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Computer Shop Management System

UNDERGRADUATE PROJECT

Submitted in partial fulfillment of the requirements of software development project (SDP)- 1 for the degree of B.Sc. Engg. in CSE

UNDER SUPERVISION OF:

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Declaration of Authorship

We, **Niamul Hassan Samin, Renu Akter Sweety, Anika Ibnat Ema, Shahriar Alom Fahim** declare that this project titled, "**COMPUTER SHOP AND MANAGEMENT SYSTEM**" and the work presented in it are our own. We confirm that:

- This work was done wholly or mainly while in candidature for a B.Sc Engineering in CSE degree at this University.
- Where any part of this software development project has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated.
- Where we have consulted the published work of others, this is always clearly attributed.
- Where we have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely our own work.
- We have acknowledged all main sources of help.
- Where the thesis is based on work done by ourself jointly with others, we have made clear exactly what was done by others and what we have contributed myself.

Certificate

This is to certify that the project entitled, ”COMPUTER SHOP AND MANAGEMENT SYSTEM” and submitted by “**Niamul Hassan Samin, Renu Akter Sweety, Anika Ibnat Ema, Shahriar Alom Fahim**, ID no**: 21224103004, 21224103045, 21224103187, 21224103036** in partial fulfillment of the requirements of embodies the work done by them under my supervision.

Dedication

Dedicated to our parents for all their love and inspiration.

Summary

This project is based on a computer shopping system for an existing computer shop. The project objective is to deliver the shopping system.

This project is an attempt to provide the advantages of shopping to customers of a computer real shop. It helps buying the products and technologies in the shop anywhere through internet by using an android device. Thus, the customer will get the service of online shopping and home delivery from his favorite shop. This system can be implemented to any shop in the locality or to multinational branded computer shops having retail outlet chains. If shops are providing an online portal where their customers can enjoy easy shopping from anywhere, the shops won't be losing any more customers to the trending online shops such as flip cart or eBay. Since the application is available in the Smartphone it is easily accessible and always available

Acknowledgements

We are thankful and expressing our gratefulness to Almighty Allah who offers us His divine blessing, patient, mental and physical strength to complete this project work.

We take this opportunity to express my gratitude to all those people who have been directly and indirectly with me during the completion of this project. We pay a special thanks to our guide, Partho Ghosh, who has given guidance and a light to us during this project.

A very special gratitude goes out to all our friends for their support and help to implement our works. The discussions with them on various topics of our works have been very helpful for us to enrich our knowledge and conception regarding the work.

Approval

This project "**COMPUTER SHOP AND MANAGEMENT SYSTEM**" Submitted by "**Niamul Hassan Samin, Renu Akter Sweety, Anika Ibnat Ema, Shahriar Alom Fahim,** ID**: 21224103004, 21224103045, 21224103187, 21224103036** Department of Computer Science and Engineering (CSE), Bangladesh University of Business and Technology (BUBT) under the supervision of **Partho Ghosh**;Lecturer, Department of Computer Science and Engineering has been accepted as satisfactory for the partial fulfillment of the requirement for the degree of Bachelor of Science (B.Sc. Engg.) in Computer Science and Engineering and approved as to its style and contents.

Contents

Chapter 1

Introduction

1. Introduction

Online shopping is the process whereby consumers directly buy goods or services from a seller in real-time, without an intermediary service, over the Internet. It is a form of electronic commerce. An online shop, e-shop, e-store, internet shop, web shop, online store, or virtual store evokes the physical analogy of buying products or services at a bricks-and-mortar retailer or in a shopping center. The process is called Business- to Consumer (B2C) online shopping.
This is a small project for Easy Online Shopping system for computer related products. The basic idea is that customers can buy computer products using online. The Easy Online Shopping system enables vendors to setup online shops, customers to browse through the shops and a system administrator to approve and maintain lists of shop categories. Also, on the feature is designing an online shopping site to manage the product in the shop and help customers to buy computer products, online without having to visit the shop physically.

1.1 Overview

The project eases the Online Shopping enables customer to buy products from anywhere through online. This system advertises some of the products for shopping in many other websites. To buy products, customer do not to create an account. They just enter their personal mobile number. The system administrator checks the number and contact with the customer that what they want, how they buy the product or need a home delivery.

1.2.1 Background

In the system you get many types of category of the products. Customer's choice their product and buy the product from the online shop. They can get the product from by home delivery. They get a discount if they buy a product via the system. The users also see the discount news where the discount products are shown. They see the product via the system and buy the product and get discount.

1.2.2 Benefits and Beneficiaries

Online shopping has become a popular shopping method ever since the internet has declared a takeover. There are many individuals that are looking for other amazing alternatives shopping and online shipping is just the fix for that. There are many advantages of online shopping, this is the reason why online stores are a booming business today.

Better price: Cheap deals and better prices are available online, because products come to you direct from the seller without involving middlemen. It is easier to compare prices and find a better dealing. No Crowd: If you hate crowds when you are shopping. During holidays, festivals, in the shopping center there can be a huge headache. All of these problems can be avoided if you buy your product from online. For this you can get many types of categories and brand in the system. Saves Time: The online shopping saves your value-able time. If you busy all time in seven days a week, the best option to shopping is online shopping. The system saves your time and you get your choice-able product from home. Easy Prices Comparison: You can get many types of products from online and you can compare your products prices so much easier from online. So, shopping from online you can get best prices with the links. By the system the all over the country people will get the best value of the product and they saves their value-able time. They can buy product with lower prices.

1.2.3 Goals

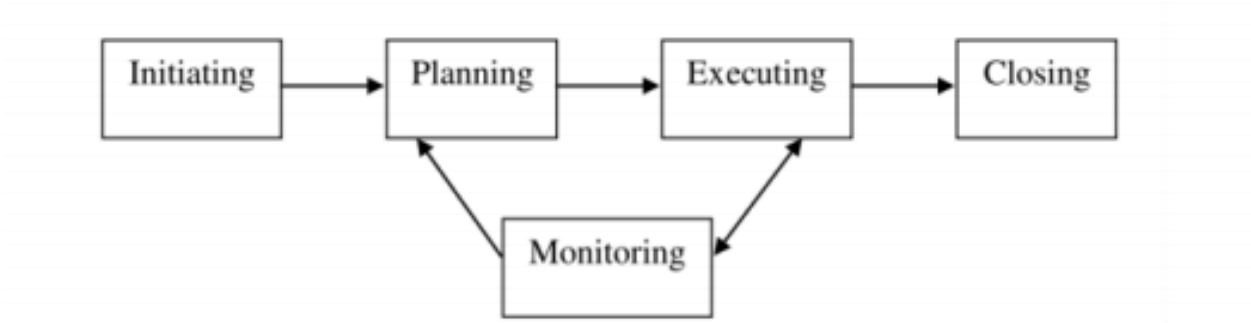
Users get their choice-able computer products from home or they can buy the product from shop. They know the product prices from online and they comparison the prices with other shopping center.

Chapter 2

Project Work Review

2.1 Project Database

Project management skills are put to good use for this project. Having gone through project management modules in Time Series Analysis, Optimization and with two interns Project Management for Business and IT respectively, they enhanced my knowledge on managing a project. Project management focuses on achieving the objectives by applying five processes presented in Figure below.



2.2 Data Collection

Every customer must provide their basic information for buying any product. Collecting information about customers allows companies to understand their interests and needs better. There are a variety of methods for collecting data, and it's hard to choose the best one.

2.3 Choosing Product.

Every customer will have the right to choose the product of their choice. There is a perfect display of the product so that, customer can easily select the products. In retail business, products are highlighted in demand as per customer needs. Products are kept in display after analyzing the demand and to help customers select the required product. This can be done by identifying products and developing an effective product list. Further to specify, customization of products depends upon the skills to sort and narrow down choices using categories varying upon the demands and necessity of the products.

2.3.1 Add product.

After choosing the product if customer want to buy something else than, they can easily add their product with previous selection. After adding another product, they also get the option to add more products and they will also get the final bill.

2.3.2 Delete product.

After choosing the product if customer want to delete any product in the selected list, they can easily add their product with previous selected list.

If no longer they need a product, they can cancel it to delete the product from choosing product list. We'll send them a confirmation massage and send the product name which they want to delete their choosing product list, and they must answer the massage. After customer reply, we'll delete the product and its files.

2.4 Final Cost

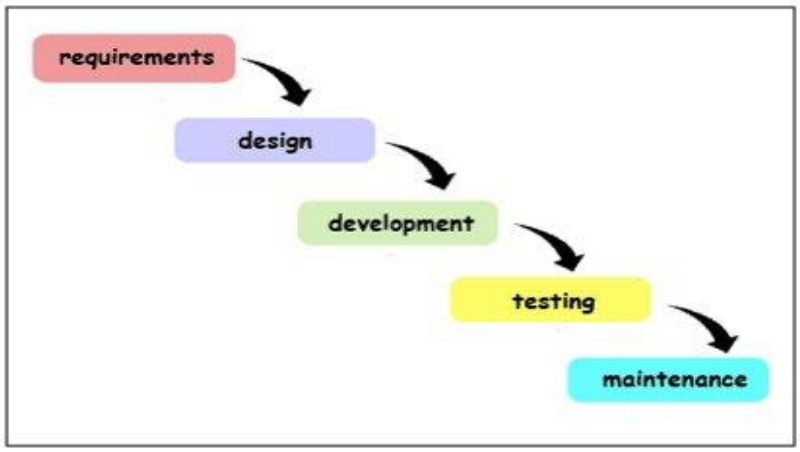
When customer select their product, they get a bill for their selected products. If they delete or add new product in their product list, after adding or delete the product, customer will have their final selected product list, product name, product quantity and total cost for their selected product. If they cancel any service, they will receive a final bill. Due to the billing cycles, they may get more than one closing bill before their account is completely closed.

Chapter 3

Resources

3.1 System Development Life Cycle (SDLC)

Systems development life cycle is composed of a number of clearly defined and distinct work phases which are used by systems engineers and systems developers to plan for, design, build, test, and deliver information systems. Like anything that is manufactured on an assembly line, an SDLC aims to produce high-quality systems that meet or exceed customer expectations, based on customer requirements, by delivering systems which move through each clearly defined phase, within scheduled time frames and cost estimates. Computer systems are complex and often (especially with the recent rise of service-oriented architecture) link multiple traditional systems potentially supplied by different software vendors. To manage this level of complexity, a number of SDLC models or methodologies have been created, such as waterfall, spiral, Agile software development, rapid prototyping, incremental, and synchronize and stabilize.



There are five phases in this model and the first phase is the planning stage. The planning stage determines the objectives of the project and whether the project should be given the green light to proceed. This is where the proposal submission comes into picture. After obtaining the approval, the next phase is analysis. Gathering and analyzing the system and user requirements is essential for entry to the design step.

In systems design, the design functions and operations are described in detail, including screen layouts, business rules, process diagrams, and other documentation. The output of this stage will describe the new system as a collection of modules or subsystems.

The design stage takes as its initial input the requirements identified in the approved requirements document. For each requirement, a set of one or more design elements will be produced because of interviews, workshops, and/or prototype efforts.

With the user requirements gathering completed, there is a need to prepare the resources for the project. Be it software or hardware components, careful consideration and selection is to be taken care at this stage. The decision on the appropriate resources to be used is further elaborated under the subsections below. The next step is to design the system and database structure.

Results from the analysis and preparation that were concluded from the previous stage are put into action. With the user requirements in mind, the flow of the system is planned, and the user interface is designed to suit their easy navigation needs. In addition, the number of tables, attributes, primary and unique keys of the database is listed.

After completing the design, actual coding begins. Database is created and codes are written. Some of the codes required amendments and improvement to it so these are being developed at this fourth stage of the waterfall model. With the development completed, testing will begin. The codes and database are tested to ensure the results obtained are as intended. More time is spent on both development and testing stages because it is inevitable to have errors and issues and buffer time is allocated for troubleshooting.

Chapter 4

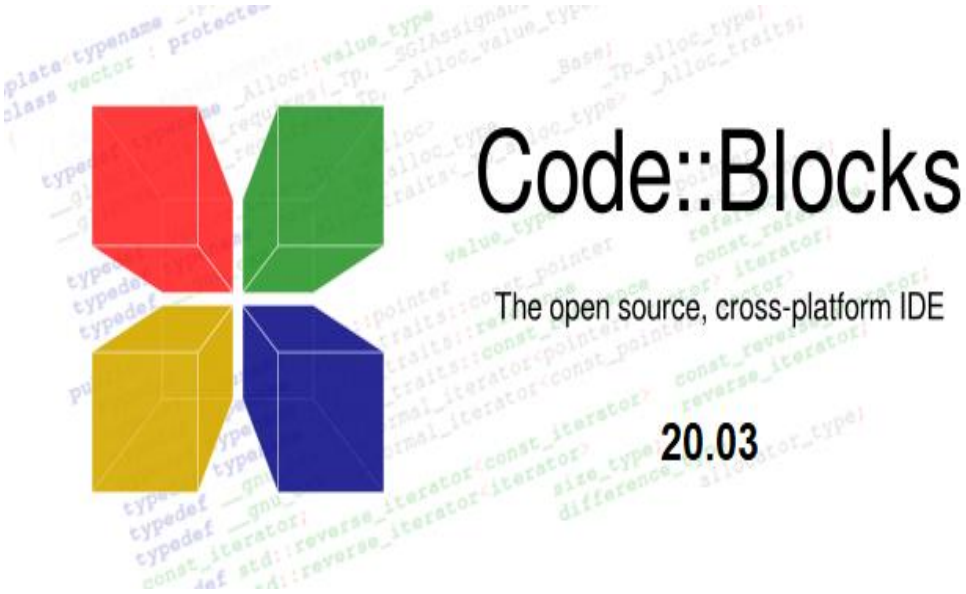
Technologies

4.1 Software

4.1.1 Code::Blocks

Code::Blocks is an open-source IDE that uses C, C++, and Fortran coding languages. The main functionality of the program is the focus around a plugin-based extension platform enabling each coder to develop the software in the way that they want to. The software was made in C++ and operates as a GUI tool.

Code Blocks is an excellent option for programming in C++. It is an open-source, integrated, cross-platform development environment that supports the use of multiple compilers, such as: GCC (MingW/GNU GCC), MSVC, Digital Mars, Borland C++ 5.5, and Open Wacom. The default compiler that this Code Blocks packet comes with is MinGW.



Code Blocks' functionality can be expanded by using plugins. It has a fast, customized construction system that doesn't require make files, and allows you to perform parallel constructions on systems with a multi-core CPU.

Code Block's debugger supports the application of breakpoints on the source code, or on the data that the program handles, as well as the establishment of conditions and counters for said breakpoints. You can also create defined inspections by user. Another noteworthy feature are the custom memory dumps.
Lastly, Code Blocks colors the source-code syntax, includes a 'code folding' function for C++ and XML languages, has a tabbed interface, comes with a class browser, and a feature for completing the source-code.

4.2 Programming Language

4.2.1 C Language

The **C programming language** is a computer programming language that was developed to do system programming for the operating system UNIX and is an imperative programming language. C was developed in the early 1970s by Ken Thompson and Dennis Ritchie at Bell Labs. It is a procedural language, which means that people can write their programs as a series of step-by-step instructions. C is a compiled language.

Because the ideas behind C are kept close to the design of the computer, the compiler (program builder) can generate machine code/native code for the computer. Programs built in machine code are very fast. This makes C a good language for writing operating systems. Many operating

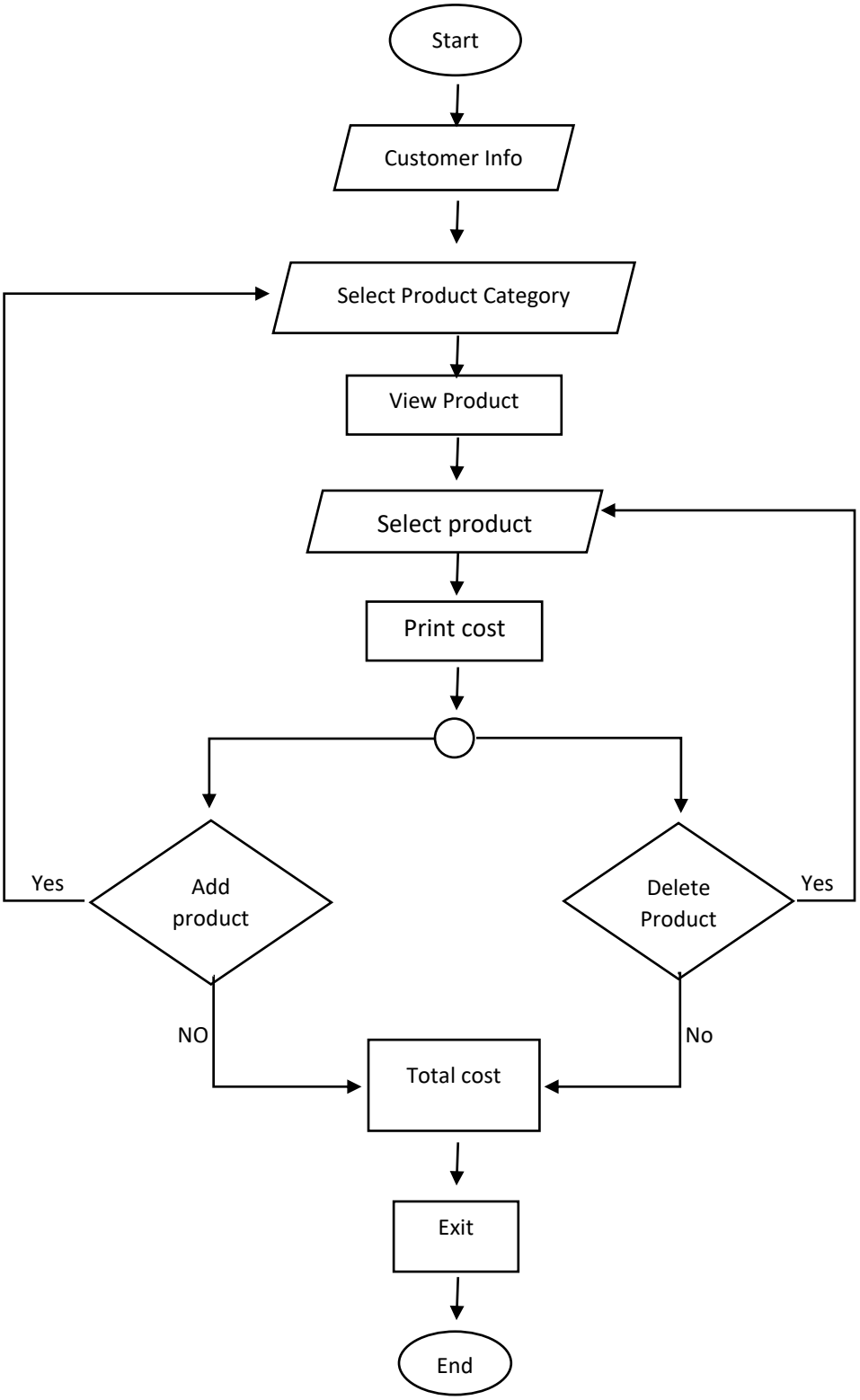
systems, including Linux and UNIX, are programmed using this language. The language itself has very few keywords, and most things are done using libraries, which are collections of code for them to be reused. C is available for many different types of computers. This is why C is called a "portable" language. A program that is written in C and that respects certain limitations can be compiled for many different platforms. The syntax of C has also influenced many other programming languages, such as C++, C#, and Java, and many more programming languages we use nowadays.

C is a general-purpose, procedural computer programming language supporting structured programming, lexical variable scope, and recursion, with a static type system. By design, C provides constructs that map efficiently to typical machine instructions. It has found lasting use in applications previously coded in assembly language. Such applications include operating systems and various application software for computer architectures that range from supercomputers to PLCs and embedded systems.

A successor to the programming language B, C was originally developed at Bell Labs by Dennis Ritchie between 1972 and 1973 to construct utilities running on Unix. It was applied to re-implementing the kernel of the Unix operating system. During the 1980s, C gradually gained popularity. It has become one of the most widely used programming languages, with C compilers from various vendors available for the majority of existing computer architectures and operating systems. C has been standardized by the ANSI since 1989 (ANSI C) and by the International Organization for Standardization (ISO).

Chapter 5
System Design

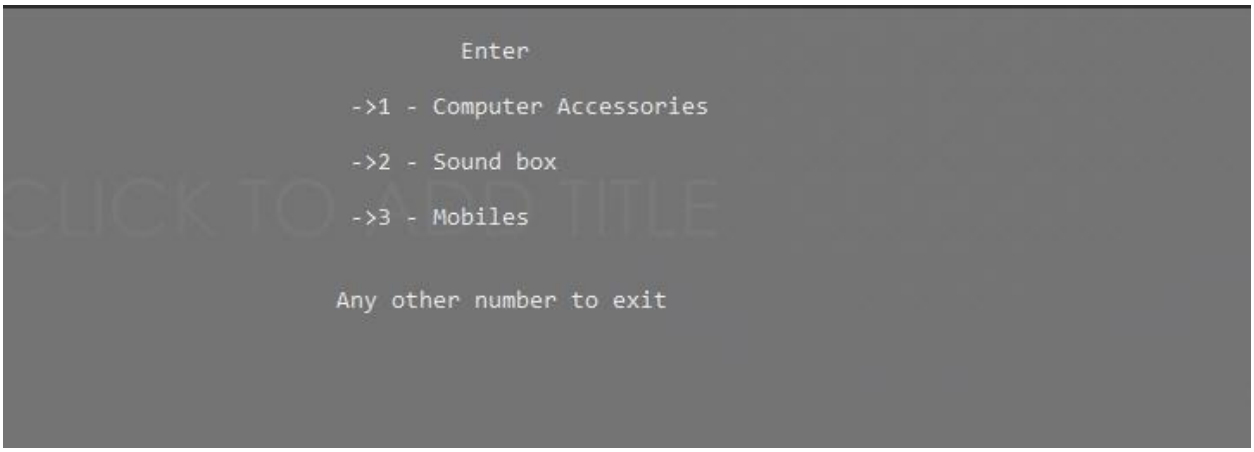
5.1 Flow Chart



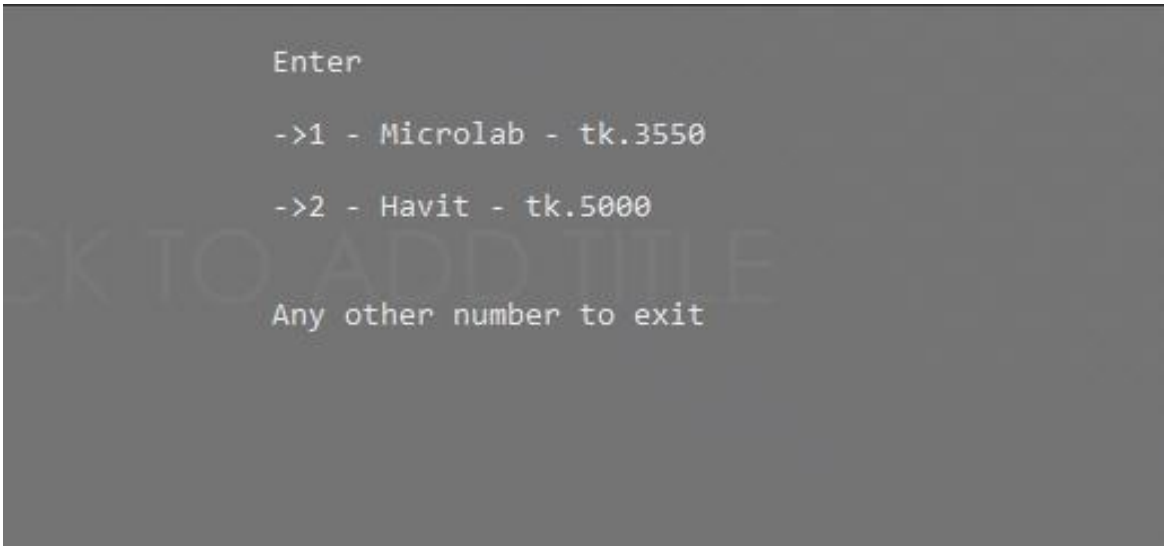
5.2 Screenshot with Project Details

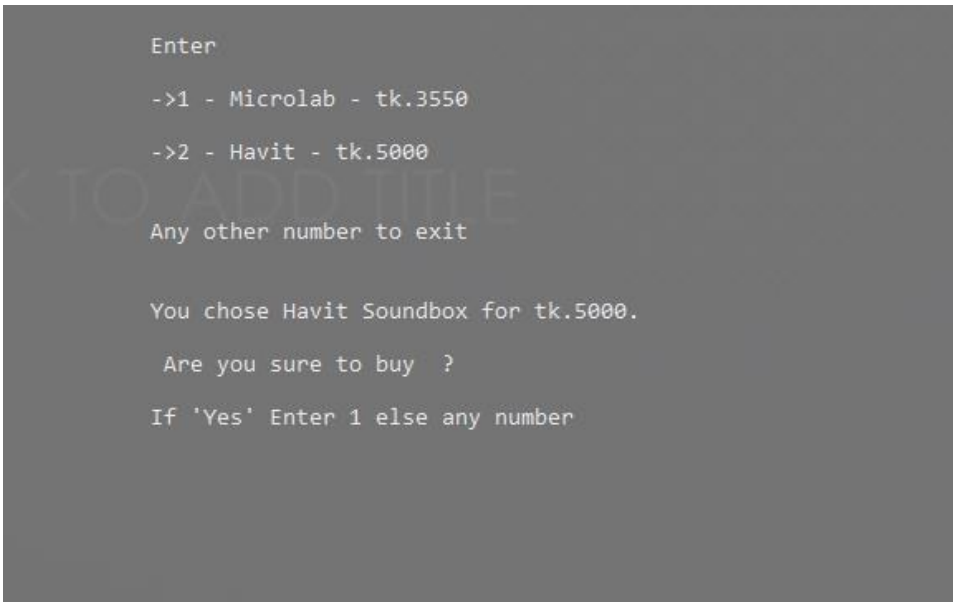
5.2.1 User Info

5.2.2 Product Category



5.2.3 Select Product.

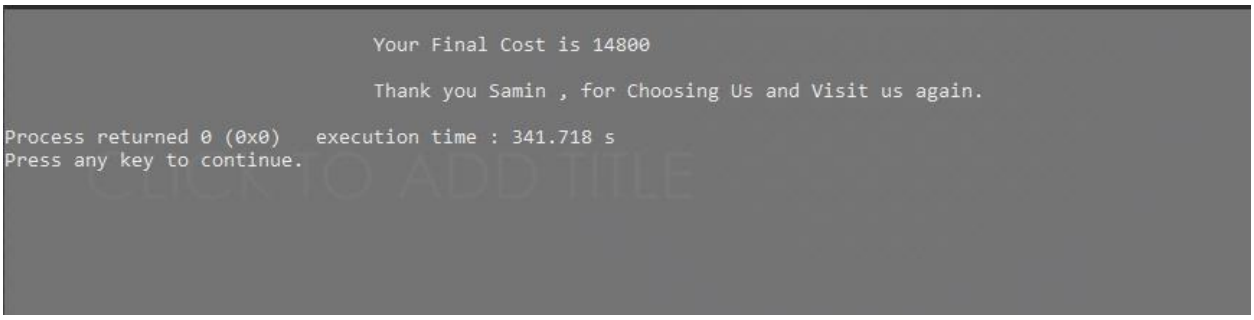




5.2.4 Add product

5.2.5 View Total Cost

5.2.6 Exit



Chapter 6

Code Analysis

6.1 CODE

```
#include<stdio.h>
#include<string.h>
#include <conio.h>
int main()
{
    char str[100];
    char address[50];
    char phn_num[11];
    int age,i,j,choice,c=1,a[6],cost[6];
    for(i=0; i<6; i++)
        a[i]=0;
    static int totalCost;

    char items[6][100]= {"Sandisk 32 GB",
                         "Logitech Mouse",

                         "Microlab",
                         "Havit",

                         "Mi Note 12",
                         "Samsung Galaxy S22",

                        };
    printf("\t\t\t\t\t----------------------------------------------\n");
    printf("\t\t\t\t\t----------------------------------------------\n");
```

```
printf("\n\t\t\t\t\t\t**********->WELCOME<-***********\n");
printf("\n\t\t\t\t\t----------------------------------------------\n");
printf("\t\t\t\t\t----------------------------------------------\n");
printf("\n\t\t\t\t\t\t::Please Enter Your info:: \n" );
{
    FILE *fptr;
    fptr = fopen("Customer info.txt", "w+");

    printf("\n\t\t\t\t\tPlease Enter Your Name : ");
    scanf("%s",&str);
    fprintf(fptr, "\nCustomer Name  = %s", str);

    printf("\n\t\t\t\t\tPlease Enter Your age : ");
    scanf("\t\t\t\t%d",&age);
    fprintf(fptr, "\nAge = %d", age);


    printf("\n\t\t\t\tEnter present address :");
    scanf("%s", &address);
    fprintf(fptr, "\nAddress  = %s",address);

    printf("\n\t\t\t\tEnter Your Mobile number :");
    scanf("%s", &phn_num);
    fprintf(fptr, "\nPhone number = %s ", phn_num);

    fclose(fptr);
    system("cls");
}

do
{
    if(c==1)
```

```
    {
        printf("\n\t\t\t\t\t Enter\n \n\t\t\t\t ->1 - Computer Accessories\n\n\t\t\t\t ->2 - Sound box\n \n\t\t\t\t ->3 - Mobiles\n\n\n\t\t\t\tAny other number to exit\n");
        scanf("%d",&choice);
        system("cls");
        switch(choice)
        {
        case 1:
        {
            int accessoriesChoice;
            printf("\n\t\t\t\tEnter\n\n\t\t\t\t ->1 - Sandisk 32 GB - tk.355\n \n\t\t\t\t->2 - Logitech Mouse- tk.500\n\n\n\t\t\t\tAny other number to exit\n");
            scanf("%d",&accessoriesChoice);
            cost[0]=355;
            cost[1]=500;
            system("cls");
            switch(accessoriesChoice)
            {
            case 1:
            {
                int num;
                printf("\n\t\t\t\tYou chose Sandisk 32GB with tk .355. \n\n\t\t\t\t Are you sure to buy  ? \n\n\t\t\t\tIf 'Yes' Enter 1 else any number\n");
                scanf("%d",&num);
                if(num==1)
                {
                    a[0]++;
                    totalCost+=355;
                }
                printf("\n\t\t\t\tYour Cost in Cart is: %d\n",totalCost);
                system("cls");
                break;
```

```
            }
            case 2:
            {
                int num;
                printf("\n\t\t\t\tYou chose Logitech Mouse with tk.500.\n\n\t\t\t\tAre you sure to buy ? \n\n\t\t\t\t
If 'Yes' Enter 1 else any number \n");
                scanf("%d",&num);
                if(num==1)
                {
                    a[1]++;
                    totalCost+=500;
                }
                printf("\n\t\t\t\tYour Cost in Cart is %d\n",totalCost);
                system("cls");
                break;
            }
            default:
            {
                printf("\n\t\t\t\tExit from Computer Accesories\n");
                break;
            }
            }
            break;
        }
        case 2:
        {
            int soundboxchoice;
            printf("\n\t\t\t\tEnter\n\n\t\t\t\t->1 - Microlab - tk.3550\n\n\t\t\t\t->2 - Havit - tk.5000\n\n\n\t\t\t\tAny
other number to exit\n");
            scanf("%d",&soundboxchoice);
            cost[2]=3550;
            cost[3]=5000;
```

```
            switch(soundboxchoice)
            {
            case 1:
            {
                int num;
                printf("\n\t\t\t\tYou chose  Microlab soundbox  for tk.3550.\n\n\t\t\t\t Are you sure to buy ? \n\n\t\t\t\tIf 'Yes' Enter  1 else any number\n");
                scanf("%d",&num);
                if(num==1)
                {
                    a[2]++;
                    totalCost+=3550;
                }
                printf("\n\t\t\t\tYour Cost in Cart is %d\n",totalCost);
                system("cls");
                break;
            }
            case 2:
            {
                int num;
                printf("\n\t\t\t\tYou chose Havit Soundbox for tk.5000.\n\n\t\t\t\t Are you sure to buy  ? \n\n\t\t\t\tIf 'Yes' Enter 1 else any number\n");
                scanf("%d",&num);
                if(num==1)
                {
                    a[3]++;
                    totalCost+=5000;
                }
                printf("\n\t\t\t\tYour Cost in Cart is %d\n",totalCost);
                system("cls");
                break;
```

```
            }
            default:
            {
                printf("\n\t\t\t\tExit from Shoes Category\n");
                break;
            }
            }
            break;
        }
        case 3:
        {
            int mobileChoice;
            printf("\n\t\t\t\tEnter\n\n\t\t\t\t->1 - Mi Note 12 - tk.11000\n\n\t\t\t\t->2 - Samsung Galaxy S22 - tk.9866\n\n\n\t\t\t\tAny other number to exit\n");
            scanf("%d",&mobileChoice);
            cost[4]=11000;
            cost[5]=9866;
            system("cls");
            switch(mobileChoice)
            {
            case 1:
            {
                int num;
                printf("\n\t\t\t\tYou chose to buy Mi Note 12 for tk.11000.\n\n\t\t\t\t Are you sure to buy ? \n\n\t\t\t\tIf 'Yes' Enter 1 else any number\n");
                scanf("%d",&num);
                if(num==1)
                {
                    a[4]++;
                    totalCost+=11000;
                }
                printf("Your Cost in Cart is %d\n",totalCost);
```

```
            system("cls");
            break;
        }
        case 2:
        {
            int num;
            printf("\n\n\t\t\t\t\t You chose to buy Samsung Galaxy S22 for tk.9866.\n\n\t\t\t\t  Are you sure to buy  ? \n\n\t\t\t\tIf 'Yes' Enter 1 else any number\n");
            scanf("%d",&num);
            if(num==1)
            {
                a[5]++;
                totalCost+=9800;
            }
            printf("\n\t\t\t\tYour Cost in Cart is %d\n",totalCost);

            system("cls");
            break;
        }
        default:
        {
            printf("\n\t\t\t\tExit from Mobile Category\n");
            break;
        }
        }
        break;
    }
    default:
    {
        printf("\n\t\t\t\tEnter Valid Categories Choice\n");
        break;
    }
```

```
        }


        printf("\n\t\t\t\t\t\t %s's cart\n",str);
        printf("\t\t\t\t----------------------------------------------\n");


        printf("\n\t\t\t\tId\tItems\t\t\t\tQuantity\t\tCost\n");
        for(i=0; i<6; i++)
        {
            if(a[i]!=0)
            {
                printf("\n\t\t\t\t%d\t%s\t\t\t%d\t\t%d\n",i,items[i],a[i],(cost[i]*a[i]));
            }
        }
        printf("\n\n\t\t\t\tTotal Cost: %d\n",totalCost);
        printf("\n\n\t\t\t\tIf you wish to buy anything more Enter\n\n\t\t\t1 to Add Item\n\n\t\t\t2 to Delete
Items \n\n\n\t\t\t\t\nAny other number to Exit\n");
        scanf("%d",&c);
        system("cls");
    }
    if(c==2)
    {
        int id;
        printf("\n\n\t\t\tEnter id to delete item\n");
        scanf("%d",&id);
        if(id<9&&id>=0)
        {
            totalCost=totalCost-(cost[id]*a[id]);
            a[id]=0;
        }
        else
        {
            printf("\n\n\t\t\tEnter Valid id\n");
```

```
            }
            // printf("\n\t\t\t\tRevised Items \n");
            printf("\n\t\t\t\tId\tItems\t\t\t\tQuantity\t\tCost\n");
            for(i=0; i<6; i++)
            {
                if(a[i]!=0)
                {
                    printf("\n\t\t\t\t%d\t%s\t\t\t\t%d\t\t\t%d\n",i,items[i],a[i],(cost[i]*a[i]));
                }
            }
            printf("\nTotal Cost :%d\n",totalCost);
            printf("\n\n\t\t\t\tIf you wish to buy anything more Enter\n->1 to Add Item\n->2 to Delete Items
\n\n\n\t\t\t\tAny other number to Exit\n");
            scanf("%d",&c);
        }

    }
    while(c==1 || c==2);
    system("cls");
    printf("\n\t\t\t\tYour Final Cost is %d\n",totalCost);

    printf("\n\t\t\t\tThank you %s , for Choosing Us and Visit us again.\n",str);

}
```

Chapter 7

Conclusion & Future Work

7.1 conclusion

The project entitled Computer Shop and Management System was completed successfully. The system has been developed with much care and free of errors and at the same time it is efficient and less time consuming. The purpose of this project was to develop a web application and an android application for purchasing items from a shop.

This project helped us in gaining valuable information and practical knowledge on several topics like designing web pages using html & CSS, usage of responsive templates, designing of android applications, and management of database using MySQL. The entire system is secured. Also, the project helped us understanding about the development phases of a project and software development life cycle. We learned how to test different features of a project.

This project has given us great satisfaction in having designed an application which can be implemented to any nearby shops or branded shops selling various kinds of products by simple modifications.

There is a scope for further development in our project to a great extent. A number of features can be added to this system in future like providing moderator more control over products so that each moderator can maintain their own products. Another feature we wished to implement was providing classes for customers so that different offers can be given to each class. System may keep track of history of purchases of each customer and provide suggestions based on their history. These features could have implemented unless the time did not limited for us.

7.2 Future Work

- Want to increase facilities of this project.
- Want to add printing option.
- Want to develop graphical design.
- Want to remove all the limitation.