Object Oriented Programming

Project

Names: Raffay Hassan ,Taha Tanvir, Subhan Afzal

SAP_IDs: 70082387,70126633, 70128279

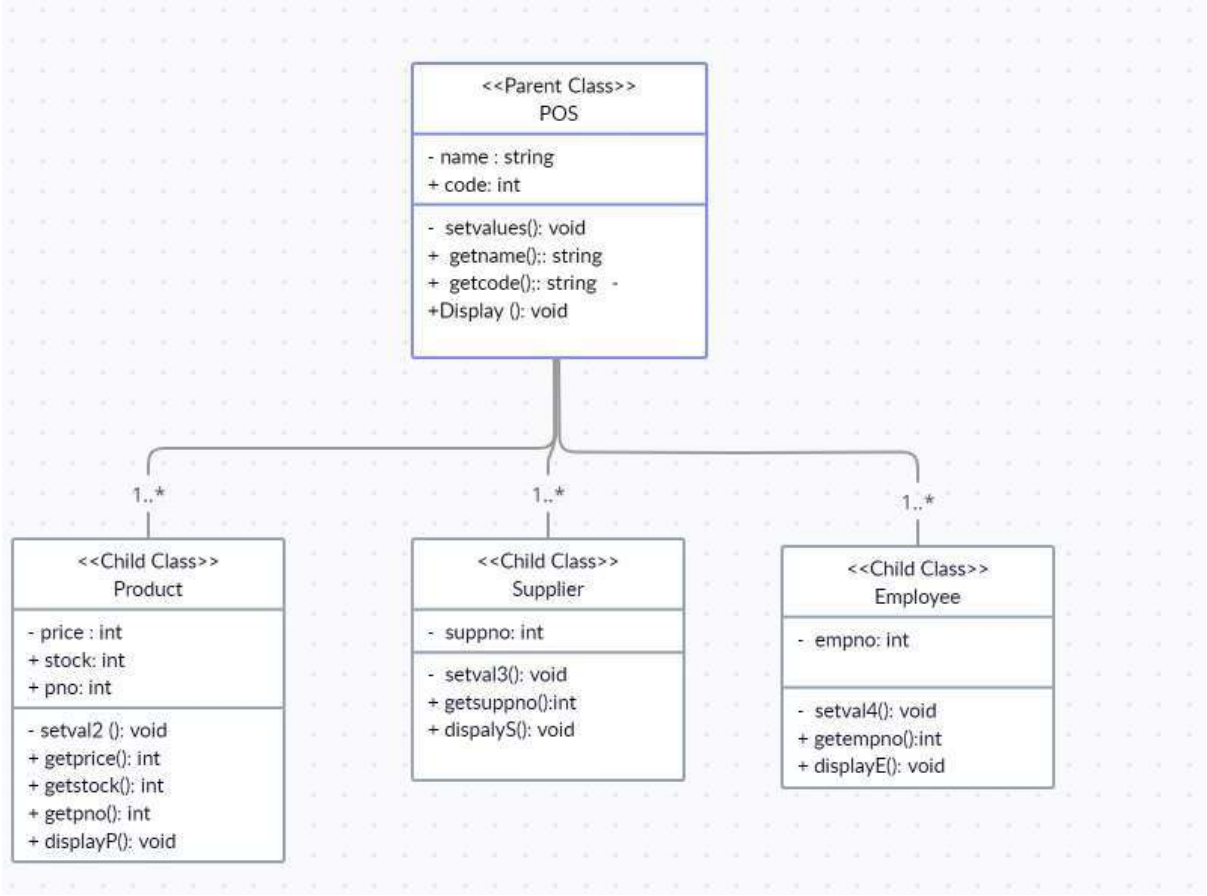
Section Name: “T”

Department Name: Software

Project:

POINT OF SALE APPLICATION MAIN SECTIONS & ASSOCIATED FUNCTIONALITIES		
SECTION NO.	**SECTION NAME:**	**DESCRIPTION:**
1	PRODUCT SECTION	• Create New Product • Edit Product, • Delete Product, • Search Product (By Code, By Name) • View list of Products (along with stock & Price), • Display all Products. • Sort Products list. (Optional)
2	ORDER PLACEMENT SECTION	• Place Order, • Search Product availability (by name, by Code) • Add Product to be Purchased along with quantity • Generate Bill/ Complete Invoice.
3	SUPPLIERS SECTION	• Create New Product Supplier • Edit Supplier, • Delete Supplier, • Search Supplier (By Code, By Name) • View list of Product Suppliers • Display all Suppliers. • Sort Supplier list.
4	EMPLOYEE SECTION	• Add New Employee • Edit Employee, • Delete Employee, • Search Employee (By Code, By Name) • View list of Employees
4	USER AUTHENTICATION (Optional)	• Administrator Or Employee. • Password authentication is required to access the system. • User should provide a valid password before getting access towards the system.

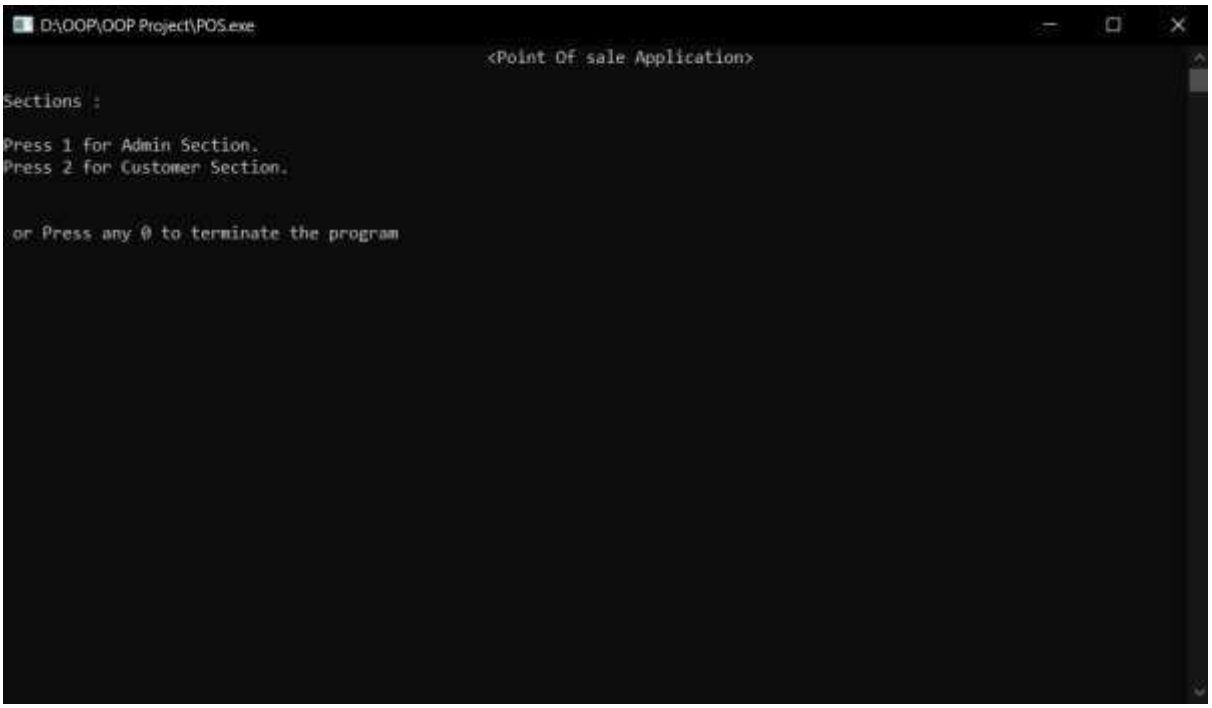
Hierarchy:


<<Parent Class>>
POS
- name : string
+ code: int
- setvalues(): void
+ getname():: string
+ getcode():: string -
+Display (): void
1..*
1..*
1..*
<<Child Class>>
Product
- price : int
+ stock: int
+ pno: int
- setval2 (): void
+ getprice(): int
+ getstock(): int
+ getpno(): int
+ displayP(): void
<<Child Class>>
Supplier
- suppno: int
- setval3(): void
+ getsuppno():int
+ dispalyS(): void
<<Child Class>>
Employee
- empno: int
- setval4(): void
+ getempno():int
+ displayE(): void

Over-view:

Our code is basic, simple, and to the point and the Most generic one in this regard. We have added all the functionalities in this, which we could. Which could make the user easy to use and the program will not just terminate until the user wanted to. He can also revert at any point in the whole program if he wanted to this is the unique aspect of our project. Our project may lack some functionalities but it is the most easy to use for the user. Some pictures are attached below:

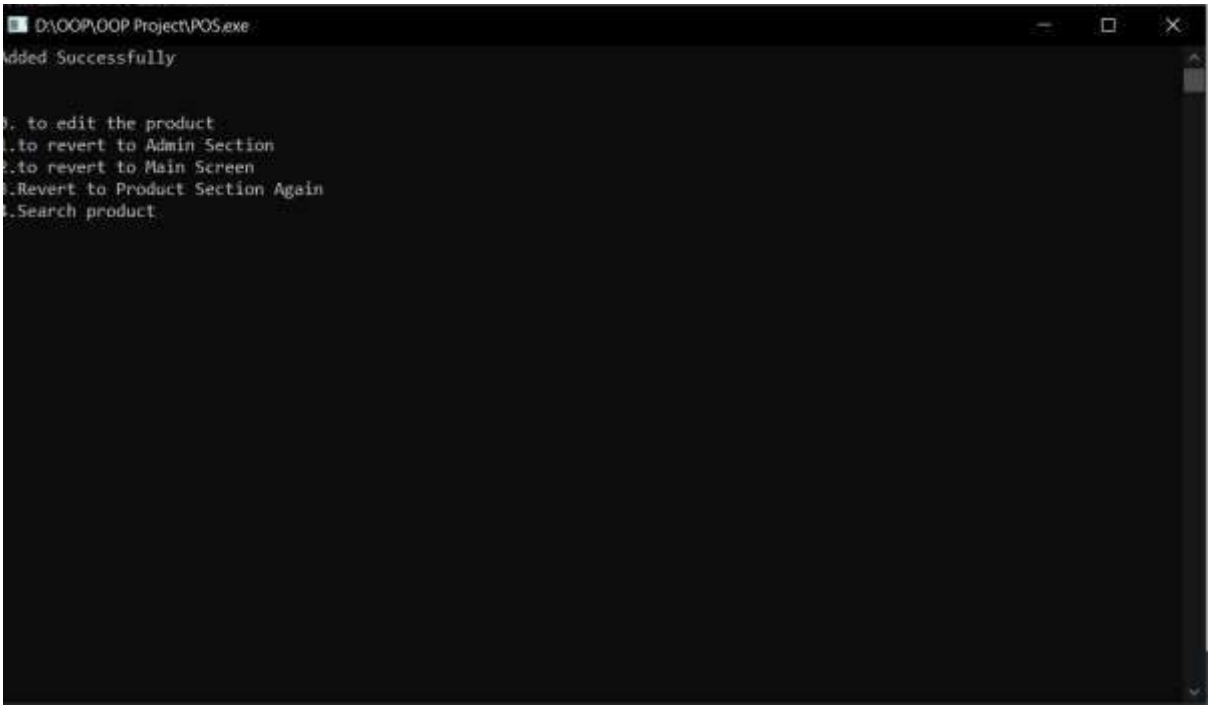
The main Screen:



The Sections are:

The revert options will look like this:

Contd…


D:\OOP\OOP Project\POS.exe
dded Successfully
. to edit the product
.to revert to Admin Section
.to revert to Main Screen
.Revert to Product Section Again
.Search product


D:\OOP\OOP Project\POS (2).exe
<Customer Section>
Enter code to buy

Source Code :

```
#include<iostream>
#include<fstream>
using namespace std;
class POS{
protected:

string name;
int code;

public:

POS(string name="unknown", int code = 00000)
                    //Parameterized constructor
{
this->name = name;
this->code = code;
}

void setvalues()                    //Entering data
{
                    cout<<"Enter name :\n";
                    cin>>name;
                    cout<<"Enter code :\n";
                    cin>>code;
}

string getname()
{
                    return name;
```

```
}

int getcode()
{
                return code;
}

//----------------------To display data of POS in file-----------------------
---------
void display()
{
                ofstream f1;
                f1.open("POS.txt",ios::app);
                f1<<"Name :"<<name<<endl;
                f1<<"Code : "<<code<<endl;
}
};

class product:public POS{
                protected:
                //------------------Unique data members of Product---
--------------------
                    double price;
                   int stock;
                   int pno;
                public:
                    //------------------Parameterized constructor------
----------------
                    product(double price=000,int stock = 000)

                   {
                      this->price=price;
```

```
                this->stock=stock;
                }
            //--------------------Entering data in Product-------
-----------------
            void setval2()
            {
                cout<<"Please Add Product Details:\n\n";
                cout<<"Enter Product number\n";
                cin>>pno;
                setvalues();
                cout<<"Enter Price:\n";
                cin>>price;
                cout<<"Enter Stock:\n";
                cin>>stock;
            }
             int getstock(){
                return stock;
             }
             double getprice()
             {
                return price;
             }
             //------------------------To display data of product in
file-----------------------------------
             void displayP()
             {
                ofstream file;
                file.open("Product.txt", ios::app);
                file<<"PRODUCT:\n"<<endl;
                cout<<"PRODUCT:\n"<<endl;
    cout<<"PRODUCT NO : "<<pno<<endl;
    file<<"PRODUCT NO : "<<pno<<endl;
```

```
                    file<<".....\n";
                    cout<<".....\n";
                  file<<"Name : "<<name<<endl;
                  cout<<"Name : "<<name<<endl;
                  file<<"Code : "<<code<<endl;
                  cout<<"Code : "<<code<<endl;
                  file<<"stock : "<<stock<<endl;
                  cout<<"stock : "<<stock<<endl;
                    file<<"Price : "<<price<<endl;
                    cout<<"Price : "<<price<<endl;
                    file<<".....\n";
                    cout<<".....\n";
                 }

                 void dis()        //reading file data
                 {
                     ifstream infile;
                     infile.open("Product.txt",ios::in);
                     infile>>name;
                     infile>>code;
                     infile>>stock;
                     infile>>price;
                  }
};
class supplier:public POS{
                 protected:
                     //--------------------Unique data members of
supplier-----------------------
                     int suppno;
                 public:
                     //--------------------Entering data in supplier
section----------------------
```

```
                void setval3()
                {
                    cout<<"please enter supplier crenditials\n";
                    cout<<"Enter Supplier number\n";
                    cin>>suppno;
                    setvalues();
                }
                    //----------------------To display data of supplier
in file----------------------
                void displayS()
                 {
                    ofstream f1;
                    f1.open("Supplier.txt",ios::app);
                    f1<<"SUPPLIER:\n"<<suppno<<endl;
                    cout<<".....\n";
                    cout<<"SUPPLIER:"<<suppno<<endl;
                    f1<<"Name : "<<name<<endl;
                    cout<<"Name : "<<name<<endl;
                    f1<<"Code : "<<code<<endl;
                    cout<<"Code : "<<code<<endl;
                    cout<<".....\n";
                 }
};
class employee:public POS{
                protected:
                    //-----------------------Unique data members of
employee section-------------------------
                    int empno;
                    public:
                        //--------------------Entering data in
employee section----------------------------
                        void setval4()
```

```
                    {
                        cout<<"please enter Employee
crenditials\n";
                        cout<<"Enter Employee numebr\n";
                        cin>>empno;
                        setvalues();
                    }
                    //---------------------To display data of
employee in file-------------------------
                    void displayE()
                {
                    ofstream f2;
                    f2.open("Employee.txt",ios::app);
                    f2<<"EMPLOYEE :\n"<<endl;
                    f2<<".............................\n";
                    cout<<"EMPLOYEE :\n"<<endl;
                    f2<<"Number:"<<empno<<endl;
                    cout<<"Number:"<<empno<<endl;
                    cout<<".............................\n";
                  f2<<"Name : "<<name<<endl;
                  cout<<"Name : "<<name<<endl;
                  f2<<"code : "<<code<<endl;
                  cout<<"code : "<<code<<endl;
                  cout<<".............................\n";
                  f2.close();
                }
};


int main()
{
int num,num1,num2;
```

```
product a[num];
employee c[num2];
int cmmnd;
system("cls");
p0:
                    system("cls");
cout<<"                                    "<<"<Point Of sale
Application>\n\n"
<<"Sections : \n\n"
<<"Press 1 for Admin Section.\n"
<<"Press 2 for Customer Section.\n\n\n";
cout<<" or Press any 0 to terminate the program\n";
cin>>cmmnd;
switch(cmmnd)
{
    case 1:
                    {
    p1:
                    system("cls");
                        cout<<"
"<<"<Admin Section>\n\n";
                            cout<<"Which Sub-Section u want to
access...?\n\n";
                                cout<<"1.Products Section\n";
          cout<<"2.Supplier Section\n";
                                cout<<"3.Employee Section\n";
                                cout<<"or press 0 to exit program\n";
                            int cmmnd2;
                                cin>>cmmnd2;
                                switch(cmmnd2)
{                   case 1:
                                        {
```

```
                                        system("cls");
                                                cout<<"
"<<"<Products Section>\n\n";
                                                cout<<"1.Create
new product.\n\n\n";
                        cout<<"2.Go back to Admin Section.\n";
                        cout<<"3.to Go back to Main Screen.\n";
                                                        int
cmmnd3;

cin>>cmmnd3;

switch(cmmnd3)
                                                        {


                case 1:{

                p2:

                system("cls");

                product a[num],a1;

cout<<"                                 "<<"<Create Product>\n\n";


                cout<<"How many Products u want to add?\n";

                cin>>num;
```

```
                    for(int i=0;i<num;i++)
                        {
                            a[i].setval2();
                            system("cls");
                            cout<<"\n\n\n";
                              cout<<".............................\n";

a[i].displayP();

cout<<".............................\n";
                                                                }


system("cls");

cout<<"Added Successfully\n\n\n";
                                                        label1:
cout<<"0. to edit the product\n";

cout<<"1.to revert to Admin Section\n";

                    cout<<"2.to revert to Main Screen\n";

                    cout<<"3.Revert to Product Section Again\n";

                    cout<<"4.Search product\n";

                                                                int
temp;
```

```
cin>>temp;
if(temp==1)
                                                    {
goto p1;
                                                    }
else if(temp==2)
                                                    {
goto p0;
                                                    }
else if(temp==3)
                                                    {
goto p2;
                                                    }
if(temp==0)
                                                    {


int x;
cout<<"Enter product to edit\n";
cin>>x;
```

```
for(int i=0;i<num;i++)
{
    if(x==a[i].getcode())
    {
        a[i].setval2();
        cout<<"New Data\n";
        system("cls");
        cout<<".....\n";
        a[i].displayP();
        cout<<".....\n";
    }

}
goto label1;
```

```
                                                                    }
            if(temp==4)
                                                                    {


            int z;
            cout<<"Enter code to Search\n";
cin>>z;
            for(int o=0;o<num;o++)
            {
                  if(z==a[o].getcode())
                  {

                        a[o].displayP();
                  }


            }
```

```
                goto label1;

                                                        }
                                                    }
                case 2:{
if(cmmnd3==2)
{
goto p1;
}
break;
                                                    }
                                                    case 3:{
if(cmmnd3==3)
                                                        {
                goto p0;
                                                            }
                                                    break;
```

```
                                                    }


                                                     }
                                                  }
                                        case 2:
                                    {
                                       system("cls");
                                              cout<<"
"<<"<Supplier's Section>\n\n";
                                              cout<<"1.Add New
Supplier.\n\n\n";
                        cout<<"2.Go back to Admin Section.\n";
                        cout<<"3.to Go back to Main Screen.\n";
                                                        int
cmmnd4;

cin>>cmmnd4;

switch(cmmnd4)
                                                        {

                    case 1:{

                    S2:

                    system("cls");

cout<<"                                "<<"<Add Supplier>\n\n";


                    cout<<"How many Suppliers ?\n";
```

```
cin>>num1;

supplier b[num1];

for(int j=0;j<num1;j++)
{
b[j].setval3();
system("cls");
cout<<"\n\n\n";

b[j].displayS();
}

system("cls");

cout<<"Added Successfully\n";
label3:
cout<<"Do you wish to edit? press '0'\n";

cout<<"1.to revert to Admin Section\n";

cout<<"2.to revert to Main Screen\n";

cout<<"3.Revert to Supplier Section Again\n";

cout<<"4.Search\n";
```

```
                                                                    int
temp1;
                cin>>temp1;
                if(temp1==1)
                                                                    {
                goto p1;
                                                                    }
                else if(temp1==2)
                                                                    {
                goto p0;
                                                                    }
                else if(temp1==3)
                                                                    {
                goto S2;
                                                                    }
                if(temp1==0)
                                                                    {


                int y;
                cout<<"Enter code to edit\n";
```

```
cin>>y;
                    for(int j=0;j<num1;j++)
                    {
                        if(y==b[j].getcode())
                        {
                            b[j].setval3();
                            b[j].displayS();
                       }



                    }
                      goto label3;
                                                                    }
                    if(temp1==4)
                                                                    {


                    int v;
```

```
                cout<<"Enter code to search\n";
cin>>v;
                for(int g=0;g<num1;g++)
                {
                    if(v==b[g].getcode())
                    {

                            b[g].displayS();
                   }


                }
                  goto label3;
                                                                    }
```

```
                                                                    }
                    case 2:{
if(cmmnd4==2)
{
goto p1;
}
break;
                                                                  }
                                                                  case 3:{
if(cmmnd4==3)
                                                                       {
                    goto p0;
                                                                          }
                                                                  break;
                                                                  }

                                                                   }
                                                                }
                                                              case 3:
```

```
                                        {
                                            system("cls");
                                                    cout<<"
"<<"<Emploees's Section>\n\n";
                                                    cout<<"1.Add New
Employee.\n\n\n";
                        cout<<"2.Go back to Admin Section.\n";
                        cout<<"3.to Go back to Main Screen.\n";
                                                                int
cmmnd4;

cin>>cmmnd4;

switch(cmmnd4)
                                                                {

                    case 1:{

                    E2:

                    system("cls");

cout<<"                                 "<<"<Add Employee>\n\n";


                    cout<<"How many Employee ?\n";

                    cin>>num2;
                            employee c[num2];
                             for(int k=0;k<num2;k++)
                             {
                                    c[k].setval4();
```

```
                                        system("cls");
                                        cout<<"\n\n\n";

c[k].displayE();
                                                                }


                system("cls");


cout<<"Added Successfully\n\n\n";
                                                        label4:
                cout<<"Press 0 to Edit Employee\n";

cout<<"1.to revert to Admin Section\n";

                cout<<"2.to revert to Main Screen\n";

                cout<<"3.Revert to Employee Section Again\n";

                cout<<"4.Search Employee\n"    ;

                                                                int
temp2;

                cin>>temp2;

                if(temp2==1)
                                                                {

                goto p1;
                                                                }
```

```
else if(temp2==2)
                                                                {
goto p0;
                                                                }
else if(temp2==3)
                                                                {
goto E2;
                                                                }
if(temp2==0)
                                                                {


int k;
cout<<"Enter Code For Edit The Employee\n";
cin>>k;
for(int y=0;y<num2;y++)
{
    if(k==c[y].getcode())
    {
```

```
                c[y].setval4();
                c[y].displayE();
            }



        }
          goto label4;
                                                                    }
        if(temp2==4)
                                                                    {


        int b;
        cout<<"Enter Code to search\n";
cin>>b;
        for(int n=0;n<num2;n++)
        {
              if(b==c[n].getcode())
```

```
                {

                        c[n].displayE();

                }

        }

        goto label4;
                                                }

                                                }

        case 2:{
if(cmmnd4==2)
{
```

```
goto p1;

}

break;
                                                        }
                                                        case 3:{

if(cmmnd4==3)
                                                              {

                    goto p0;
                                                                 }

                                                        break;
                                                        }


                                                          }
                                                    }

                    }

}
                     case 2:
                    {system("cls");
                          int pcode;
              cout<<"                                    "<<"<Customer
Section>\n\n";
```

```
int i,buy;
cout<<"Enter code to buy \n";
cin>>i;

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

    if(i==a[o].getcode())
    {

        a[o].displayP();
        cout<<"HOW MANY PRODUCT YOU WANT TO BUY:\n";
        cin>>buy;
        cout<<"Product name:"<<a[o].getname();
```

```
                cout<<"\nTotal prize is
\n"<<(a[o].getprice()*buy);

                cout<<"\nRemaining stock after
purchasing:\n"<<a[o].getstock()-buy<<endl;

                cout<<"\n\n";

            }



        }



        int c;

        cout<<"Press 1 to revert.\n";

        cin>>c;

        if(c==1)

        {

            goto p0;

        }
```

```
                                                    //                  }

                                    break;
                                }
                            }

    }
```