figure 6 Map Related Menu

12. Select option [Enter New/Edit Landroute] to input Landroute No's available on a map that you will deal with at the Estate Agency. These Landroute Nos's will then be listed in the Transaction form when dealing with Customer transactions fig .

Lan	droute Input	Form	
		Add New Record	
Landroute ID	1	Delete Record	
Landroute NO	NA	Save Record	
 Close Form	Find Record	Upgrade Record	

Figure 6.1a Landroute Input Form

13. Select option [Enter New/Edit Pole] to input Pole No's available on a map that you will deal with at the Estate Agency. These Pole Nos's will then be listed in the Transaction form when dealing with Customer transactions fig .

{Please recall step 4 pg to view command button operations} {Please recall step 5 pg to view Find Record Button Dialogue Box}

e form in Design view	E TRANSACTION		
e form by using wizard	TRANSACTION S		
VESS 🛅 HARITA			
	Pole Input	Form	prus
ENCY			
OMER Pole ID	1	Add New Record	
TION Pole NO	D N/A	Delete Record	
A		Save Record	
ERTY Close I	Form Find Record	Update Record	
hboard	1 A 14		
Record: 14	1 > >1 >*	of 131	
			_

Figure 6.9b Pole Input Form

14. Select option [Enter Transaction Menu] to go to Fig 7 from main switchboard.



Figure 7.10 Transaction Menu

15. Select option [Enter New/Edit Customer(s)] to input Customer Details. The Customer ID's will then be used in the transaction form fig 7.1b and selected from the listbox. Customer details will then be displayed by auto lookup.

	Surna	ime
ND CUSTOMER ID	PUNJANI	•
	BENGISU	MUAZZEZ
	PUNJANI	ASHFAQ
STOMER ID	HELLO	ATA
ST OWILK ID	OMER	ALI
STOMER NAME	BENGISU	TUNA

The form is also designed to find Customer ID by surname and name. For example a Customer phones up and wishes to enquire about his or her property but he has forgotten his Customer ID. The user of the program enters this form and types in the surname and finds the corresponding name(s), (more than one person can have the surname) and then selects the applying surname

& name. The details including unique Customer ID are displayed in the record fields

{Please recall step 4 pg to view command button operations} {Please recall step 5 pg to view Find Record Button Dialogue Box}

	m
Surname R ID	
MUZETCO	Add New Record
E MUAZZEZ NAME BENGISU	Delete Record
OIRNE	Save Record
(0542) 856 8358	Upgrade Record
ashfaq_punjani@hotmail.com	
	Surname RID • E MUAZZEZ MUAZZEZ DIRNE (0542) 856 8358 shife_punjani@hotmail.com

Figure 7.1a Customer Information Form

16. Select option [Enter New/Edit Transaction By Customer] to Fill out the Property Transaction Details when a customer comes to the Estate Agency.
{Please recall step 4 pg to view command button operations}
{Please recall step 5 pg to view Find Record Button Dialogue Box}



Business type is selected from list to determine what business transaction is to be made. For Sale, Buy, Vendor or Tendant.

For Sale: The Customer wants to put property on sale. Deed info is entered & commission rate, & property info. In Business Deal **Available For Sale** is selected. Once Sold, record is found and **Sold** is selected in Business Deal and upgraded.

Buy: Customer is looking for property to buy. Details entered. Measurement & Map location is not entered. NA is chosen for landroute & pole. In business Deal Still looking for is selected. Once they have bought a property Bought is selected from Business Deal List.

Vendor: This option is selected from the list box when a customer is the landlord of the property and is putting the property for rent. Hence **For Rent** is selected in the Business Deal list box. Measurements and Map Location not needed to be filled out. Once property is rented the Business Deal is changed to **Rented** and hence upgraded.

Tendant: This option is selected when a customer wishes to rent out a property. Details of property type, location and what price they are willling to pay monthly are filled out on the form. In Business Deal list box **Still looking for** is selected. Once the Customer has rented a property this is changed to **Rented**.

If in the Business List box the Customer has not decided what to do with his/her property "Undecided" should be selected and Not Applicable in the Business Deal list box.

The sub-form displays all the associated Ref No's for each Customer. You can change the Customer ID for given transaction details if any external changes are made to the property (i.e owner changes). Select from list & Refresh.

17. Select option [Print/Print Preview Reports] to gain access to the various reports available with the program.



This section provides the user with various reports based on the details that they have inputted in the Transaction Form. These reports were designed on the demands of the Estate Agency. What info & Reports that they need to make effective decisions on the business.

- 1. This report gives details on all available properties either Available For Sale, Available for Rent. We choose the property type we want to see report on.
- 2. Shows all Properties by Business and location. For example all Sale Properties in Girne, or all Vendor properties in ozankoy.
- 3. This report shows all properties in the given range of Donum measurements.
- 4. This report shows all the properties in the defined price range and business within the business.
- 5. This report shows all the properties by chosen business deal, and hence the commission earned.

6. This report shows all the details available with the associated Customer ID in the transaction form.

Example of each Report is attached on the following pages.

Reports are made using the Queries Tool in access. A select query is the most common type of query. It retrieves data from one or more tables and displays the results in a datasheet where you can update the records (with some restrictions). You can also use a select query to group records and calculate sums, counts, averages, and other types of totals. However we are not going to view the results in datasheet view in normal view, and we have grouped our Data.



Figure 110 An Example Of Query in Design View



Figure 11 Example of a Parameter Query box

A parameter query is a query that when run displays its own dialog box prompting you for information, such as criteria for retrieving records or a value you want to insert in a field. You can design the query to prompt you for more than one piece of information; for example, you can design it to prompt you for Property & Location. Microsoft Access can then retrieve all records in that property & location

CUATOMER ID TUN-1	100										
Ref No Location Date	Business	Property	Name	Surname	Contact	Bed(s)	Price	Don EVL	AY2 M2	Com. Rate	Com. Earn
15 OZANKOY 1	FOR SALE	BUNGALOW	TUNA	BENGISU	(0542) 856-8358	ŝ	10,000 Stg	1 1	1200	0.0%	0.00
					,						
					15						
26 August 2003										1	

	C
	e
	È
	2
	ŝ
	2
	,
	-
	5
-	ł
	9
	2
	b
	ľ
	1
	-
6	

1

rice
by P
erty
rop

BUSINESS		FG	JR SALE											
PROPERTY		Bung	alow					2						
LOCATION		OZANKOY	4											
Ref No	Date	CID	Bed(s)	PRICE	Donum	EVL	AY2	M2 F	afta	Harita	Parsel	Commission Rate	Comments	Commission Earn
15		TUN-100	б	10,000 Stg	1	1	1200		NA	N/A		0.0%	GOOD MOUNTAIN VIEW	0
PROPERTY		Ev												
LOCATION		Gime												
RefNo	Date	CID	Bed(s)	PRICE	Donum	EVL	AY2	M2 F	afta	Harita	Parsel	Commission Rate	Comments	Commission Earn
14		GUL-100	3	50,000 Stg					NA	N/A		0.0%	SOSYAL KONUKLAR	0
PROPERTY		Villa												
LOCATION		Gime												
Ref No	Date	CID	Bed(s)	PRICE	Donum	EVL	AY2	M2 I	Pafta	Harita	Parsel	Commission Rate	Comments	Commission Earn
16		GUL-100		500,000 Stg					NA	N/A		0.0%		0

NA N/A

500,000 Stg

GUL-100

16

0

Total Commission Earned

26 August 2003

Property By Location

BUSINESS		OR SAL	ш									
PROPERTY	Bun	galow										
LOCATION	OZANK(Ϋ́										
Ref No Date	CID	Bed(s)	PRICE	Donum EVL	AY2 M2	Pafta	Harita	Parsel	Commission Rate	Commission Earn	Comments	
15	TUN-100	3	10,000 Stg			NA	N/A		0.0%	0.00	GOOD MOUNTAIN VIE	M

Page 1 of 1
~
5
0
Ä
9
Free
-
0
60
•
65
-
-

DICINEDO										The second second second	
BUSINESS	÷	-OR SAL									
PROPERTY	Bung	galow									
BUSINESS DEAL	AVAILAI	BLE FOR S	SALE								
Ref No Location	Date	CD	Name	Surname	Contact	Bed(s)	Price	Don EVL AV2 N	 Commission Rate 	Commission Farm	
15 Ozanköy		TUN-100	TUNA	BENGISU	05428568358	З	10,000 Stg		0.0%	0.00	

m
n
III
Ď
by
le
ab
ail
AV
ert
rop
6

BUSINESS		FOR SALE										
PROPERTY	Bur	ngalow										-
Donum	-											
Ref No Date	CID	Location	Bed(s)	PRICE	Щ	٨L	AY2 M	Pafta	Harita	Parsel	COMMISION RATE	Commission Earn
15	TUN-100	OZANKOY	e	10,000	Stg	-	200	NA	N/A		0.0%	0
										Ţ	otal Commission Earned	0

26 August 2003

Page 1 of 1

6. Program Flow charts

The following section describes how to use the program via User Flow charts










































































NEAR EAST UNIVERSITY

Faculty Of Economics And Administrative Sciences

Department Of Computer Information Systems

2003 Summer Term CIS 400 (Graduation Project)

Property Management System

Submitted to: DR. Yalçın Akçalı Miss Nadire Çavuş

Submitted by : Muazzez Bengisu ~ (20002050)





CONTENTS

1.	AC	KNOWLEDGEMENTS	1
2.	AB	STRACT	2
3.	INT	FRODUCTION	
3.	1.	Company Overview & System Analysis	
3.	.2.	Determining the purpose of the Database	4
3.	3.	"The Property Management Database" Maintenance Aim	4
3.	4.	Business Objectives	5
4.	Exp	planation Of The System	6
4.	.1.	System Block Diagram	
4.	.2.	Creating Tables	
4.	.3.	Relationship of Tables	
4.	.4 H	Iow do relationships work?	
5.	US	ER MANUAL	
6.	Pro	gram Flow charts	
7.	RE	FERENCE	
8.	Co	nclusion	

1. ACKNOWLEDGEMENTS

I have taken a lot of care and attention in preparing this project, it is a reflection of my System Analysis, Management information & Programming skills which I have encountered throughout my Computer Information System BSC at Near East University.

I'd like to thank all of my teachers at the University who have helped me gather and maintain the knowledge that I have gathered throughout my degree. In preparing this project I'd like to reserve a space and Thank Miss Nadire Çavus and Dr. Yalcın Akçalı who have taken the responsibility to assist us in preparing and documenting our Final Project. Their assistance and help will be greatly remembered by me and others.

I would also like to thank Assoc. Prof. Ilham Huseynov who taught me Access and helped me become a competent Access Database designer, and for all of his good nature and will.

To finalize I would like to say that this project has assisted me to maximize my database and system analysis skills, and has prepared me for a post in this field.

2. ABSTRACT

The final year project of the BSc Computer Information System is based on The Real Estate Agency which is located in Girne. The main idea of the project is to dedicate how the designed system will improve the business operations and the activities of the company by removing the current paper based system. Therefore the project entails the investigation of the current business environment and designs a new system for the business requirements which have been implemented by using MsAcess 2000.

3. INTRODUCTION

3.1. Company Overview & System Analysis

The "Property Management System" is designed to computerize the manual work done at Real Estate Agency. The Business carries out the main tasks involved in an Estate Agency. The staff Buy, Sell and Rent properties in Northern Cyprus. They also buy and sell Land around Northern Cyprus. Before they can do this they need to follow the Government procedures for this, so all staff at the business are fully trained to follow Governmental procedures, and have been trained to maximize their Sales and Communication Skills.

The Company earns commission on each business deal done. The Commission differs on each property & business type. At the moment there is one flaw in the Administrative work done at the office. There is no centralised database system to keep records of the files. The company deals with huge amounts of documented paper work which requires lots of storage space within the office. Therefore the company cannot maintain information which has been held for many long periods.

The Administrative work done at the office consists of regular work done at all Property Estate Agencies. They keep records of the properties that they have to Sell, Rent, leased out or which they have bought, along with Land that they may have business deals with! Details and description of the property are kept alongside with it's location & address. Also the 'Deed' details must also be kept for each property or land and who it is currently owned buy. Each business type has an earned commission rate and price at which it shall be done. For example if the business type is rental there is a fixed price in which the commission rate will calculate the amount earned on it for the company.

My aim is to design a database System with processes and interrelated sub-processes to keep this data organized and easy to maintain. The data must be easily retrievable and the database should be reliable enough to produce valid information. (Access turns the Data into information via queries and outputs them to the user via reports.)

Real Estate Agency have been operating sine April 20002. Already they have realized the importance of Computerization, as this will reduce time when dealing with customer queries, make their data more secure and they will have the satisfaction of using technology while at work.

3.2. Determining the purpose of the Database

A Database must be designed to maintain the Business needs and to keep records of their data and transactions.

The first step in designing a database is to determine its purpose and how it's to be used. You need to know what information you want from the database. From that, you can determine what subjects you need to store facts about in the tables (or database).

Talk to people who will use the database. Brainstorm about the questions you and they would like the database to answer. Sketch out the reports you'd like it to produce. Gather the forms you currently use to record your data. To do this efficiently I have examined well-designed databases similar to the one that I will be designing.

The decided project to design is a "Property Management System". Which will be a relational database that will store data in a tabular form. Each file will be implemented as a table. Each field is a column in the table. Each record in the file is a row in a table. Related records between two tables (e.g Client & Property) are implemented by intentionally duplicating columns in the two tables (in our case PID).

3.3. "The Property Management Database" Maintenance Aim

The Database aims to manage and maintain the following in it's design:

0	Add, Upgrade,	Delete, Find	details of	
	1. Customers	2.Business	3.Business Deal	4.Property
	5. Location	6.Pafta	7.Landroute	8.Currency
	9.Commission		10.Transaction	

• Produce Reports on the following:

- 1. Available Property Report
- 2. Property by Location & Business
- 3. Property by Dönüm & Business
- 4. Property by Price & Business
- 5. Property by Business Deal
- 6. Property by Customer ID

3.4. Business Objectives

The opportunities for an information system to improve the business operation are as follows.

• Implementing a system streamline business operations and activities by eliminating part of the current paper based system.

The designed system will eliminate most of the current paperwork of the business, however not all. In the current business environment, all the data is saved and filed inside the files, which take up space and organizing. Because of this the company cannot generate any reports to evaluate business performance in order to carry out future changes to the business. Moreover this results in poor data mining in order to satisfy customers and partners of the Property Estate industry.

- Improve the work flow of information in the company by using an automated system
- Automate the storing of data about Customers, their Reg. No's and Transaction details

The designed database for the system will enhance the business's data storage. Most of the information about the business issues such as Transaction, Customer, location will be held in the database. This again enables the data to be easily retrieved from the database.

• To reduce the time wasted when carrying out the business operations and the activities.

The designed system will increase the speed of the business operations and the activities. During most of the activities and operations, the staff spent a lot of time with the writing of documentation, removing and filing of the manual paper based system.

In addition to this the searching for required documentation takes a large amount of time which causes delays for all business operations. Therefore the database had to be developed to enable information for each client to be automated instantly. The sub forms and reports provided this facility.

4. Explanation Of The System

A Data Flow Diagram (DFD), is a tool that depicts the flow of data through a system and the work or processing performed by that system. DFD designing begins after gathering information about existing system's problems and requirements and determination DFD is a model, which define how data flow through an information, the relationships among the data flows, and how data come to be stored. DFDs also show the processes that change or transform data.

DFD 1 illustrates the 'Context Diagram' (The highest-level view of the 'Property Management System'), DFD 2 explains how the main processes are inter-related, and DFD 3 to DFD 5 show how the sub-process work.



DFD 1

7





9

DFD 3







System Block Diagram Of The Property Management System

DFD 6

4.1. System Block Diagram

DFD 6 Shows the system as whole as a hierarchical model.

4.2. Creating Tables

The Property Management System consists of 10 Tables. Illustrations of each of the tables are shown below. Each table has to have a Primary Key which is shown by a key next to the field.

BUSINESS DEAL : 1	Table					
Field Name	Data Type AutoNumber Text	Description	Field Name IDB BUSINESS	Data Type AutoNumber Text	Description	
	Field Properties			Field Properties	5	
General Lookup) Field Size Format Input Mask Caption Default Value Validation Rule Validation Rule Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 >?????????????????;o; Business Deal No No No No Yes	A field name cen be up to 64 characters long, including spaces. Press F1 for help on field names.	General Lookup Field Size Format Input Mask Caption Default Value Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 >????????????????????;_ Business No No Yos (Duplicates OK) Yes		A field name can be up to 64 characters long, including spaces. Press F1 for help on field names.

Table 1 Business Deal & Properties

Table 2 Business & Properties

COMMISSION : Ta	ble			CURRENCY : Ta	ble		
Field Name COM_ID COMMISION RATE	Data Type AutoNumber Number	Description		Field Name IDC CUR	Data Type AutoNumber Text	Description	
	Field Properties		~		Field Properties	L	
General Lookup Field Size Format Decimal Places Input Mask Caption Default Value Validation Rule Validation Text Required Indexed	Double Percent 1 0 No No			General Lookup Field Size Format Input Mask Caption Default Value Validation Rule Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 Currency No No Yes		

Table 3 Commission & Properties

Table 4 Currency & Properties

HARITA : Table		
Field Name IDH HARITA NO	Data Type AutoNumber Text	Description
	Field Properties	~
General Lookup Field Size Format	50	-
Input Mask Caption Default Value	00:?0;0;_ Harita	
Validation Rule Validation Text Required	No	
Allow Zero Length Indexed	No No	
oncode compression	res	

IDCATION : Table		
Field Name DL LOCATION	Data Type AutoNumber Text	Description
	Field Properties	-
Fierd Size Format Input Mask Caption Default Value Validation Rule Validation Text Required Allow Zero Length	50 >777777777777777777777777777777 Location	J;_
Indexed Unicode Compression	Yes (Duplicates OK) Yes	

Table 6 Location & Properties

Table 5 Harita & Properties

CONTOWING JUNE			I COSTOMER - Toble		- 🗅 🗙	Elaid stores	I Date Date 1	Des de la
Field Name	Data Type	Description	Field Name	Data Terrer f	Description	2 CID	Late type	Description
CID	AutoNumber		CID CID	AutoNumber	and a second s	C ID	Taxe	
C ID	Tarxt		C ID	Text		CUETOMED MANE	TELL	
STOMED NAME	Taut		CUSTOMED NAME	Taut		CUSTOMER NAME	1ext	
ISTOMED STIDATAME	Text		CUSTONER SUDVANE	Text		CUSTOMER SURNAME	Text	
JOINTER SURMANE	rext		ADDOLER SURVEY	rext		ADDRESS	Text	
DURCOS	rext		ADDRC35	1 4000		CONTACT NO	Text	
JNTACT NO	Text		LONTACT NO	Text		E-MAIL	Text	
MAIL	Text	*	E-MAIL	Text	~			
	Field Properties			Field Properties			Field Properties	
						General Lookup		
eral tookup			General Lookup			Field Size	30	1
Size	20	A Bull	Field Size	50	A Buld	Format		A nex
het		A MARC	Format		PS FIDICA	Town & Banada		name ci
t Made	1)/000073 70000 000011	name can	Jonut Mask	>2222222222222222222222	neme can	Inpuk Mask		be up t
dae .	WARA (000/ 0000/)	De UD CO	Cashing	source (contraction)	De up to	Caption	Email	64
June	Contact No	64	Caption	Customer Sumame	04	Default Value		charact
uit value		criaractor	Derauk Value		character	Validation Rule		s long
lation Rule		s ionig,	Validation Rule		s long,	Validation Text		Includin
lation Text		including	Validation Text		mauding	Registed	Ma	spaces
dred.	No	spaces.	Required	No	spaces,	Alter Tree Longth	No	Press F
Zong Langth	41-	Press P1	Allow Zong Langth	41-	Press P1	Allow Zaro Langth	No	for help
v Zero Length	NO	For help	Padeva de Dengori	NO	For help	Indexed	No	on field
TXING C	No	on field	thoexed	No	on field	Unicode Compression	Yes	names
ode Compression	No	Olamos,	Unicade Compression	Yes	names,			1
					a season of comp	W COSTOMER - T	able	
STOMUL - Laiste			TERCORTONNE T	-the		PLAND MARK T	Deta Type	Description
STOMUL - Lable	Dote Type		THE STORES	stela		PERSONAL PROPERTY IN THE PROPERTY INTERPOPERTY IN THE PROPERTY IN THE PROPERTY INTERPOPERTY INTO PROPERTY INTERPOPERTY INTO PROPERTY INTO PROPER	e Date Type AutoNumber Text	Description
STOMUL - Table Field Name	Dote Type Autobamber	- X	TO CUSTOMUSE T	e Data type	Description		e Data Type AutoNumber Text Text	Description
STOMULE Facilit Field Hame	Deta Type AufoRander Text	- C X	THE CUSTORIUS TO	e Dato Type AutoType	Description	PLOSTOWER MARK	e Data Type AutoNamber Text Text	Description
STOMULE - Table Field Name D	Doka Type Autokumbor Text	Crocyclan	TICUS FOMULE TO Pick Norm	-1-14 s Dela Type Actolianiber Tect	Description	E CIVINO MARRO T Field Nor CIVINO CIVINO CUSTOMER NAME CUSTOMER SURV	Dete Type AutoNumber Text Text Text Text	Description
FlatStame	Data Type AutoNamber Fext Fext	Description	Pedrama	e Data Type Addolariber Text Text	Description	TOTISTOMPROT	Autonomic Autonomic Text Text Text Text Text	Description
STOMUL - Tac.in Bold Name O TOMER NAME TOMER SURNAME DEPS	Data Type AutoNumber Text, Text, Text,	Decipition in the	PICUS TOMUS	e Deta Type Autolianiber Teck Fect Fect	Description	TO CITY THE AND THE AN	e Dete Type AutoNamber Text Text Text Text	Description
STOMUT - Table Pold Hame DOMER NAME TOMER SURNAME RESS TAGET NO	Data Type AutoNamber Text Text Text Text	- C X Drogolin		e Deta Type Add Samber Text Text Text Text	Desception		e Deta Typo AutoNumber Text Text Text Text Text Text Text	Description
Field Hame Field Hame DOMER NAME RESS TACT NO	Data Type AutoShabbe Text Text Text Text Text	- 5 X	COSTORIATE T CD CD CCD CLOSTORER NAME CLOSTORER NAME CLOSTORER SAMO	e Deta Type ActoRube Toot Vet Toot Toot Toot Toot	Description	IT CLINE MARKET V CD Cold Customer Name Customer Name Customer Same ADDRESS Contract No E-MAIL	Bate Dete Type AutoNumber Text Text Text Text Text Text Fold Propertie	Description
Paid tame Paid tame Tomer Name Ress Ress Tact No NaL	Data Type AutoNamber Text Text Text Text Text Text Text	C C X	CUSTONUE CLSTOPER NAME CLSTOPER NAME CLSTOPER SIRIA ADDRESS CONTACT NO	e Deta Type Add Marber Text Text Text Text Text Text	Description	T LEVEL MATE T Field to Conference Conf	e Dete Type Autohanber Text Text Text Text Text Text Feel Propertie	Description
COMPLET TALAM Red Tome OMER NAME COMER SURNAME RES SURNAME TACT NO NU	Data From Autohmber Text Text Text Text Text Text Text Text	Drarghan A	COSTORUE CD CLOCO CLOCO CLOCORENAUSE CLOSTORER NUME CLOSTORER NUME CLOSTORER NUME CLOSTORER NUME CLOSTORER NUME	e Data Type Add Type Tod Marber Tod Tod Tod Tod Ted Field Properties	Description	T ULINI MARTE I Q CDP Q CDP Q CDP Q CDP Q CDP NAVE Q CDP CAR SUM ADDRESS CONTACT NO E-MAIL General Lookup	Adde AddRunber Foxt Foxt Text Text Fed Propertie	Description
FINIS LEADER FINIS LEADER FOMER NAME FOMER SURNAME RESS TACT NO NIL	Data Type AutoNamber Text Text Text Text Text Text Text Text	Conception of the second secon	CUSTORER SENA CLO CLO CLO CLOTORER SENA ADDRESS CONTACT NO CONTACT NO	e Deta Type Addanber Tect Fet Fet Fet Fet Fet Fet Poperties	Description	TI VEN'N MUTE V CD CUSTOVER NUME CUSTOVER NUME CUSTOVER CUSTOVER NUME CUSTOVER NUME CUSTOVER NUME CUST	afile a Deta Type Autonumber Text Text Text Text Text Feed Propertie 50	Description
COMMIL: Lacker Field Home COMER NAME RESS TACT NO NIL Lookup	Dota Type AutoNumber Taxt Taxt Taxt Taxt Taxt Taxt Taxt Taxt	Unarphan ~	CUSTORICE TO CD CD CD CD CD CD CD CD CD CD CD CD CD	e Deta Type Autofanber Ect Fot Fot Fot Fot Properties	Description	If IT I I'V I MATE I Peel Real Controlment water Controlment water Controlment water Controlment water Controlment water Controlment Controlment Controlment Field Size Field Size Field Size	Addin B AutoNumber Text Text Text Text Feld Propertie 50	Description
CIONALII - Caldon Field Iteme COMER NAME COMER NAME SESS SESS SESS IL COMER SILENAME SESS SESS IL COMER SILENAME SESS IL COMER SILENA IL COMER SILENAME SESS IL COMER SILENAME SESS IL COMER SILENAME SESS IL COMER SILENAME SESS IL COMER SILENA IL COM	Data Type AutoNarobe Text Text Text Text Text Text Text Tex	Dengtilan	Elisticity Peld Neme 2 OP Cutorio Review CLSTOPER NAME CLSTOPER NAME CUTOPER NAME CLSTOPER NAME CUSTOPER NAME CUSTOPER NAME CLSTOPER NAME CUSTOPER NAME CUSTOPER NAME CUSTOPER NAME CUSTOPER NAME CUSTOP	Addianaber Text Fext Text Text Text Text Text Text Text T	Description A field	T TUNN MATT I V COP CoP CoP CoP CoP CoP CoP CoP Co	Altitude Altitude Altitude Text Text Text Text Fed Propertie 50 >777-000,0;	Description
COMULE CALLAN Red Name Contra Name Contra Name RESS Contra Name RESS Contra Name Al Lookup Sto	Data Type AutoNumber Text Text Text Text Text Text Text Text	Description	CLISTONUE TO CD CLID CLID CLIDTORE NAME CLISTORE NAME CLISTORE NAME CLISTORE NAME CLISTORE NAME CLISTORE NAME CLISTORE NAME CLISTONUE TO CONTACT NO	e Duta Type Additarber Text Fext Fext Fext Fed Properties 50	Description	TO CLEVE AND THE THE CLEVE AND	Pate Type AutoNumber Text Text Text Text Text Fed Propertie S0 >777,400,05, Cudrone ID	Description
STOMMIC: FAILAR Field Hame Comer Name Tomer Name Ress TACT No NIL Contap A Lookap A Mode	Data Type Automber Fox Text Text Text Text Text Feld Properties 50	Drangelan	CLASTORIAL T CD Field Name CLASTORER NAME	Data Type Actolk Type Actolk Type Text Text Text Field Properties 50 >1777777777777777777	A field cen be cen cen cen cen cen cen cen cen cen cen cen cen cen cen cen cen cen cen cen	T ULINI MARTE I T ULINI MARTE I COP COP COP COP COP COP COP COP	Alter AutorNumber AutorNumber Text Text Text Text Text Feld Propertie 500 >777(1400,8);_ Custome ID	Description
Reid Hamm Reid Hamm Tomer Name Tomer Name Ress Ress All Lookup Res Ress	Data Type AutoNambe Text Text Text Text Text Text Text Tex	And here can be co	CUSTORUE DA	e Deta Type Additistation Text Text Text Text Text Text Text Text	A field comb a u ta didad	TI VEIN'S MATTER V CD CLOP	alian Additivender Text Text Text Text Text Text Text Text Text So >7774-000,65, Customer ID	Description
FIGHTIE: LACAR FIGHTIERS TACT NO NIL 4 LORAD 800 800 800 800 800 800 800 800 800 80	Data Type AutoNumber Taxt Taxt Taxt Taxt Taxt Taxt Taxt Taxt	A field A field A mer can be up to 6 de	CLISTONLIAT TO CONTRACT TO CON	e Deta Type Autofaniber Tect Tect Tect Tect Tect Tect Tect Tect	A field control of the second	If the local set of the set	Adde Dete Type AutoNumber Tot Tot Tot Ted Ted Ted Feld Properts 50 >777-000,0;- Customer ID	Description
Pied tame Pied tame Concer Name Tomer Name Ress Survawe RESS Survawe RESS Survawe RESS Survawe RESS TACT NO ALL Cookap See X Mosk Mosk N N K Yalan K Yalan	Data From AutoNanber Text Text Text Text Text Text Text Text	And And And And And And And And And And	COSTORE TO COSTORE ANNE CLOTORE NAME CL	rt la Red Stanber Text Text Text Text Text Text Text Sol >1777777777777777777777777777777777777	Desurption A A field Common Co	T VUNN MARTI I V CDP COP COP COP COPER NAME COPER SAME ADDRESS COPICAC NO E4MAI FIND FIND FIND FORM Locate Formal Vadiation Rut Vadiation Test	Aller a Deta Type Admonoer Fed Fed Text Text Text Text Text So >777-000,6; Customer ID	Description
SUDMULT Taldar Bald Stamm D Tomer Name Tomer Sunname Tomer Sunname Tomer Sunname Tomer Sunname Taldar No Name Name Name Name Name Name Name Name	Data Type AutoNamber Text Text Text Text Text Text Text Text	A field benzeiten	CUSTONUE TO THE Mark CLD CLD CLD CLD CLD CLD CLD CLD	e Deta Type Addataber Teck Fest Fest Fest Fest Pest Pest So So So So So So So So So So So So So	A field Personation A field a man a field a man a field a man a field a man a field a man a field a f	TI VEN'IN MUTE V CD CUSTOVER NAME CUSTOVER NAME CUSTOVER SURV CONTACT NO CONTACT NO	vitie Deta Type Autonumber Text Text Text Text Text Text Text Text Text So >77(+000, 0;- Customer ID No	Description
Read Same Read Same TodeR Numer TodeR Numer Comers Surplane RESS TodeR Numer TodeR Numer TodeR Numer Same	Data Type AutoNumber Tank Tank Tank Tank Tank Tank Tank Tank	A feld A feld neme can be give de star s long, incluing	CUSTONICE IN CO CO CO CUSTONER NAME CUSTONER NAME CUSTONER NAME CUSTONER NAME CUSTONER NAME CONTACT NO CONTACT NO C	e Deta Type ActoRarber Foct WE Took Took Field Properties 50 >177777777777777707770, Customer Name	A field A f	If initial waters of Fred Rom Controlmers water Controlmers water Controlmers water Controlmers water Controlmers water Controlmers Controlm	Addewards Addewards Addewards Text Text Text Text Feld Propertie 50 >771/400,0;_ Customer ID No No	Description
STUMUT: Local of Field Tione DTOVER JANKE TOVER JANKE TOVER JANKE ALSS ALSS ALSS ALSS ALSS ALSS ALSS ALS	Data Trans AutoNanhee Fext Text Text Text Fext Fext S0 >>>>>>>>>>>>>>>>>>>>>>>>>>>>	A faid Describes A faid nere can be can b	CLISTORUE TO TeleStern CLIC	Additionabor Text Text Text Text Text Text Text Text	A field come of the come of the come come of the come come come come come come come com	T LULINI MATTEL T V COD COD COD COD COD COD COD COD	diale AutoNancise Text Text Text Text Text Text Text Text Text Text Text Text S0 >7771-000,6; Customer ID No No No No	Description
Stributi Exclusion Field Stame Drokes Number Torkes Torkes Number Torkes To	Data Fyze AutoNumber Text Text Text Field Properbies 50 >>>>>>>>>>>>>>>>>>>>>>>>>>>>	A field A field A field A field A field A field A field A field A field A field B to Do G 4 field C 4 fiel	CLIS FONLOF TO CD CD C	e Deta Type Autofanber Ect Fot Tod Tod Tod S0 >17777777777777777777777,0, Cutomer Nama	A field Pescration A field Control Co	If the local state of the	ALCONUNCE Text Text Text Text Text Text Text Text	Pesotption
SIDUALITY Factor Preditions DIORER NAME TOORER SURVICE RESS RESS RESS RESS RESS RESS RESS RE	Data Train AutoAmber Text Text Text Text Text Text Text Text	A field Decorption A field me den be den deve der s bong sources pess fri for head for head	COSTORE DE LE COSTORE NOVE CUTORE NOVE CUTORE NOVE CUSTORE NOVE CU	e Data Type Additanber Ted Autor Ted Ted Ted Ted Ted Field Properties 50 >1771777110711077770, Cutomer Nome No No No	A field A f	T ULINIH MARTE I Conformer Newson Conformer Newson Conformer Newson Conformer Newson Conformer Newson Conformer Newson Forma Fo	Alite Alite Type Alite Type Alite Type Text Text Text Text Text Text Text S0 S0 No	Description
StriMitt - Teil/Ar Field Hame > ChoreR NaMe ToorRR Summe ToorRR Summe ToorRR Summe ToorRR Summe Re Re Re Re Re Re Re Re Re Re Re Re Re	Data Type AutoNambe Text Text Text Text Text Text Text Tex	A field beografien A field be us to be us to che wider be user inscheng ins	CUSE IONUU I I TELES IONUU I I CLD CLD CLD CLD CLD CLD CLD CLD	Additional type Additional type Additional type Additional type Text Text Text Text Text Text Text Tex	A field nome exh be divect mrs brock broch	T LULININ MUTTER T V CD0 CLIDINE CLIDIN	Alfon Alfonauber Text	Description

Table 7 Customer & corresponding Properties for each field

III PAFTA : Table			# PROPERTY : Table	9		×
Field Name	Data Type AutoNumber Text	Description	Field Name	Data Type AutoNumber Text	Description].
	Field Properties	1				
General Lookup				Field Properties		
Field Size Format Input Mask Caption Default Value Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 >?????;0;_ Pafta No No No Yes		General Lookup Field Size Format Input Mask Caption Default Value Validation Rule Validation Text Required Allow Zero Length Indexed Unicode Compression	50 >7????????????????????????????????????	;0;_	

Table 8 Pafta & Properties

Table 9 Property & Properties

TRANSACTION :	Table	
Field Name	Data Type	Description
REF NO	AutoNumber	Description
DATE	Date/Time	
IDB IDB	Number	
IDP	Number	
IDL	Number	
Donum	Text	
EVL	Text	
AY2	Text	
M2	Text	
BED ROOM	Text	
FURNISHED	Yes/No	
IDPF	Number	
Consult Lookup	Field Properties	
Display Control Row Source Type	Combo Box Table/Query	A field
Row Source	SELECT DISTINCTROW [IDB].	BUSINESS be up to
Bound Column	1	64
Column Count	2	characters
Column Heads	No	long,
Column Widths	0cm:5.082cm	including
List Rows	8	spaces.
List Width	4 501cm	Press F1
Limit To List	Vec	for help on
	103	names.

Table 1 Transaction & Properties

4.3. Relationship of Tables

Each field in a table has corresponding properties as shown for table 7 [Customer]. They have the General and Lookup Properties.

Table 10 shows the Lookup properties for Field Name IDP showing that the field in the table is designed as a Combo Box.

Tables are used & designed by the programmers. The end users should not interact with this interface.

After you've set up different tables for each subject in your <u>Microsoft Access database</u>, you need a way of telling Microsoft Access how to bring that information back together again. The first step in this process is to define relationships between your tables. After you've done that, you can create queries, forms, and reports to display information from several tables at once. For example, this form includes information from ninetables: (5 are shown. All list Box entries are data retrieved from the corresponding tables. List Box has an arrow adjacent to the box.)



As you can see nine of the tables are all joined with their Primary & corresponding Foreign Keys to the Main Table 10. which is the transaction table which makes The Property Transaction Form Figure 7.1b.



Figure 9 RELATIONSHIPS

4.4 How do relationships work?

The fields in the ten tables must be coordinated so that they show information about the same order. This coordination is accomplished with <u>relationships</u> between tables. A relationship works by matching data in key fields — usually a field with the same name in both tables. In most cases, these matching fields are the <u>primary key</u> from one table, which provides a unique identifier for each record, and a <u>foreign key</u> in the other table. For example, customer can be associated with Ref No's they're assigned for by creating a relationship between the Customer's table and the Transaction table using the CID fields.

primary key One or more fields (columns) whose value or values uniquely identify each record in a table. A primary key cannot allow Null values and must always have a unique index. A primary key is used to relate a table to foreign keys in other tables.

foreign key One or more table fields (columns) that refer to the primary key field or fields in another table. A foreign key indicates how the tables are related. The data in the foreign key and primary key fields must match, though the field names do not have to be the same. For example, the Transaction table might contain the foreign key CID, which relates to the primary key CID in the Customers table.

5. USER MANUAL

1. In order to gain access to the Real Estate Agent Program you Must First click the shortcut on the Desktop.

My Documents Ashiag ICQ Like First Her Fred Come	~
My Computer insuzazz License ALLL-SIDE -15	
My Network Online project astricy	1.1
Recycle Bin Proje QuickTime CMDB	19 A.
Internet Get QuickTime Shottout to VCD_PLAY Evolutioner Prio PPIQUECT-2	
Image Image Image Microsoft Sony Intel/fideo Student-proc Dulook Image/Station Student-proc Student-proc	
Setup MSN Shotcut to My Windows icolife Internet A. Connection Medie Player	÷
WinZp Shotcut to Acrobit OFFECAL e3d3 Reader 4 0	10
Convect to the HP Desklet Dutlock Stretcus to Internet 610C Seres Express Real Estate	
Figure 2. Desktop	
Click This Shortcut Located in your Desktop	

2. Straight after the Password Box appears. You must type in the correct password to enter in to the Database Environment.



Figure 3 Password Dialogue Box

3. [The Switchboard Manager is used to create the switchboard which makes it easy to navigate between the forms and reports in an Access Database. A preview of the main switchboard is shown below.]

At the next stage the programs main menu appears. Here you have a list of options to choose from.



4. [Enter Business Related Option] This section deals with inputting the Estate Agents Business related Data which is assigned and determined by the manager as a task to the User's of the Program.

Performs Real Estate Agency-Northam Enter New /Edit Business Type Enter New /Edit Location Enter New /Edit Location Enter New /Edit Commission % Enter New /Edit Currency Return to Main Menu	Enters Fig 4.1a Enters Fig 4.1b Enters Fig 4.1c Enters Fig 4.1d Enters Fig 4.1e
	Returns to main menu

Figure 5.1 Business Related Menu

5. If you select option [Enter New/Edit Business Type] Fig 4.1a opens which is the [Enter Business Type Form]. Click this button to go to a

		new empty location & enter details required on form
BUSINESS BUSINESS BUSINESS Record	Add New Record SID SID N/A Sid N/A Save Record Upgrade Record 1 Find Record Delete Record 1 N/A	Click this button to save details inputted on record Click this button once upgraded details on record to save the ungrade Click this button to delete required records
Closes Form & returns to fig 4.1	Click this option to find records(s)	

6 The Find Dialogue Box is as follows.



Figure 6. Find Dialogue Box

6. Select option [Enter New/Edit Property] to input property types you deal with at the Estate Agency. These property types will then be listed in the transaction form when dealing with Customer transactions fig.

•	Duese autor Tree	nut Earm	
	Property Ind	out rorm	
PROPERTY ID	1	1 Add New Record	
PROPERTY	TARLA	Delete Record	
		Save Record	
Close Form	Find Record	Upgrade Record	
		L of 10	9 (- S

Figure 4.7b Property Input Form

7. Select option [Enter New/Edit Location] to input Locations that you will deal with at the Estate Agency. These Property types will then be listed in the Transaction form when dealing with Customer transactions fig .

{Please recall step 4 pg to view command button operations} {Please recall step 5 pg to view Find Record Button Dialogue Box}

Ĺ	ocation Input	Form	
dire de .	and the second	Add New Record	
LOCATION ID		Delete Record	
LOCATION	ÇATALKÖY	Save Record	
Close Form	Find Record	Upgrade Record	

Figure 4.1c Location Input form

8. Select option [Enter New/Edit Commission] to input Commission Rates that you will deal with at the Estate Agency. These commission rates will then be listed in the Transaction form when dealing with Customer transactions fig .

Comn	nission	Rate (%) Inp	ut Form	
			Add New Record	
Commissi	on ID	1	Dalata Pasard	
Commissio	on Rate	5,0%	Delete Record	
			Save Record	
Clo	se Form	Find Record	Upgrade Record	

Figure 4.8d Commission Rate Input Form

9. Select option [Enter New/Edit Business Deal] to input Business Deals that you will deal with at the Estate Agency. These Business Deal types will then be listed in the Transaction form when dealing with Customer transactions fig .

{Please recall step 4 pg to view command button operations} {Please recall step 5 pg to view Find Record Button Dialogue Box}

BUSINESS DEAL		
Business	Deal Input Form	
		Add New Record
bUSINESS DEAL ID		Delete Record
BUSINESS_DEAL	AVAILABLE	Save Record
Close Form	Find Record	UpgradeRecord
	Eletter 4	

Figure 4.1e Business Deal Input Form

10. Select option [Enter New/Edit Currency] to input Currency types that you will deal with at the Estate Agency. These Currency types will then be listed in the Transaction form when dealing with Customer transactions fig .

Commission	<mark>ı Rate (%) Inp</mark>	ut Form_
	Sande -	Add New Record
Commission ID		Delete Record
Commission Rate	5,0%	Sava Pacand
1	1	Save Recolu
Close Form	Find Record	Upgrade Record

Figure 4.1f Commission rate Input Form

11. Select option [Enter map related menu] to go to fig 6. Map related Menu. Here you can select to enter Landroute Input Form or Pole Input Form .



Figure 6 Map Related Menu

12. Select option [Enter New/Edit Landroute] to input Landroute No's available on a map that you will deal with at the Estate Agency. These Landroute Nos's will then be listed in the Transaction form when dealing with Customer transactions fig .

Lan	droute Input	Form	
		Add New Record	
Landroute ID	1	Delete Record	
Landroute NO	NA	Save Record	
 Close Form	Find Record	Upgrade Record	

Figure 6.1a Landroute Input Form

13. Select option [Enter New/Edit Pole] to input Pole No's available on a map that you will deal with at the Estate Agency. These Pole Nos's will then be listed in the Transaction form when dealing with Customer transactions fig .

{Please recall step 4 pg to view command button operations} {Please recall step 5 pg to view Find Record Button Dialogue Box}

e form in Design view	E TRANSACTIO	N	
e form by using wizard	TRANSACTION	N S	
NESS 🔳 HARITA			
VESS DI			prus
MISSIO	Pole In	put Form	
ENCY			
OMER Pole ID		Add New Record	1.1
ТА	1010	Delete Deened	201 B
TION Pole NC		Delete Record	1.53
A		Save Record	
reports			1
ERTY Close F	Form Find Rec	ord Update Record	
hboard		Autor and a second	
Record: 14 4	1 .	▶ ▶ ★ of 131	
	1.0		

Figure 6.9b Pole Input Form

14. Select option [Enter Transaction Menu] to go to Fig 7 from main switchboard.



Figure 7.10 Transaction Menu

15. Select option [Enter New/Edit Customer(s)] to input Customer Details. The Customer ID's will then be used in the transaction form fig 7.1b and selected from the listbox. Customer details will then be displayed by auto lookup.

	Surna	ime
ND CUSTOMER ID	PUNJANI	•
	BENGISU	MUAZZEZ
	PUNJANI	ASHFAQ
STOMER ID	HELLO	ATA
ST OWILK ID	OMER	ALI
STOMER NAME	BENGISU	TUNA

The form is also designed to find Customer ID by surname and name. For example a Customer phones up and wishes to enquire about his or her property but he has forgotten his Customer ID. The user of the program enters this form and types in the surname and finds the corresponding name(s), (more than one person can have the surname) and then selects the applying surname

& name. The details including unique Customer ID are displayed in the record fields

{Please recall step 4 pg to view command button operations} {Please recall step 5 pg to view Find Record Button Dialogue Box}

	Custon	ner Information Form		
	FIND CUSTOMER ID	Surname •		
	CUSTOMER ID	MUSERCE	Add New Record	
	CUSTOMER NAME CUSTOMER SURNAME	MUAZZEZ BENGISU	Delete Record	
2.	ADDRESS	OIRNE	Save Record	
(CONTACT NO	(0542) 856 8358	Upgrade Record	
E	EMAIL	ashfaq_punjani@hotmail.com	2	

Figure 7.1a Customer Information Form

16. Select option [Enter New/Edit Transaction By Customer] to Fill out the Property Transaction Details when a customer comes to the Estate Agency.
{Please recall step 4 pg to view command button operations}
{Please recall step 5 pg to view Find Record Button Dialogue Box}



Business type is selected from list to determine what business transaction is to be made. For Sale, Buy, Vendor or Tendant.

For Sale: The Customer wants to put property on sale. Deed info is entered & commission rate, & property info. In Business Deal **Available For Sale** is selected. Once Sold, record is found and **Sold** is selected in Business Deal and upgraded.

Buy: Customer is looking for property to buy. Details entered. Measurement & Map location is not entered. NA is chosen for landroute & pole. In business Deal Still looking for is selected. Once they have bought a property Bought is selected from Business Deal List.

Vendor: This option is selected from the list box when a customer is the landlord of the property and is putting the property for rent. Hence **For Rent** is selected in the Business Deal list box. Measurements and Map Location not needed to be filled out. Once property is rented the Business Deal is changed to **Rented** and hence upgraded.

Tendant: This option is selected when a customer wishes to rent out a property. Details of property type, location and what price they are willling to pay monthly are filled out on the form. In Business Deal list box **Still looking for** is selected. Once the Customer has rented a property this is changed to **Rented**.

If in the Business List box the Customer has not decided what to do with his/her property "Undecided" should be selected and Not Applicable in the Business Deal list box.

The sub-form displays all the associated Ref No's for each Customer. You can change the Customer ID for given transaction details if any external changes are made to the property (i.e owner changes). Select from list & Refresh.

17. Select option [Print/Print Preview Reports] to gain access to the various reports available with the program.



This section provides the user with various reports based on the details that they have inputted in the Transaction Form. These reports were designed on the demands of the Estate Agency. What info & Reports that they need to make effective decisions on the business.

- 1. This report gives details on all available properties either Available For Sale, Available for Rent. We choose the property type we want to see report on.
- 2. Shows all Properties by Business and location. For example all Sale Properties in Girne, or all Vendor properties in ozankoy.
- 3. This report shows all properties in the given range of Donum measurements.
- 4. This report shows all the properties in the defined price range and business within the business.
- 5. This report shows all the properties by chosen business deal, and hence the commission earned.

6. This report shows all the details available with the associated Customer ID in the transaction form.

Example of each Report is attached on the following pages.

Reports are made using the Queries Tool in access. A select query is the most common type of query. It retrieves data from one or more tables and displays the results in a datasheet where you can update the records (with some restrictions). You can also use a select query to group records and calculate sums, counts, averages, and other types of totals. However we are not going to view the results in datasheet view in normal view, and we have grouped our Data.



Figure 110 An Example Of Query in Design View



Figure 11 Example of a Parameter Query box

A parameter query is a query that when run displays its own dialog box prompting you for information, such as criteria for retrieving records or a value you want to insert in a field. You can design the query to prompt you for more than one piece of information; for example, you can design it to prompt you for Property & Location. Microsoft Access can then retrieve all records in that property & location
	V-100										
Ref No Location Date	Business	Property	Name	Surname	Contact	Bed(s)	Price	Don EVL	AY2 M2	Com. Rate	Com. Earn
15 OZANKOY	FOR SALE	BUNGALOW	TUNA	BENGISU	(0542) 856-8358	3	10,000 Stg	1 1	1200	0.0%	0.00
					, 100 s						
					47						
26 August 2003										Dece 1 of	

	5
	e
	P
	2
	ĥ
	2
	,
	1
	5
-	ľ
	1
	2
	5
	E
	i
	-
1	

1

rice
by P
erty
rop

BUSINESS		FG	JR SALE											
PROPERTY		Bung	alow					2						
LOCATION		OZANKOY	4											
Ref No	Date	CID	Bed(s)	PRICE	Donum	EVL	AY2	M2 F	afta	Harita	Parsel	Commission Rate	Comments	Commission Earn
15		TUN-100	б	10,000 Stg	1	1	1200		NA	N/A		0.0%	GOOD MOUNTAIN VIEW	0
PROPERTY		Ev												
LOCATION		Gime												
RefNo	Date	CID	Bed(s)	PRICE	Donum	EVL	AY2	M2 F	afta	Harita	Parsel	Commission Rate	Comments	Commission Earn
14		GUL-100	3	50,000 Stg					NA	N/A		0.0%	SOSYAL KONUKLAR	0
PROPERTY		Villa												
LOCATION		Gime												
Ref No	Date	CID	Bed(s)	PRICE	Donum	EVL	AY2	M2 I	afta	Harita	Parsel	Commission Rate	Comments	Commission Earn
16		GUL-100		500.000 Stg					NA	N/A		0.0%		0

NA N/A

500,000 Stg

GUL-100

16

0

Total Commission Earned

26 August 2003

Property By Location

BUSINESS		-OR SAL	ш									
PROPERTY	Bun	galow										
LOCATION	OZANK(Ϋ́										
Ref No Date	CID	Bed(s)	PRICE	Donum EVL	AY2 M2	Pafta	Harita	Parsel	Commission Rate	Commission Earn	Comments	
15	TUN-100	3	10,000 Stg			NA	N/A		0.0%	0.00	GOOD MOUNTAIN VIE	M

Page 1 of 1

~
5
0
Ä
9
Free
-
0
60
•
65
-
-

DICNER										The second second second	
BUSINESS	÷	-OR SAL									
PROPERTY	Bung	galow									
BUSINESS DEAL	AVAILAI	BLE FOR S	SALE								
Ref No Location	Date	CD	Name	Surname	Contact	Bed(s)	Price	Don EVL AV2 N	 Commission Rate 	Commission Farm	
15 Ozanköy		TUN-100	TUNA	BENGISU	05428568358	З	10,000 Stg		0.0%	0.00	

m
n
III
Ď
by
le
ab
ail
AV
ert
rop
6

BUSINESS		FOR SALE										
PROPERTY	Bur	ngalow										-
Donum	-											
Ref No Date	CID	Location	Bed(s)	PRICE		SVL	AY2 M	2 Pafta	Harita	Parsel	COMMISION RATE	Commission Earn
15	TUN-100	OZANKOY	e	10,000	Stg	-	1200	NA	N/A		0.0%	0
											Total Commission Earned	0

26 August 2003

Page 1 of 1

6. Program Flow charts

The following section describes how to use the program via User Flow charts









































































































































7.0 References

- 1. Database System Concepts Authors: Abraham Silberchatz, Henry F. Korth S.Sudarson
- 2. Software Package: Tour Tracker http://www.toursoftware.com/tracker.htm
- 3. Software Package: Ground Tour Tracker http://www.toursoftware.com/ground.htm

4

8. Conclusion

In a real world environment most of the Estate Agencies are working with software package programs designed generally for the Estate Agency needs. Our designed system has been tested at the Estate Agency and has proved to be efficient in maintaining the property records and producing a variety of reports, based on the organization needs. However to implement the long term benefits of the organization we will need to observe the company work for a minimum of six weeks.

A summary control of knowledge is very important. In this project the importance of accuracy and efficiency was maximised in my practice as working with MS Access 2000 requires a lot of care and attention. The application program needs a sensitive approach to designing the relationships and this means careful system analysis. A good and sound basis is needed in the core design of the system as this reduces flaws in the proceeding time.

In order to further expand the system we could have introduced more SQL Queries, however with the proposed organization in question the queries are enough to analyse current business conditions. I as the student and database designer still believe that the managers expectations are quite high regarding the program, but it is always known that a developed system should be tested for a period of time to eradicate any shortcomings in order to satisfy the manager at the Estate Agency. According to my experience on a programming background, is that designer clothes are more suited and better fitted for the body, rather than the clothes designed for the sizes.