

**Computer and Laptop Accessories Management System**

**Submitted By:**

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**Submitted To:**

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**CS 161 Programming Fundamentals**

**Department of Computer Science**

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**Abstract:**

In this program, there will be three users.

1. Admin.
2. Employee.
3. Customer.

* Admin can add employees, delete employee, view the employees and view the available stock.
* Employee can add items category wise. There are two categories: “Computer” and “Laptop”. Employee can view all the added products, change the prices of products, sort the products in descending order and change the password of their account.
* Customer can view the available stock, place the order and pay the bill.

**Functional Requirement:**

There are three type of users:

1. Admin.
2. Employee
3. Customer

**For Admin:**

1. As a admin, I can add employees.
2. As a admin, I can view employees.
3. As a admin. I can delete employees.
4. As a admin, I can view the available stock.

**For Employee:**

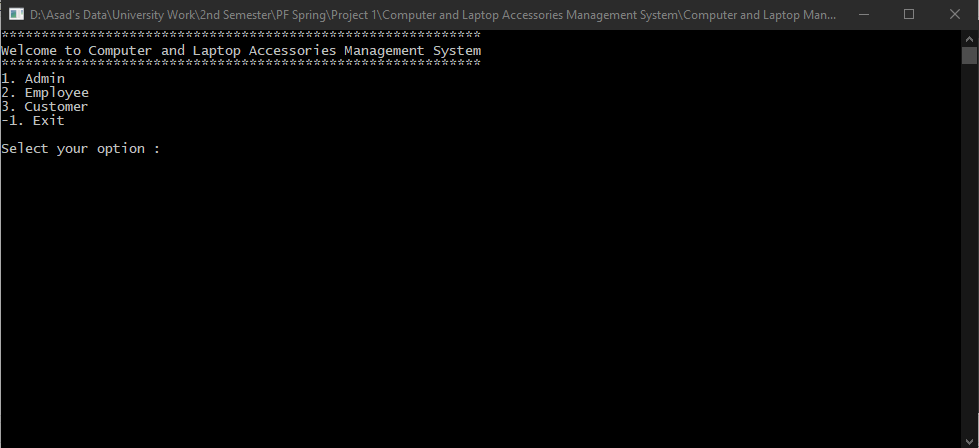
1. As a employee, I can add items category wise.
2. As a employee, I can view items category wise.
3. As a employee, I can change price of entered products.
4. As a employee, I can sort the products in descending order.
5. As a employee, I can change the password of account.

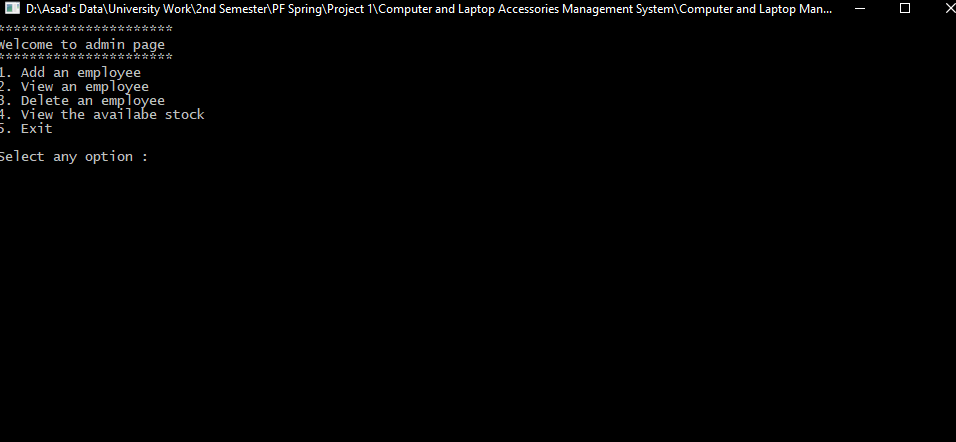
**For Customer:**

1. As a customer, I can view the available stock.
2. As a customer, I can place my order.
3. As a customer, I can pay the bill.

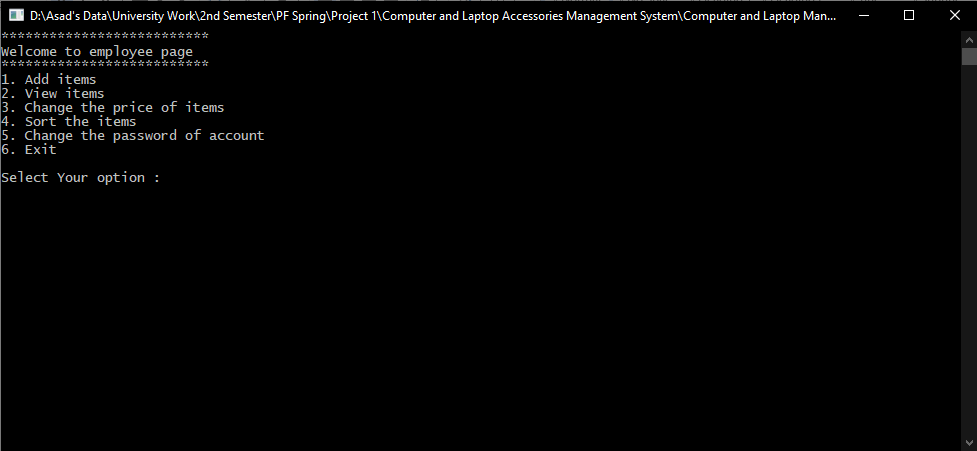
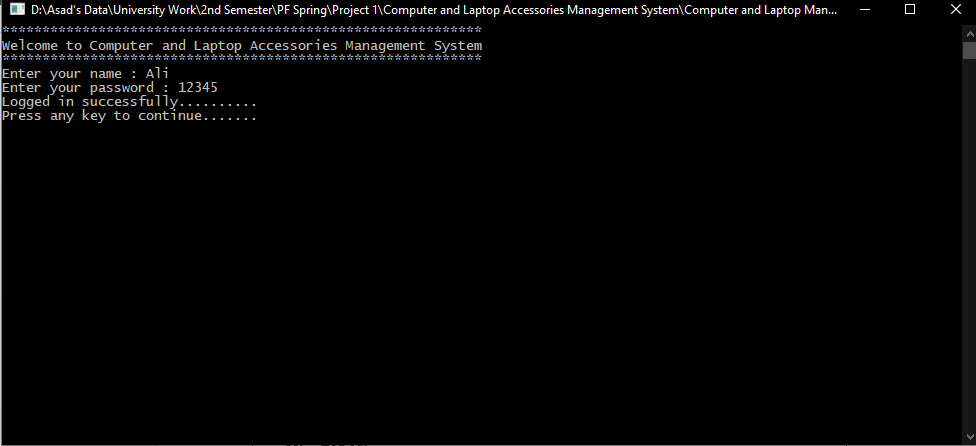
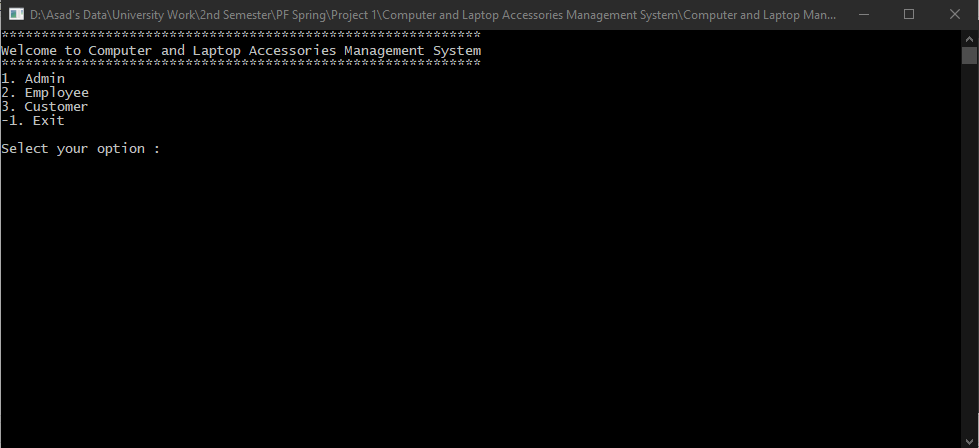
**Wireframes:**

**Admin:**

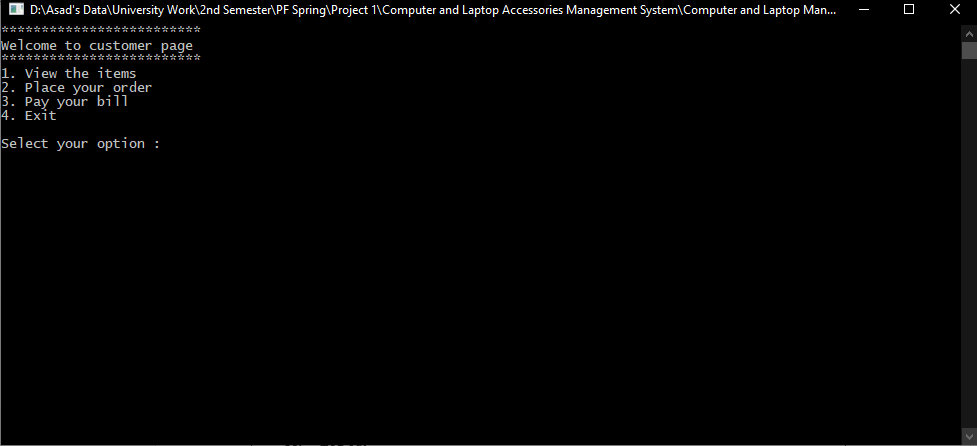
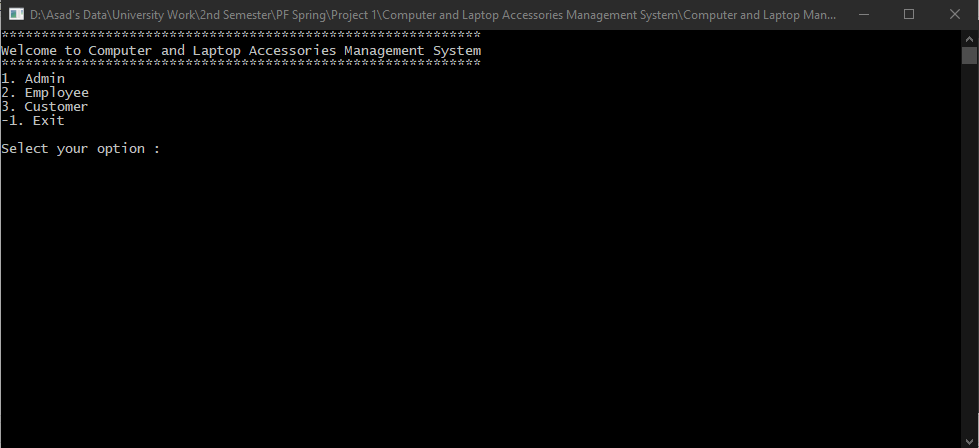
****



**Employee:**



**Customer:**



**Data Structure:**

Globally declared variables and arrays:

**Variables:**

int i=0;

int q=0;

int r=0;

int t=0;

int a=0;

int s=0;

int id3=0;

int id5=0;

string select;

string computer\_order\_item;

string laptop\_order\_item;

int computer\_order\_quantity;

int laptop\_order\_quantity;

**Arrays:**

string employee\_name[10];

string employee\_pass[10];

string employee\_cnic[10];

string computer\_items[10];

int computer\_price[10];

int computer\_quantity[10];

string laptop\_items[10];

int laptop\_price[10];

int laptop\_quantity[10];

string computerorder[10];

int computerquantity[10];

string laptoporder[10];

int laptopquantity[10];

**Functions:**

void main\_menu();

void admin(int option);

void admin\_welcome();

void add\_employee();

void view\_employee();

void delete\_employee();

void view\_stock();

void employee(int option);

void employee\_welcome();

void add\_items();

void view\_items();

void price\_change();

void sorting();

void password\_change();

void customer(int option);

void customer\_welcome();

void place\_the\_order(string select);

void pay\_the\_bill();

**Function Header and Description:**

void main\_menu();

This Function will display the main menu.

void admin(int option);

This Function will call entire admin port

void admin\_welcome();

This function will display admin welcome.

void add\_employee();

This Function will be used to add employees.

void view\_employee();

This function will be used to view all the added employees.

void delete\_employee();

This function will be used to deleted employee.

void view\_stock();

This function will display all the products added.

void employee(int option);

This function will call entire employee portion.

void employee\_welcome();

This function will display employee welcome.

void add\_items();

This function will used to add products category wise.

void view\_items();

This function will used to view products category wise.

void price\_change();

This function will used to change the price of products.

void sorting();

This function will sort all the products in descending order.

void password\_change();

This function will used to change the password of login account.

void customer(int option);

This function will be used to call entire customer portion.

void customer\_welcome();

This function will be used to display customer welcome.

void place\_the\_order(string select);

This function will be used to place order by customer.

void pay\_the\_bill();

This function will be used to pay the bill by customer.

**Flow Chart of all functions:**

Add\_employee();

View\_stock();

Delete\_employee();

View\_employee();

Sorting();

Change\_the\_password();

Change\_the\_price()

View\_items();

Add\_items();

Pay\_the\_bill();

Place\_the\_order();

View\_stock();

**Code:**

#include <iostream>

#include <conio.h>

#include <stdlib.h>

using namespace std;

// Functions

void main\_menu(); // to view the main menu(front of program)

void admin(int option); // that function is for entire admin portion

void admin\_welcome(); // this function ss to display admin welcome

void add\_employee(); // this function add employees

void view\_employee(); // this function view added employees

void delete\_employee(); // this function delete added employee

void view\_stock(); // this function show stock added by employee

void employee(int option); // this function is used to view entire employee portion

void employee\_welcome(); // this function is used to view employee welcome

void add\_items(); // this function is used to add stock by employee

void view\_items(); // this function is used to view stock added by employee

void price\_change(); // this function is used to change prices of products

void sorting(); // this function sort all the prodoucts in order

void password\_change(); // this function is used to change password of employee account

void customer(int option); // this function is for entire customer portion

void customer\_welcome(); // this function is to display customer welcome

void place\_the\_order(string select); // this function will take the order from customer

void pay\_the\_bill(); // this function will pay the customer bill

// Arrays

string employee\_name[10];

string employee\_pass[10];

string employee\_cnic[10];

string computer\_items[10];

int computer\_price[10];

int computer\_quantity[10];

string laptop\_items[10];

int laptop\_price[10];

int laptop\_quantity[10];

string computerorder[10];

int computerquantity[10];

string laptoporder[10];

int laptopquantity[10];

// Counters and variables

int i=0;

int q=0;

int r=0;

int t=0;

int a=0;

int s=0;

int id3=0;

int id5=0;

string select;

string computer\_order\_item;

string laptop\_order\_item;

int computer\_order\_quantity;

int laptop\_order\_quantity;

int main(){

main\_menu();

int option;

while(option!=-1){

cout<<"1. Admin "<<endl;

cout<<"2. Employee "<<endl;

cout<<"3. Customer "<<endl;

cout<<"-1. Exit "<<endl;

cout<<endl;

cout<<"Select your option : ";

cin>>option;

if(option==1){

admin(option); // this will call the admin function

}

if(option==2){

employee(option); // this will call employee function

}

if(option==3){

customer(option); // this will call customer function

}

}

}

void main\_menu(){

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<"Welcome to Computer and Laptop Accessories Management System"<<endl;

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

}

void admin\_welcome(){

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<"Welcome to admin page "<<endl;

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

}

void admin(int option){

system("CLS");

string user="Asad"; // admin fixed username

string pass="12345"; // admin fixed password

string userName;

string userPass;

main\_menu();

cout<<"Enter your name : ";

cin>>userName;

cout<<"Enter your password : ";

cin>>userPass;

if(userName==user && userPass==pass){ // this will check admin name and pass is correct or not

cout<<"Logged in successfully.........."<<endl;

cout<<"Press any key to continue....... "<<endl;

getch();

system("CLS");

admin\_welcome();

while(option!=5){

cout<<"1. Add an employee "<<endl;

cout<<"2. View an employee "<<endl;

cout<<"3. Delete an employee "<<endl;

cout<<"4. View the availabe stock "<<endl;

cout<<"5. Exit "<<endl;

cout<<endl;

cout<<"Select any option : ";

cin>>option;

if(option==1){

add\_employee(); // this will call add employee function

}

if(option==2){

view\_employee(); // this will call view employee function

getch();

system("CLS");

admin\_welcome();

}

if(option==3){

delete\_employee(); // this will call delete the employee function

getch();

system("CLS");

admin\_welcome();

}

if(option==4){

view\_stock(); // this will call view stock function

getch();

system("CLS");

admin\_welcome();

}

if(option==5){

system("CLS");

main\_menu();

}

}

}

else{

cout<<"Invalid uername or password......."<<endl;

cout<<"Try again ....."<<endl;

getch();

system("CLS");

main\_menu();

}

}

void add\_employee(){

system("CLS");

string agree;

admin\_welcome();

cout<<"There are some rules for the job. "<<endl;

cout<<"1. You have to come on time which is 9'o clock. "<<endl;

cout<<"2. Your job time will be 8 hours. "<<endl;

cout<<"3. You will get salary on 5 of every month and your salary will be fixed which is 15000. "<<endl;

cout<<endl;

cout<<"Are you agree to all the terms and conditions : ";

cin>>agree;

cout<<endl;

if(agree=="Yes"){

cout<<"Enter your name : ";

cin>>employee\_name[i];

cout<<"Enter your CNIC number : ";

cin>>employee\_cnic[i];

cout<<"Enter your password : ";

cin>>employee\_pass[i];

cout<<"Congratulations!!!You are hired....... "<<endl; // employee will be added one by one

getch();

q=i; // this counter will take index value

i++;

system("CLS");

admin\_welcome();

}

if(agree=="No"){

cout<<"Hope for your better future.Have a nice day "<<endl;

getch();

system("CLS");

admin\_welcome();

}

}

void view\_employee(){

system("CLS");

admin\_welcome();

cout<<"Employee Name"<<"\t"<<"CNIC Number"<<"\t"<<"Password"<<endl;

for(int k=0;k<=q;k++){

cout<<employee\_name[k]<<"\t"<<employee\_cnic[k]<<"\t"<<employee\_pass[k]<<endl;

}

}

void delete\_employee(){

system("CLS");

string name,cnic,password;

admin\_welcome();

cout<<"Enter your name : ";

cin>>name;

cout<<"Enter your CNIC number : ";

cin>>cnic;

cout<<"Enter your password : ";

cin>>password;

for(int w=0;w<=q;w++){

if(name==employee\_name[w] && cnic==employee\_cnic[w] && password==employee\_pass[w]){

cout<<"User deleted successfully ......"<<endl;

employee\_name[w]=" ";

employee\_cnic[w]=" ";

employee\_pass[w]=" ";

}

else if(name!=employee\_name[w] && cnic!=employee\_cnic[w] && password!=employee\_pass[w]) {

cout<<"User is not available....."<<endl;

}

}

}

void view\_stock(){

system("CLS");

admin\_welcome();

cout<<"Enter the category : ";

cin>>select;

if(select=="Computer"){

cout<<"Item Name "<<"\t"<<"Price "<<"\t"<<"Quantity"<<endl;

for(int y=0;y<=t;y++){

cout<<computer\_items[y]<<"\t"<<computer\_price[y]<<"\t"<<computer\_quantity[y]<<endl;

}

}

if(select=="Laptop"){

cout<<"Item Name "<<"\t"<<"Price "<<"\t"<<"Quantity"<<endl;

for(int y2=0;y2<=s;y2++){

cout<<laptop\_items[y2]<<"\t"<<laptop\_price[y2]<<"\t"<<laptop\_quantity[y2]<<endl;

}

}

}

void employee\_welcome(){

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<"Welcome to employee page "<<endl;

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

}

void employee(int option){

system("CLS");

string emp\_Name;

string emp\_Pass;

main\_menu();

cout<<"Enter your name : ";

cin>>emp\_Name;

cout<<"Enter your password : ";

cin>>emp\_Pass;

for(int e=0;e<=q;e++){

if(emp\_Name==employee\_name[e] && emp\_Pass==employee\_pass[e]){ // this will check employee username and password and then log in

cout<<"Logged in successfully.........."<<endl;

cout<<"Press any key to continue....... "<<endl;

getch();

system("CLS");

employee\_welcome();

while(option!=6){

cout<<"1. Add items "<<endl;

cout<<"2. View items "<<endl;

cout<<"3. Change the price of items "<<endl;

cout<<"4. Sort the items "<<endl;

cout<<"5. Change the password of account "<<endl;

cout<<"6. Exit "<<endl;

cout<<endl;

cout<<"Select Your option : ";

cin>>option;

if(option==1){

add\_items(); // this will call add items function

}

if(option==2){

view\_items(); // this will call view items function

getch();

system("CLS");

employee\_welcome();

}

if(option==3){

price\_change(); // this will call price change function

}

if(option==4){

sorting(); // this will call sorting of items function

getch();

system("CLS");

employee\_welcome();

}

if(option==5){

password\_change(); // this will call password change function

}

if(option==6){

system("CLS");

main\_menu();

}

}

}

else if(emp\_Name!=employee\_name[e] && emp\_Pass!=employee\_pass[e]){

cout<<"Invalid username or password......."<<endl;

getch();

system("CLS");

main\_menu();

}

}

}

void add\_items(){

system("CLS");

employee\_welcome();

string category;

cout<<"Enter the category : ";

cin>>category;

if(category=="Computer"){

cout<<"Enter the item : ";

cin>>computer\_items[r];

cout<<"Enter the price of item : ";

cin>>computer\_price[r];

cout<<"Enter the quantity : ";

cin>>computer\_quantity[r];

t=r; // this will store index value

r++;

cout<<"Item added successfully ....."<<endl; // items will be added one by one

}

if(category=="Laptop"){

cout<<"Enter the item : ";

cin>>laptop\_items[a];

cout<<"Enter the price of item : ";

cin>>laptop\_price[a];

cout<<"Enter the quantity : ";

cin>>laptop\_quantity[a];

s=a; // this will store index value

a++;

cout<<"Item added successfully ....."<<endl;

}

getch();

system("CLS");

employee\_welcome();

}

void view\_items(){

system("CLS");

employee\_welcome();

cout<<"Enter the category : ";

cin>>select;

if(select=="Computer"){

cout<<"Item Name "<<"\t"<<"Price "<<"\t"<<"Quantity"<<endl;

for(int y=0;y<=t;y++){

cout<<computer\_items[y]<<"\t"<<computer\_price[y]<<"\t"<<computer\_quantity[y]<<endl;

}

}

if(select=="Laptop"){

cout<<"Item Name "<<"\t"<<"Price "<<"\t"<<"Quantity"<<endl;

for(int y2=0;y2<=s;y2++){

cout<<laptop\_items[y2]<<"\t"<<laptop\_price[y2]<<"\t"<<laptop\_quantity[y2]<<endl;

}

}

}

void price\_change(){

system("CLS");

employee\_welcome();

int newprice;

int old\_price;

string item\_name;

cout<<"Enter the category : ";

cin>>select;

if(select=="Computer"){

cout<<"Enter name of item : ";

cin>>item\_name;

cout<<"Enter price of old price of item : ";

cin>>old\_price;

for(int u=0;u<=t;u++){

if(item\_name==computer\_items[u] && old\_price==computer\_price[u]){ // this will check entered name and price is same as added

cout<<"Enter the new price of item : ";

cin>>newprice;

cout<<"Price of item is changed successfully...."<<endl;

getch();

computer\_price[u]=newprice;

getch();

system("CLS");

}

}

}

if(select=="Laptop"){

cout<<"Enter name of item : ";

cin>>item\_name;

cout<<"Enter price of old price of item : ";

cin>>old\_price;

for(int o=0;o<=s;o++){

if(item\_name==laptop\_items[o] && old\_price==laptop\_price[o]){

cout<<"Enter the new price of item : ";

cin>>newprice;

cout<<"Price of item is changed successfully...."<<endl;

getch();

laptop\_price[o]=newprice;

getch();

system("CLS");

}

}

}

}

void sorting(){

system("CLS");

employee\_welcome();

int newarray[10];

for(int f=0;f<=t;f++){

newarray[f]=computer\_price[f];

}

int largesti=0;

int largest=0;

int copyarray[10];

largest=newarray[0];

for(int v=0;v<=t;v++){

for(int x=1; x<=t; x++){

if(largest<newarray[x]){

largest=newarray[x];

largesti=x;

}

}

copyarray[v]=largesti;

newarray[largesti]=-1;

largest=newarray[0];

largesti=0;

}

int newarray2[10];

for(int f2=0;f2<=s;f2++){

newarray2[f2]=laptop\_price[f2];

}

int largesti2=0;

int largest2=0;

int copyarray2[10];

largest2=newarray2[0];

for(int v2=0;v2<=s;v2++){

for(int x2=1; x2<=s; x2++){

if(largest2<newarray2[x2]){

largest2=newarray2[x2];

largesti2=x2;

}

}

copyarray2[v2]=largesti2;

newarray2[largesti2]=-1;

largest2=newarray2[0];

largesti2=0;

}

cout<<" Following are the computer items "<<endl;

cout<<"Item Name "<<"\t"<<"Price "<<"\t"<<"Quantity"<<endl;

for(int m=0;m<=t;m++){

int id=copyarray[m];

cout<<computer\_items[id]<<"\t"<<computer\_price[id]<<"\t"<<computer\_quantity[id]<<endl;

}

cout<<" Following are the laptop items "<<endl;

cout<<"Item Name "<<"\t"<<"Price "<<"\t"<<"Quantity"<<endl;

for(int m2=0;m2<=s;m2++){

int id2=copyarray2[m2];

cout<<laptop\_items[id2]<<"\t"<<laptop\_price[id2]<<"\t"<<laptop\_quantity[id2]<<endl;

}

}

void password\_change(){

system("CLS");

employee\_welcome();

string check\_pass;

string new\_pass;

cout<<"Enter your previous password : ";

cin>>check\_pass;

for(int id1=0;id1<=q;id1++){

if(check\_pass==employee\_pass[id1]){

cout<<"Enter your new password : ";

cin>>new\_pass;

employee\_pass[id1]=new\_pass;

cout<<"Your password is changed successfully....."<<endl;

getch();

system("CLS");

employee\_welcome();

}

else if(check\_pass!=employee\_pass[id1]){

cout<<"Wrong password ......"<<endl;

getch();

system("CLS");

employee\_welcome();

}

}

}

void customer\_welcome(){

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<"Welcome to customer page "<<endl;

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

}

void customer(int option){

system("CLS");

customer\_welcome();

while(option!=4){

cout<<"1. View the items "<<endl;

cout<<"2. Place your order "<<endl;

cout<<"3. Pay your bill "<<endl;

cout<<"4. Exit "<<endl;

cout<<endl;

cout<<"Select your option : ";

cin>>option;

if(option==1){

view\_stock(); // this will call view stock function

getch();

system("CLS");

customer\_welcome();

}

if(option==2){

place\_the\_order(select); // this will call place the order function

}

if(option==3){

pay\_the\_bill(); // this will call pay the bill function

getch();

system("CLS");

customer\_welcome();

}

if(option==4){

system("CLS");

customer\_welcome();

}

}

}

void place\_the\_order(string select){

system("CLS");

customer\_welcome();

cout<<"Select your category : ";

cin>>select;

if(select=="Computer"){

cout<<"Enter Your Item : ";

cin>>computer\_order\_item;

cout<<"Enter The Quantity : ";

cin>>computer\_order\_quantity;

for(int idx1=0;idx1<=t;idx1++){

if(computer\_order\_item==computer\_items[idx1]){

if(computer\_quantity[idx1]==0 || computer\_quantity[idx1]<computer\_order\_quantity){

cout<<"Sorry product is not available......";

}

else if(computer\_order\_quantity<=computer\_quantity[idx1]){

cout<<"Your order is added successfully......";

computerorder[idx1]=computer\_order\_item;

computerquantity[idx1]=computer\_order\_quantity;

computer\_quantity[idx1]= computer\_quantity[idx1]-computer\_order\_quantity;

id3++;

}

}

}

}

if(select=="Laptop"){

cout<<"Enter Your Item : ";

cin>>laptop\_order\_item;

cout<<"Enter The Quantity : ";

cin>>laptop\_order\_quantity;

for(int idx2=0;idx2<=s;idx2++){

if(laptop\_order\_item==laptop\_items[idx2]){

if(laptop\_quantity[idx2]==0 || laptop\_quantity[idx2]<laptop\_order\_quantity){

cout<<"Sorry product is not available......";

}

else if(laptop\_order\_quantity<=laptop\_quantity[idx2]){

cout<<"Your order is added successfully......";

laptoporder[idx2]=laptop\_order\_item;

laptopquantity[idx2]=laptop\_order\_quantity;

laptop\_quantity[idx2]= laptop\_quantity[idx2]-laptop\_order\_quantity;

id5++;

}

}

}

}

getch();

system("CLS");

customer\_welcome();

}

void pay\_the\_bill(){

system("CLS");

customer\_welcome();

int price1[10];

int price2[10];

int bill1=0,bill2=0,total=0;

for(int as1=0;as1<id3;as1++){

for(int as2=0;as2<=t;as2++){

if(computerorder[as1]==computer\_items[as2]) {

price1[as1]=computer\_price[as2]\*computerquantity[as1];

}

}

}

for(int b1=0;b1<id3;b1++){

bill1+=price1[b1];

}

for(int as3=0;as3<id5;as3++){

for(int as4=0;as4<=s;as4++){

if (laptoporder[as3]==laptop\_items[as4]) {

price2[as3]=laptop\_price[as4]\*laptopquantity[as3];

}

}

}

for(int b2=0;b2<id5;b2++){

bill2+=price2[b2];

}

cout<<"Following is the bill for computer items "<<endl;

cout<<endl;

cout<<"Name Of Items"<<"\t"<<"Quantity"<<"\t"<<"Price"<<endl;

for(int id4=0;id4<id3;id4++){

cout<<computerorder[id4]<<"\t"<<computerquantity[id4]<<"\t"<<price1[id4]<<endl;

}

cout<<"Your computer product bill is : "<<bill1<<endl;

cout<<endl;

cout<<"Following is the bill for laptop items "<<endl;

cout<<endl;

cout<<"Name Of Items"<<"\t"<<"Quantity"<<"\t"<<"Price"<<endl;

for(int id6=0;id6<id5;id6++){

cout<<laptoporder[id6]<<"\t"<<laptopquantity[id6]<<"\t"<<price2[id6]<<endl;

}

cout<<"Your laptop product bill is : "<<bill2<<endl;

cout<<endl;

total=bill1+bill2;

cout<<"Your total bill will be : "<<total<<endl;

cout<<"Thanks For Your Payment...."<<endl;

}