T.C. AREL UNIVERSITY

GRADUATION PROJECT

DVD VCD AUTOMATION

ERSİN ÇOKLU

160303016

EDUCATIONAL OFFICER

METİN ZONTUL

PREFACE

This project, named 'DVD - VCD automation', was made as a computer programming graduation project at Istanbul Arel University.

My project advisor, Mr. Lecturer, who did not spare all kinds of help and support in the determination of the graduation project subject, planning and execution of the study. See. I would like to express my sincere thanks to Metin Zontul.

I would like to thank Hakan AKSÜZEK and Mesut AYDIN, who provided their help and time during the study and provided the data to be used in the thesis and assisted in the procurement of the receivers used in the field studies.

Lect. See. Instructor Ekrem Erol See. Instructor Timur İNAN See. Onur and Lecturer. See. I owe a debt of gratitude to Emrah DİKBIYIK

I would like to express my endless thanks to my family who have always given me all kinds of financial and moral support.

Contents

ABBREVIATIONS

Auto: Automation

MySql : My Structured Query Language

Tables : Table

Procedures : Procedure/procedure

Cursors: In database objects; It is the structure that allows us to move between records on a row basis.

Obbc: The places we define as data sources do not have to be server systems, so a database created with MS Office Access, even the information in an Excel file is a data source.

FLOOR : Layered architecture

DAL: In the three-layer architecture, the lowest layer is the data layer where the data is pulled from the database and the incoming data is added to the database. DAL does that.

BLL: The process of adapting the collected data to the application should be carried out. The Business Layer provides this job.

FIGURES

TABLES

1. Introduction and purpose

Today, the unbelievable rapid development in information and, accordingly, information technologies necessitated various software needs in order to access information quickly, regularly and reliably. The increase in information in societies has given birth to the idea of conveying that information to those in need. Seeing the necessity of information sharing in order to produce better and higher quality, human beings developed computer networks for information sharing.

DVD - Vcd markets have been affected by the increase in the need for information and the developments in communication technology. While the use of computers in marketing gave birth to DVD - Vcd automation, the internet enabled resources and services to be offered to more people. Management of information resources is carried out easily by computers. The development of the Internet has enabled the use of information resources by all computer systems regardless of the platform.

In order to provide modern service in the markets, computers and the internet must be used effectively. Techniques such as data hunting are helpful tools to maximize performance. The primary purpose of my project is to create an automation system that caters to all requests of users, that everyone can use and that no one will be alienated from.

With database techniques, categorization records are entered only once, relationships can be established between records, and therefore, the work is much faster than before.

Computer-based realization of document supply, categorization, lending, inspection of periodicals and consultancy services in markets. In other words, the only main purpose is to monitor and control the entire system from a single location. The aim of this study is to record the information of the product in a market in general, to follow the members registered to the market and to keep the DVD and Vcd movement information in the market. The program performs operations such as adding, deleting, changing, searching in accordance with the subject I received.

It will be as close as a keyboard whether it is in hand or not, as the store clerk does not need to search for a DVD or VCD while looking for a DVD or VCD. The purpose of DVD – VCD Automation is to facilitate the cashiers and the boss in the DVD – VCD markets. It is aimed to carry out the operations that human intelligence cannot do in the purchase, sale and rental of products, and to keep accounts in a trouble-free and regular manner and to store them in the database. He will learn the movie, music, game he wants by asking the program according to the type of product (DVD or VCD). In this way, it will both save time and get a plus point in the eyes of the incoming customer. In any product sale, the sales process will also be reflected in the stocks and can be controlled by the boss. This will increase reliability and quality. The product rental system in the DVD - VCD market will also be available thanks to this automation. Rented products can be listed and information about which product is rented to which customer, when and for how much will be displayed

1.1. Dvd - Importance of Vcd Automation

The use of the computer, which is indispensable in all public services, from the smallest to the largest, in information centers aiming to compile information effectively and present it to its users, took place shortly after its development. With the introduction of electronic systems and computers into all working areas, it has been observed that there has been a great improvement in the structure of society. The societies that made the second industrial revolutions and took electronic systems from the lowest level of education to the highest level of scientific study are also called "computerized society". Computerized society means a society that organizes information in the most effective way and promotes scientific studies by distributing it to all segments of society, and as a result, a strong economy has been born. Today, which is described as the information age, the storage and access of information has gained importance. For this work, computers have been used, as they allow both ease of storage and access to national or international dimensions. The use of computers in markets has demolished the existing traditional structure in these organizations and replaced it with a more active, productive, integrated structure (in terms of inter-market cooperation).

One of the most important stages in the field of marketing has been the use of computers in the work of markets and similar institutions. This new tool has brought three possibilities to all applications in the world:

- Speed beyond human reach.

- Accuracy.

- Convenience.

These three possibilities are vital to the work of knowledge centres. Because the speed of information dissemination is directly proportional to social development. If the information is stored and organized quickly and accurately and its access is facilitated by computer, the effectiveness of the information increases. This, in turn, accelerates the reflection of the acquired knowledge on social life.

If there is a lot of information to be processed, time is limited and precise accuracy is sought in the work done, it is possible to use computers. Since the course of the world imposes the above conditions in almost all works, this new vehicle has become widespread rapidly and has been put into service one after the other in various fields. Computer technology has a great role in the success of space exploration.

1.2. Literature research

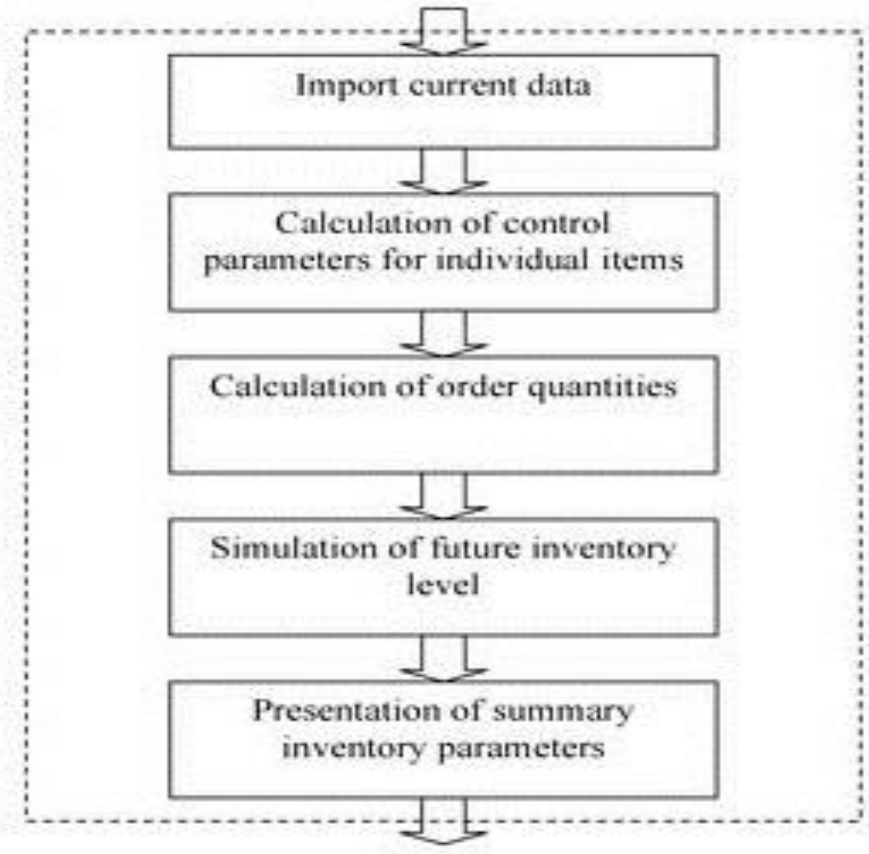
Automation in DVD-VCD markets can be defined as the realization of document supply, categorization, lending, periodicals supervision and consultancy services in DVD-VCD markets based on information systems, use of computers in market management and utilization of all products of information technology, especially remote communication technology.

The automation system allows the management and optimum sharing of resources in DVD-VCD markets. The use of barcodes in the system is a practical solution for the tracking of publications. The slowness and errors caused by the human factor in the transactions made on the publications (borrowing/taking, extension of time, etc.) are eliminated by the use of barcodes.

Category scanning DVD-VCD has become possible in and out of the market.

The integrated DVD-VCD market automation system, on the other hand, refers to the fulfillment of many functions within a system. It includes circulation of publications, course reservations, categorization, purchasing, retention of library data and statistical functions. In addition, thanks to the system, it is possible to access inter-market category information.

2. Organization Scheme



3. Task List

3.1. Users: The major functionality of this product is divided into two categories.

1. Administrative User Functions.
2. Normal User Functions.

3.2. Administrative User Functions: Administrators can perform the following task

- Create new users
- Change the password
- Add/Update the details of Employees of the Company
- Add the information about the Godowns
- Can view the information about the Inwards
- Can view the information about the Deliveries
- Can view the information about the Returns
- Can view/generate management reports

3.3. Normal User Functions: Normal users can perform the following task

- Change the password
- View the details of Employees of the Company
- View information of different Godowns
- Can add the information about the Inwards
- Can add the information about the Deliveries
- Can add the information about the Returns
- Can view management reports

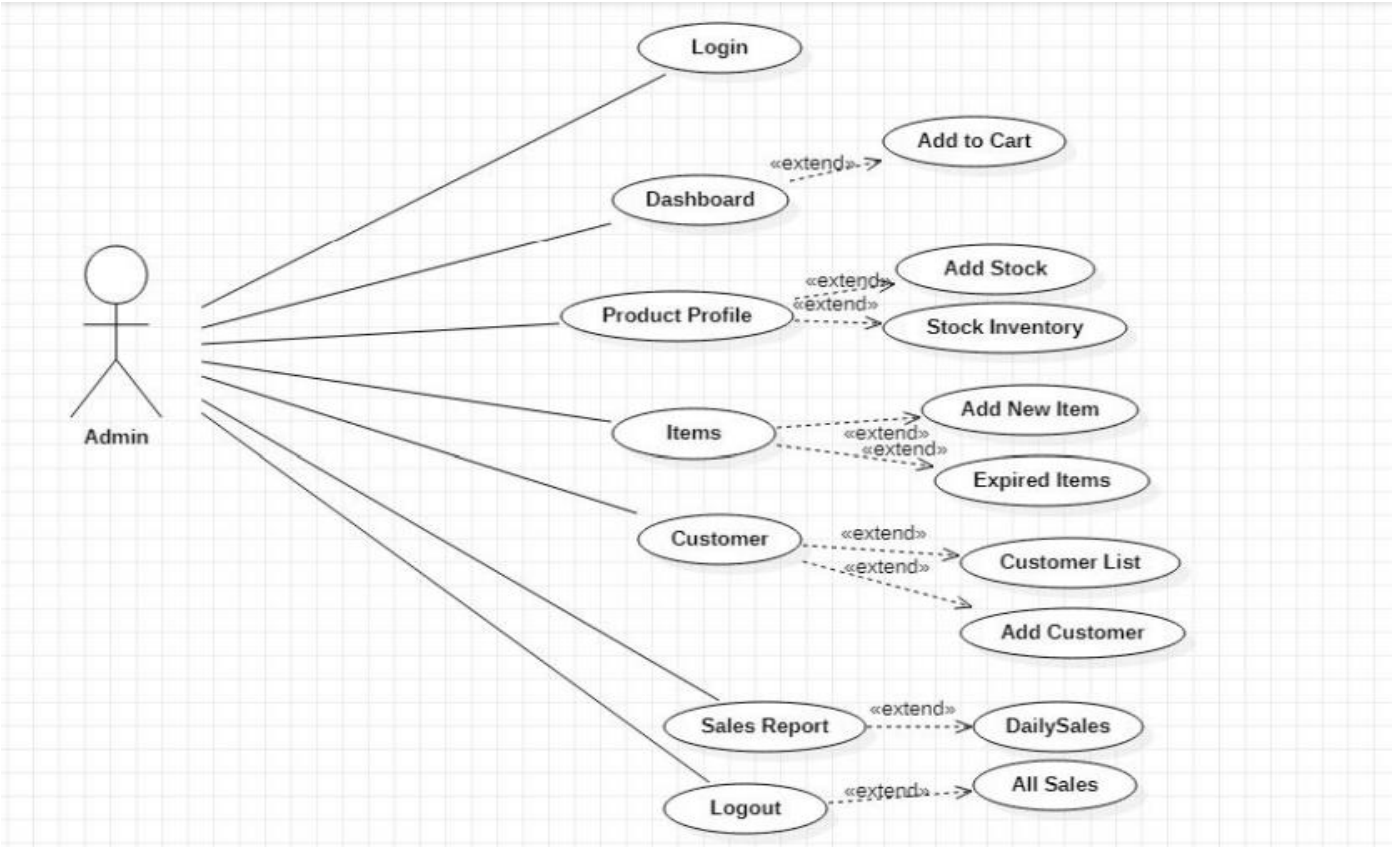
4. Functional Requirement Specifications

Req. No.	Description	Type
R-101	The server shall run on Windows 7 or later version.	Configuration
R-102	The application shall include a user interface.	Functional
R-104	The Admin shall be able to upload, delete view and edit available products.	Functional
R-105	The system should have Login Box and which will allow the user to login	Functional
R-106	The Admin shall be able to Login with admin details	Functional
R-107	The admin shall be able to log out.	Functional

4.1. Non-Functional Requirement Specifications

Req. No.	Description	Type
R-101	When launched, the application shall stay running unless there is an intentional shutdown of the application or the platform.	Performance
R-102	The system should be accessible at all times unless if there is a malfunction that can be resolved in a short period of time	Performance
R-103	The system should have a session that ends to prevent breach	Security
R-104	The system should execute as expected without returning any issues	System Dependability

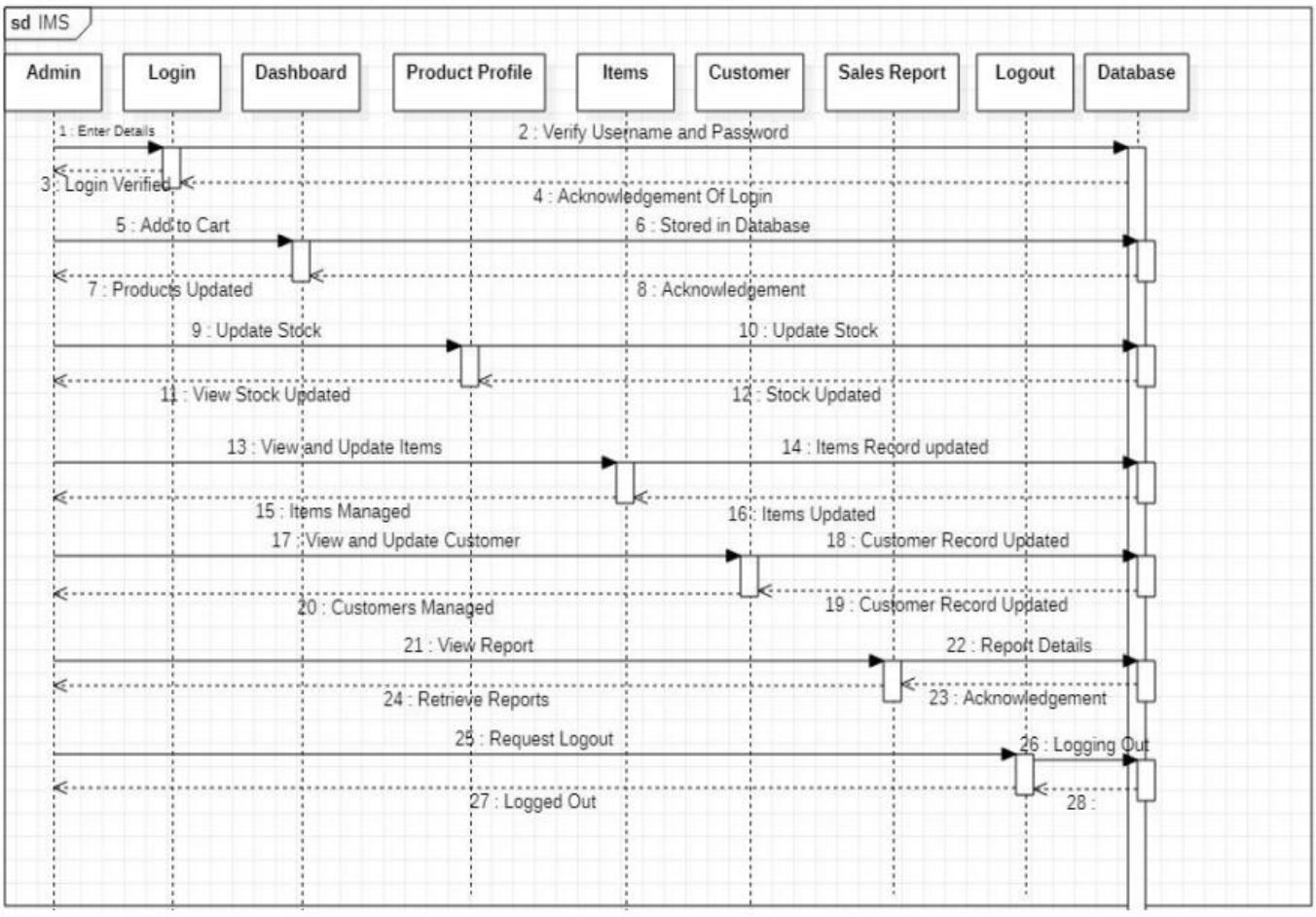
5. Use Case Diagram



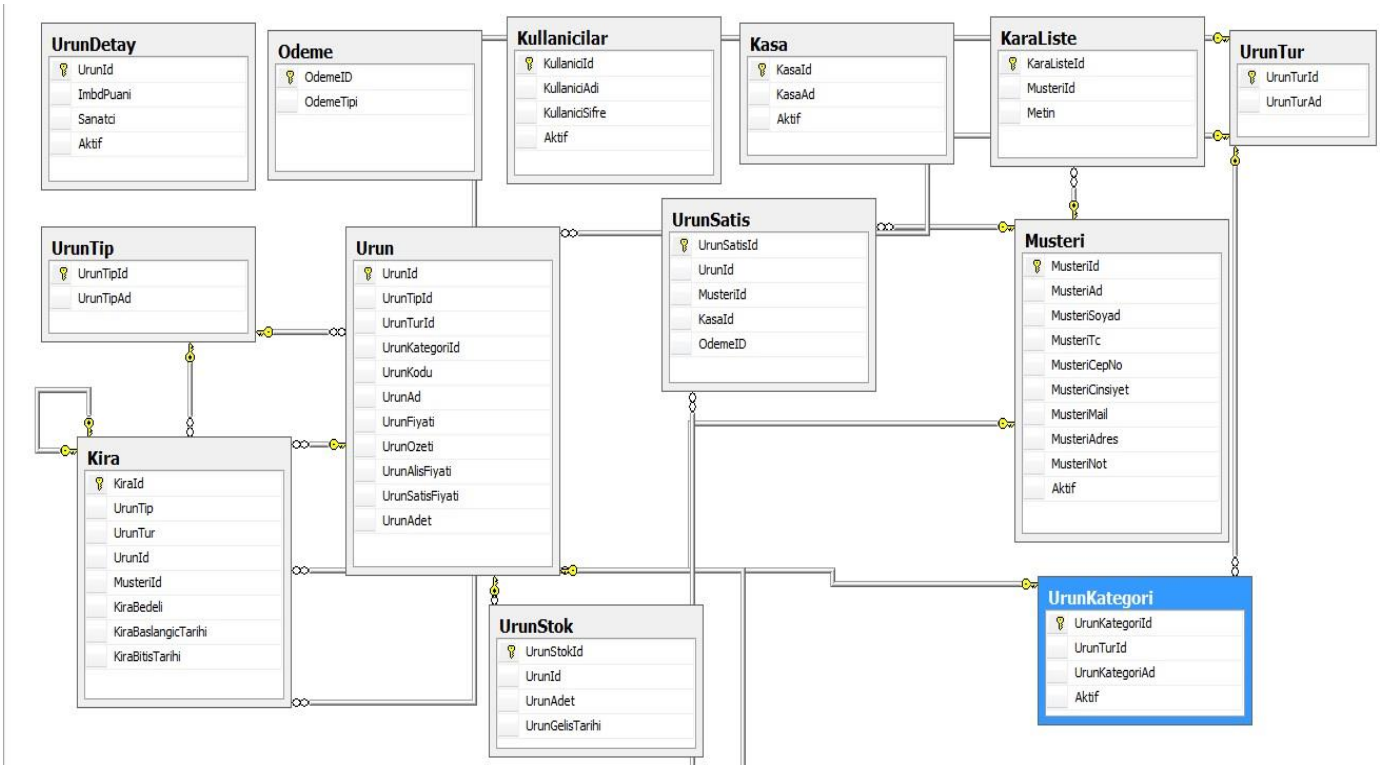
6. Swot Table

Strength	Weakness
• Service responsiveness. • Better quality of goods. • Stock-out reduction (order fulfillment). • Increased inventory turnover. • Better inventory management decisions. • Market visibility. • Smooth SC processes. • Easier flow of information, fund, and product. • Reduce bullwhip effect. • Cost transfer to vendors/ clients.	• Adoption of VMI requires long term planning and market positioning. • Pay-back period is long, in comparison to high investments in expenditure. • Requires process re-engineering. • High investments in technology. • Necessitates change management and adaptation. • Increased product pricing.
Opportunity	**Threats**
• Opens access to larger markets. • Strategic partnership opportunities with suppliers. • Evolvement of new technologies. • Macro-level trade agreements.	• Overall control level decreases. • Job loss. • Competition within existing players. • Substitute threat (coal, solar etc). • Vendor rating and selection. • Environmental and ecological pressure and restrictions on the oil and gas industry.

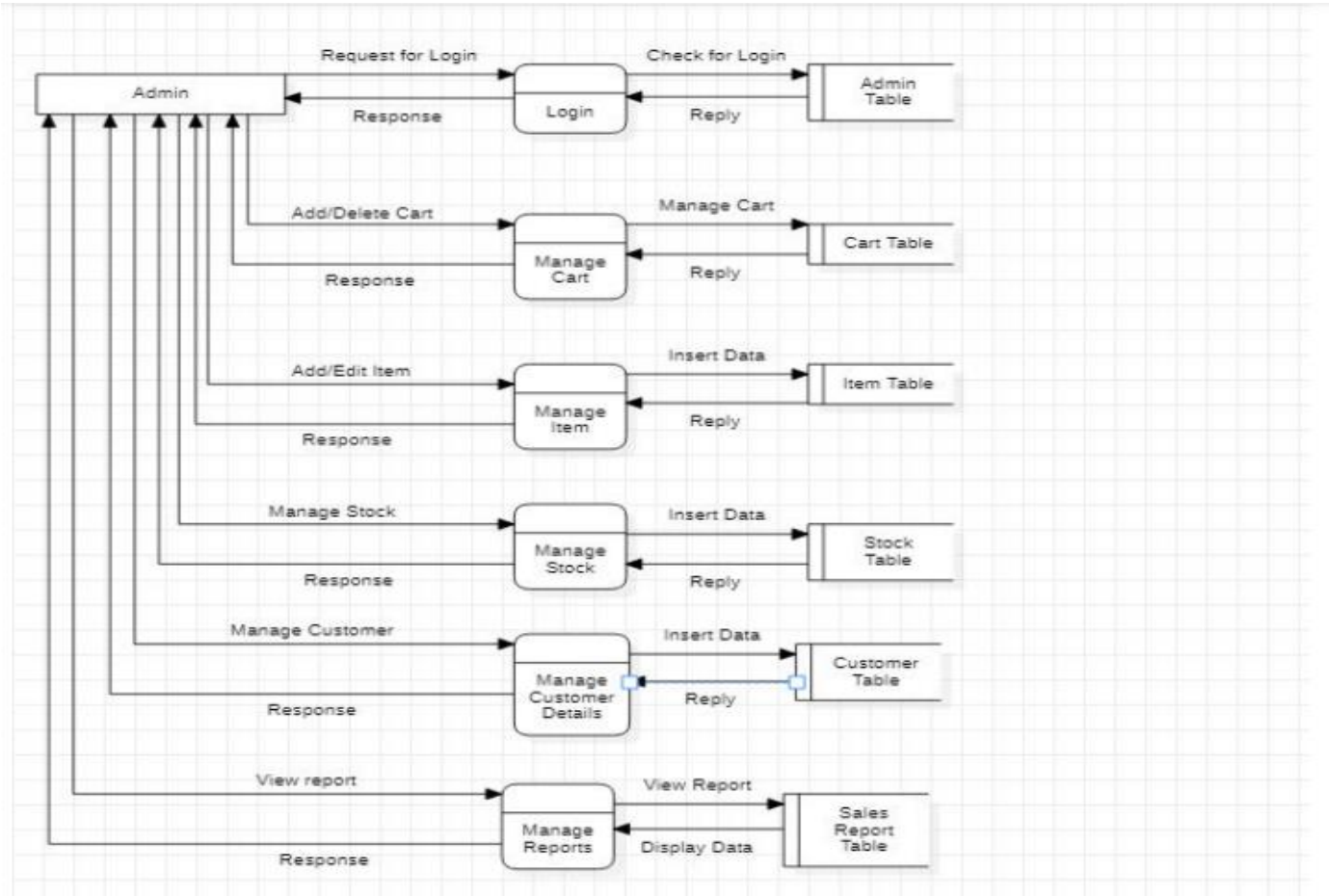
7. Sequence Diagram



8. EERD Diagram



9. UML Diagram



10. Database Tables

Tables and fields of the DVD VCD automation system are explained in this section.

It is the table where the types of transactions made by the users are kept.

Domain name	Type	Explanation
KullanıcıAdi	nvarchar(50)	It is the primary key and is auto-incremented.
Parola	nvarchar(50)	The field where the Password information of the Users type is kept
Turid	int	This is the field where the TypeId of the Users type is kept.

Table 3.1 Kullanıcılar Tablosu

TblUsers is the table where the types of transactions made by the users are kept.

Domain name	Type	Explanation
Turid	nvarchar(50)	It is the primary key and is auto-incremented.
Tur	nvarchar(50)	The field where the Password information of the Users type is kept
Turid	int	This is the field where the TypeId of the Users type is kept.

Table 3.2: KullanıcıTur Tablosu

The information of the members registered in the customer system is kept. The TcNo field is the identity information of the members in the system.

Domain name	Type	Explanation
MusteriId	nvarchar(11)	It is the primary key and is auto-incremented.
MusteriAd	nvarchar(250)	The area where the Person's Name is kept
MusteriSoyad	nvarchar(250)	The area where the surname of the person is kept
MusteriTcNo	nvarchar(250)	The area where the person's Home Tel information is kept
MusteriCepTel	nvarchar(250)	The area where the person's Mobile Phone information is kept
MusteriEmail	nvarchar(250)	The area where the person's E-Mail information is kept
MusteriAdres	nvarchar(250)	The area where the address information of the person is kept
MusteriKayıtTarihi	datetime	The field where the person's Registration Date information is kept
MusteriCinsiyet	nvarchar(50)	The field where the person's Gender information is kept.
MusteriNot	nvarchar(25)	Area to note about the person

Tablo 3.3: Musteriler tablosu

It is the table where the book information is kept in the TblDvdVcd database. The TurNo and PublisherNo fields are related to another table. In this way, we can use the data in the related table.

Domain name	Type	Explanation
UrunId	int	DVD – VCD Primary key and auto number
UrunTip	int	DVD – VCD The field that keeps the Type of the Product in the database
UrunTur	int	The field that keeps the Tour of the DVD – VCD in the database
UrunKategori	int	The area where DVD – VCD Category information is kept
UrunKodu	nvarchar(8)	DVD – VCD The area where the code of the product is kept in the database
UrunAd	nvarchar(25)	DVD – VCD The area where the name of the product is kept in the database.
UrunOzet	nvarchar(250)	DVD – VCD The area where the summary of the product is kept in the database
UrunAlisFiyatı	decimal	DVD – VCD The area where the purchase price of the product is kept in the database
UrunSatısFiyatı	decimal	DVD – VCD The area where the sales price of the product is kept in the database

Tablo 3.4:Ürünler tablosu

It is the table where the types of transactions made by the users at the cash desk are kept.

Domain name	Type	Explanation
KasaId	int	It is the primary key and is auto-incremented.
KasaAd	nvarchar(250)	It is the field where the Cash Name information is kept.

Tablo 3.6: Kasa Tablosu

It is the table where the types of transactions that users have made are kept.

Domain name	Type	Explanation
OdemeId	int	It is the primary key and is auto-incremented.
OdemeAd	nvarchar(250)	It is the field where the Category Name information is kept.

Tablo 3.7: Odeme Tablosu

11. Testing

In this testing approach, data to run tests were obtained from the determinations of the system and afterward used to test every conceivable section or entries as input. Where subsequently the real outcome was then contrasted with the normal outcome after each test trial was carried out.

On the off chance that the two outcomes relate at a point, the testing can be supposed to be a success. Which means the developer that led the testing was more worried about the genuine outcome delivered by the program than with the web build of the program. This online framework is huge and very much controlled that is the reason testing framework technique was picked as the testing method to streamline the testing cycle and make all around reported outcomes.

The system has many website pages and each page has numerous connections and verifications that make the system successful and productive consequently the utilization of System Testing was basic. Different kinds of testing where likewise completed such Unit Testing and Combination Testing and so on.

11.1. Tests Plans (for Unit Testing, Integration Testing, and System Testing)

• During execution, bugs and errors of various calls happened. A portion of these bugs were trivial while some made the movement of the application a little slow. Testing was performed while execution was in advancement.

• Unit testing was performed for example after each combination of a component of line of code, the system was developed to check for blunder errors and made to check for exemptions.

• Combination Testing was likewise performed for example the whole application was continually checked after a colossal coordination (for example expansion of update part of the

application).

• System testing to test the framework completely.

S/N	Admin
1	Admin can add stock
2	Admin can view customer data
3	Admin can perform CRUD functions on all products
4	Admin can view available stock
5	Admin can view and see items that are currently in stock

11.2. Test Traceability Matrix (for Unit Testing, Integration Testing, and System Testing)

CASE	1
OBJECTIVES	Test Validation on Login Page
TEST DATA	Try to login without Access
EXPECTED RESULT	Unrestricted Access
ACTUAL RESULT	Unrestricted Access
CONCLUSION	Successful

CASE	2
OBJECTIVES	Admin Login
TEST DATA	Approve
EXPECTED RESULT	Dashboard
ACTUAL RESULT	As below
CONCLUSION	Successful

CASE	3
OBJECTIVES	Add Item
TEST DATA	Add Item in Item list
EXPECTED RESULT	As below
ACTUAL RESULT	Success
CONCLUSION	

CASE	4
OBJECTIVES	Show only items available in Stock
TEST DATA	Stock Inventory
EXPECTED RESULT	Item List
ACTUAL RESULT	As below
CONCLUSION	Success

CASE	5
OBJECTIVES	Add Customer
TEST DATA	Adding customer
EXPECTED RESULT	Success message
ACTUAL RESULT	As below
CONCLUSION	Success

CASE	6
OBJECTIVES	Delete Customer
TEST DATA	Deleting Customer
EXPECTED RESULT	Deleted from Table
ACTUAL RESULT	Deleted
CONCLUSION	Success

CASE	7
OBJECTIVES	Logout
TEST DATA	Logout
EXPECTED RESULT	Successful Logout
ACTUAL RESULT	
CONCLUSION	Success

11.3. Test Report Summary (for Unit Testing, Integration Testing, and System Testing)

No	Test Performed	Action
1	Test Validation on Login Page	Pass
2	Admin Login	Pass
3	Add Item	Pass
4	Show only items available in Stock	Pass
5	Add Customer	Pass
6	Delete Customer	Pass
7	Logout	Pass

12. Important Code Parts

Kullanici.cs

```
namespace BLL
{
    public class Kullanici:DataConnection
    {
        public int kullaniciid;
        public string kullaniciadi;
        public string kullanicisifre;

        public int Kullaniciid
        {
            get { return kullaniciid; }
            set { kullaniciid = value; }
        }

        public string Kullaniciadi
        {
            get { return kullaniciadi; }
            set { kullaniciadi = value; }
        }

        public string Kullanicisifre
        {
            get { return kullanicisifre; }
            set { kullanicisifre = value; }
        }
```

```
        public bool KullaniciGiris()
        {
            KullaniciIslemleri islem = new KullaniciIslemleri();
            int kayit = islem.KullaniciGiris(this.kullaniciadi, this.kullanicisifre);
            if (kayit > 0)
                return true;
            else
                return false;
        }

        public string KullaniciEkle()
        {
            KullaniciIslemleri islem = new KullaniciIslemleri();
            int kayit = islem.KullaniciEkle(this.kullaniciadi, this.kullanicisifre);
            if (kayit > 0)
                return "Kullanici basarili bir sekilde eklendi";
            else
                return "Kullanici eklerken hata olustu!!";
        }

        public string KullaniciSil()
        {
            KullaniciIslemleri islem = new KullaniciIslemleri();
            int kayit = islem.KullaniciSil(this.kullaniciid);
            if (kayit > 0)
                return "Kullanici silindi ";
            else
                return "Kullanici silerken hata olustu";
        }


        public string KullaniciGuncelle()
                {
                    KullaniciIslemleri islem = new KullaniciIslemleri();
                    int kayit = islem.KullaniciGuncelle(this.kullaniciid,
        this.kullaniciadi, this.kullanicisifre);
            if (kayit > 0)
                return "Kullanici guncellendi";
            else
                return "Kullanici guncellerken hata ile karsilasildi";
        }

        public DataTable Listele()
        {
            KullaniciIslemleri islem = new KullaniciIslemleri();
            return islem.Listele();
        }

    }
}
```

Musteri.cs

```
    public class Musteri
        {
            private int musteriid;
            private string musteriAd;
            private string musteriSoyad;
            private string musteriTc;
            private string musteriCepNo;
            private char musteriCinsiyet;
            private string musteriMail;
            private string musteriAdres;
            private string musteriNot;
            private bool aktif;
```

```
public int MusteriId
{
    get { return musteriid; }
    set { musteriid = value; }
}


public string MusteriAd
{
    get { return musteriAd; }
    set { musteriAd = value; }
}


public string MusteriSoyad
{
    get { return musteriSoyad; }
    set { musteriSoyad = value; }
}


public string MusteriTc
{
    get { return musteriTc; }
    set { musteriTc = value; }
}


public string MusteriCepNo
{
    get { return musteriCepNo; }
    set { musteriCepNo = value; }
}


public char MusteriCinsiyet
{
    get { return musteriCinsiyet; }
    set { musteriCinsiyet = value; }
}


public string MusteriMail
{
    get { return musteriMail; }
    set { musteriMail = value; }
}


public string MusteriAdres
{
    get { return musteriAdres; }
    set { musteriAdres = value; }
}


public string MusteriNot
{
    get { return musteriNot; }
    set { musteriNot = value; }
}
```

```
        public bool Aktif
        {
            get { return aktif; }
            set { aktif = value; }
        }

        public string MusteriEkle()
        {
            MusteriIslemleri islem = new MusteriIslemleri();
            int kayit = islem.MusteriEkle(this.musteriAd, this.musteriSoyad,
this.musteriTc, this.musteriCepNo, this.musteriCinsiyet, this.musteriMail,
this.musteriAdres, this.musteriNot, this.aktif);
                if (kayit > 0)
                    return "Kayıt islemi basarılı";
                else
                    return "Kayıt işleminde hata oluştu!! (Aynı T.C'li müşteri var
veya T.C numarası karalistede var)";
           }

        public string MusteriSil()
        {
            MusteriIslemleri islem = new MusteriIslemleri();
            int kayit = islem.MusteriSil(this.musteriid);
            if (kayit > 0)
                return "Silme islemi basarili";
            else
                return "Hata olustu";
        }

            public string MusteriGuncelle()
            {
            MusteriIslemleri islem = new MusteriIslemleri();
            int kayit = islem.MusteriGuncelle(this.musteriid, this.musteriAd,
this.musteriSoyad, this.musteriTc, this.musteriCepNo, this.musteriCinsiyet,
this.musteriMail, this.musteriAdres, this.musteriNot, this.aktif);
            if (kayit > 0)
                return "Guncelleme islemi basarili";
            else
                return "Guncelleme yaparken hata olustu";
            }

        public DataTable MusteriListele()
        {
            MusteriIslemleri islem = new MusteriIslemleri();
            return islem.Listele();
        }

        public string KaraListeEkle(int musteriId, string metin)
        {
            MusteriIslemleri islem = new MusteriIslemleri();
            int kayit = islem.MusteriKaraListeEkle(musteriId, metin);
            if (kayit > 0)
                return "Kayıt islemi basarılı";
            else
                return "Hata";
        }

        public string KaraListeSilme(int musteriId)
        {
            MusteriIslemleri islem = new MusteriIslemleri();
            int kayit = islem.MusteriKaraListeSil(musteriId);
            if (kayit > 0)
                return "Silme islemi basarılı";
            else
                return "Hata";
        }
}
```

13. REFERENCES

Software Reference

➔ Swatik Accounting And Inventory Software

High-tech Software, Kalimati

➔ Inventory Management Software

Sagar International, Balkhu

Website

Visual Studio Official Site: https://msdn.microsoft.com/en-us/library/dd492171.aspx

14. VIDEO

Since my project videos are not displayed properly in word, they are in the Graduation Project Folder. Thank you for your understanding.