NAME : MANGESH A. GHADWAJE
ROLL NO:24
BATCH : B2
COURSE: OOPs PRACTICAL

Assginment No. 2

Problem Statment:
A Book shop maintains the inventory of books that are being sold at the shop. The list includes details such as title, author, publisher, price and available stock. Write a program in C++ which will have a class called books with suitable member functions for
i. Add
ii. Update
iii. Search a book
iv. Purchase a book (update the stock and display the total cost)
v. Record number of successful/unsuccessful transactions (use static data members to keep count of transactions) Use new operator in constructors to allocate memory space required

Code :

```
#include<iostream>
#include<string.h>
using namespace std;
class book
{
 public:
 char *Title,*Author,*Publisher;
 int Price,Stock;
 static int suc_transaction;
  static int unsuc_transaction;
  book()
  {
   Title=new char[2];
   Author=new char[2];
   Publisher=new char[2];
   Price=0;
   Stock=0;
  }
 void accept();
 void display();
 int search(char str[20]);
 void purchase();
 static void fun()
```

```
 {
  cout<<"\nNumber of sucessfull transctions="<<suc_transaction;
   cout<<"\nNumber of unsucessfull transctions="<<unsuc_transaction;
 }
};
int book::suc_transaction;
int book::unsuc_transaction;
void book::accept()
{
 cout<<"Enter the title of book:";
 cin>>Title;
  cout<<"Enter the author of book:";
 cin>>Author;
  cout<<"Enter the publisher of book:";
 cin>>Publisher;
  cout<<"Enter the Price of book:";
 cin>>Price;
  cout<<"Enter the stock of book:";
 cin>>Stock;
}
void book::display()
{
 cout<<"\n"<<Title<<"\t"<<Author<<"\t"<<Publisher<<"\t"<<Price<<"\t"<<Stock<<"\t"<<"\n";
}
int book::search(char str[20])
{
 if(strcmp(str,Title)==0)
  return 1;
 else
  return 0;
}
void book::purchase()
{
 int count;
 cout<<"\nEnter Number of Books to buy:";
 cin>>count;
 if(count<=Stock)
 {
  Stock=Stock-count;
  cout<<"\nAmount:Rs."<<(Price*count);
  book::suc_transaction++;
 }
 else
 {
```

```
  cout<<"\nRequired Copies are not available.";
    book::unsuc_transaction++;
 }
}
int main()
{
 book b1[20];
 int n,i,ch,val;
 char str[20];


 do
 {
  cout<<"\n\n1.Insert\n2.Display\n3Search\n4.Purchase Book\n5.Modify\n6.Number of Sucessful
Transaction\n7.Exit"<<"\n";

  cout<<"Enter your choice = ";
  cin>>ch;

  switch(ch)
  {
   case 1:
                b1[n++].accept();
                break;
   case 2:
                cout<<"Book Details:"<<"\n";

cout<<"Title"<<"\t"<<"Author"<<"\t"<<"Publisher"<<"\t"<<"Price"<<"\t"<<"Stock"<<"\t";
                for(i=0;i<n;i++)
                {
                 b1[i].display();
                }
                break;
   case 3:
                cout<<"\nEnter the title of book:";
                cin>>str;
                for(i=0;i<n;i++)
                {
                 val=b1[i].search(str);
                 if(val==1)
                 {
                  cout<<"\nBookFound Sucessfully";
                  break;
                 }
```

```
            }
            if(i==n)
            {
             cout<<"\nThis Book is not in Stock.";
            }
            break;
case 4:
            cout<<"\nEnter the title of book:";
            cin>>str;
            for(i=0;i<n;i++)
            {
             val=b1[i].search(str);
             if(val==1)
             {
              b1[i].purchase();
              break;
             }
            }
            if(i==n)
            {
             cout<<"\nThis Book is notin Stock.";
            }
            break;
case 5:
            cout<<"\nEnter the title of book:";
            cin>>str;
            for(i=0;i<n;i++)
            {
             val=b1[i].search(str);
             if(val==1)
             {
              cout<<"\nEnter modified data:";
              b1[i].accept();
              break;
             }
            }
            if(i==n)
            {
             cout<<"\nThis Book is not in Stock.";
            }
            break;
case 6:
            book::fun();
            break;
```

```
   case 7:
                cout<<"EXIT";
                break;
  }
 }while(ch<7);
 return 0;
}
```