**Define the class Vehicle and describe the states and behavior of Vehicle.**

**package** assignment\_2;

**import** java.util.Scanner;

**public** **class** Question1

{

**public** **static** **void** main(String[] args)

{

Vehicle1 vehicle = **new** Vehicle1();

vehicle.vname = "Motorcycle";

vehicle.make = "Herohonda";

vehicle.color = "Black";

System.***out***.println("Details of vehicle is......");

vehicle.showDetails();

System.***out***.println("Starting engine......");

vehicle.startEngine();

System.***out***.println("-------------------");

vehicle.startEngine();

}

}

**package** assignment\_2;

**class** Vehicle1

{

String vname;

String make;

String color;

**boolean** engineState;

**void** startEngine()

{

**if**(engineState == **true**)

{

System.***out***.println("Engine is already on... ");

}

**else**

{

engineState = **true**;

System.***out***.println("Engine is now on... ");

}

}

**void** showDetails()

{

System.***out***.println("Vehicle name is " +vname);

System.***out***.println("nmake is " + make);

System.***out***.println("color is "+color);

}

}

**Overload the constructor of Vehicle class by passing different parameters.**

**package** assignment\_2;

**public** **class** Question2

{

**public** **static** **void** main(String args[])

{

Vehicle2 vehicle2 = **new** Vehicle2();

vehicle2.showData();

System.***out***.println("-----------------------------");

Vehicle2 vehicle3 = **new** Vehicle2("Scooty" ,"Hero motocorp", "Activa", "White", "2002", 60000, 60);

vehicle3.showData();

System.***out***.println("-----------------------------");

Vehicle2 vehicle4 = **new** Vehicle2("Car", "Maruti", "Maruti Suziki 800", "red");

vehicle4.showData();

System.***out***.println("-----------------------------");

}

}

**package** assignment\_2;

**public** **class** Vehicle2

{

String typeOfVehicle, brand, model, color, year;

**int** price, speed;

Vehicle2()

{

typeOfVehicle = "Motorcycle";

brand = "Hero MotorCorp";

model = "Hero Splendor Plus";

color = "yellow ";

year = "1998 ";

price = 50000 ;

speed = 45 ;

}

**public** Vehicle2(String typeOfVehicle, String brand, String model, String color, String year, **int** price, **int** speed)

{

**super**();

**this**.typeOfVehicle = typeOfVehicle;

**this**.brand = brand;

**this**.model = model;

**this**.color = color;

**this**.year = year;

**this**.price = price;

**this**.speed = speed;

}

**public** Vehicle2(String typeOfVehicle, String brand, String model, String color) {

**super**();

**this**.typeOfVehicle = typeOfVehicle;

**this**.brand = brand;

**this**.model = model;

**this**.color = color;

price = 4500000;

speed = 120;

}

**void** showData()

{

System.***out***.println("Vehicle type is:" +typeOfVehicle);

System.***out***.println("brand :" +brand);

System.***out***.println("model :" +model);

System.***out***.println("color :" +color);

System.***out***.println("price:" +price);

System.***out***.println("speed is:" +speed+ "k/h");

}

}

**Determine the speed Up of Vehicle which represents behavior of Vehicle and which can get increased.**

**package** assignment\_2;

**import** java.util.Scanner;

**public** **class** Question3

{

**public** **static** **void** main(String[] args)

{

System.***out***.println("Please enter the details of vehicle:");

Vehicle3 vehicle3 = **new** Vehicle3("Car", "Maruti", "Maruti Suziki 800", "red");

System.***out***.println(vehicle3);

// for increase the speed of vehicle

vehicle3.speedUp();

System.***out***.println("Current speed of vehicle is :" +vehicle3.getSpeed());

System.***out***.println(vehicle3);

**for**(**int** i=0; i<5; i++)

{

vehicle3.speedUp();

System.***out***.println("Current speed of vehicle is :" +vehicle3.getSpeed());

}

System.***out***.println(vehicle3);

}

}

**package** assignment\_2;

**public** **class** Vehicle3

{

String typeOfVehicle, brand, model, color, year;

**int** price, speed;

**public** Vehicle3(String typeOfVehicle, String brand, String model, String color) {

**super**();

**this**.typeOfVehicle = typeOfVehicle;

**this**.brand = brand;

**this**.model = model;

**this**.color = color;

price = 4500000;

speed = 0;

}

@Override

**public** String toString() {

**return** "Vehicle3 [typeOfVehicle=" + typeOfVehicle + ", brand=" + brand + ", model=" + model + ", color=" + color+ ", year=" + year + ", price=" + price + ", speed=" + speed + "]";

}

**public** **int** getSpeed() {

**return** speed;

}

**public** **void** setSpeed(**int** speed) {

**this**.speed = speed;

}

**public** **void** speedUp()

{

speed += 5;

}

}

**Define the common states and behaviors for the Vehicle.**

**package** assignment\_2;

**import** java.util.Scanner;

**public** **class** Question4

{

**public** **static** **void** main(String[] args)

{

Vehicle4 vehicle4 = **new** Vehicle4("Internal Combustion Engine ","Car", "Maruti", "Maruti Suziki 800", "red", 2006, 4, 500000);

System.***out***.println( "Details of vehicle "+ vehicle4);

// for increase the speed of vehicle

vehicle4.speedUp();

System.***out***.println("Current speed of vehicle is :" +vehicle4.getSpeed());

**for**(**int** i=0; i<5; i++)

{

vehicle4.speedUp();

System.***out***.println("Current speed of vehicle is :" +vehicle4.getSpeed());

}

System.***out***.println(vehicle4);

System.***out***.println("--------------------------------------------------");

//Brake

**for**(**int** i=0; i<5; i++)

{

**if**(i>=0 && i<= 210)

{

vehicle4.brake();

}

System.***out***.println("After brake speed of vehicle is :" +vehicle4.getSpeed());

}

// park

vehicle4.park();

System.***out***.println("After parking speed of vehicle is :" +vehicle4.getSpeed());

}

}

**package** assignment\_2;

**public** **class** Vehicle4

{

String engine\_type,vehicleType,brand, model, color;

**int** year;

**int** seater, price, speed;

**public** Vehicle4(String engine\_type, String vehicleType, String brand, String model, String color, **int** year,

**int** seater, **int** price) {

**super**();

**this**.engine\_type = engine\_type;

**this**.vehicleType = vehicleType;

**this**.brand = brand;

**this**.model = model;

**this**.color = color;

**this**.year = year;

**this**.seater = seater;

**this**.price = price;

}

@Override

**public** String toString() {

**return** "Vehicle4 [engine\_type=" + engine\_type + ", vehicleType=" + vehicleType + ", brand=" + brand + ", model="+ model + ", color=" + color + ", year=" + year + ", seater=" + seater + ", price=" + price + ", speed="

+ speed + "]";

}

**public** **int** getSpeed() {

**return** speed;

}

**public** **void** setSpeed(**int** speed) {

**this**.speed = speed;

}

**public** **void** speedUp()

{

speed += 5;

}

**public** **void** brake()

{

speed -= 5;

}

**public** **void** park()

{

speed = 0;

}

}

**Define constants in for Vehicle i.e. the states those are fix for all Vehicle**

**package** assignment\_2;

**public** **class** Question5 {

**public** **static** **void** main(String[] args)

{

Car car = **new** Car("Internal Combustion Engine ","Car", "Maruti", "Maruti Suziki 800", "red", 2006, 4, 500000);

System.***out***.println(car);

System.***out***.println("Max speed of car is "+Car.***MAX\_SPEED***+"k/h \nNo of gear is "+Car.***NO\_OF\_GEAR***+

"\nFuel Capacity is "+Car.***FUEL\_CAPCITY***+"Litre");

}

}

**package** assignment\_2;

**public** **class** Car

{

String engine\_type,vehicleType,brand, model, color;

**int** year;

**int** seater, price;

**final** **static** **int** ***MAX\_SPEED*** = 120,***NO\_OF\_GEAR***=4 ,***FUEL\_CAPCITY*** = 65;

**public** Car(String engine\_type, String vehicleType, String brand, String model, String color, **int** year,

**int** seater, **int** price)

{

**super**();

**this**.engine\_type = engine\_type;

**this**.vehicleType = vehicleType;

**this**.brand = brand;

**this**.model = model;

**this**.color = color;

**this**.year = year;

**this**.seater = seater;

**this**.price = price;

}

@Override

**public** String toString() {

**return** "Car [engine\_type=" + engine\_type + ", vehicleType=" + vehicleType + ", brand=" + brand + ", model="+ model + ", color=" + color + ", year=" + year + ", seater=" + seater + ", price=" + price + "]";

}

}

**Show the parameter passing in Vehicle.**

**package** assignment\_2;

**import** java.io.BufferedReader;

**import** java.io.IOException;

**import** java.io.InputStreamReader;

**import** java.util.Scanner;

**public** **class** Question6 {

**public** **static** **void** main(String[] args) **throws** IOException

{

String engineType,vehicleType,brand, model, color;

**int** year;

**int** seater, price;

InputStreamReader isr = **new** InputStreamReader(System.***in***);

BufferedReader br = **new** BufferedReader(isr);

Scanner scanner = **new** Scanner(System.***in***);

System.***out***.println("Enter Engine type");

engineType = br.readLine();

System.***out***.println("Enter vehicle type");

vehicleType = br.readLine();

System.***out***.println("Enter brand");

brand = br.readLine();

System.***out***.println("Enter model");

model = br.readLine();

System.***out***.println("Enter color");

color = br.readLine();

System.***out***.println("Enter year");

year = scanner.nextInt();

System.***out***.println("Enter seater");

seater= scanner.nextInt();

System.***out***.println("Enter price");

price= scanner.nextInt();

Vehicle6 vehicle = **new** Vehicle6();

Vehicle6 vehicle1 = **new** Vehicle6();

vehicle.speedUp(15);

vehicle.shift(2);

vehicle.getInfo(vehicle);//call by reference

vehicle.printStates();

vehicle1.speedUp(25);

vehicle1.shift(2);

vehicle1.speedUp(5);

vehicle1.shift(3);

vehicle1.getInfo(engineType,vehicleType,brand,model,color,year,seater,price);//call by value

vehicle1.printStates();

}

}

**package** assignment\_2;

**public** **class** Vehicle6

{

**int** gear=1, speed=0,year, seater, price;

String engine\_type,vehicleType,brand, model, color;

**public** **void** getInfo(String engine\_type, String vehicleType, String brand, String model, String color, **int** year,

**int** seater, **int** price)

{

**this**.engine\_type = engine\_type;

**this**.vehicleType = vehicleType;

**this**.brand = brand;

**this**.model = model;

**this**.color = color;

**this**.year = year;

**this**.seater = seater;

**this**.price = price;

}

**public** **void** getInfo(Vehicle6 vehicle)

{

vehicle.engine\_type ="External Combustion Engine ";

vehicle.vehicleType="Car";

vehicle.brand = "Maruti";

vehicle.model ="Alto";

vehicle.color = "brown";

vehicle.year =2007;

vehicle.seater = 8;

vehicle.price =600000;

}

**void** shift(**int** newValue)

{

gear = newValue;

}

**void** speedUp(**int** paceUp)

{

speed += paceUp;

}

**void** applyBrake(**int** paceDown)

{

speed -= paceDown;

}

**void** printStates()

{

System.***out***.println("vehicle engine type:"+engine\_type+"vehicle\_type: "+vehicleType+"brand:"+brand+""

+ "model:" +model+"color:"+color+"year:" +year+"seater: "+seater+"price: "+price);

System.***out***.println("Speed: "+speed+"Gear: "+gear);

}

}

**Use in instaceOf operator in Vehicle.**

**package** assignment\_2;

**public** **class** Question7

{

**public** **static** **void** main(String[] args)

{

Question7 vehicle7 = **null**;

**if**(vehicle7 **instanceof** Question7)

{

System.***out***.println("True");

}

**else**

{

System.***out***.println("False");

}

Question7 vehicle = **new** Question7();

**if**(vehicle **instanceof** Question7)

{

System.***out***.println("True");

}

**else**

{

System.***out***.println("False");

}

}

}

**Overload the method fuelCapacity by passing the capacity in terms of liters and milliliters.**

**Litre double**

**Mililitre int**

**package** assignment\_2;

//Overload the method fuelCapacity by passing the capacity in terms of liters and milliliters

**public** **class** Question8 {

**public** **static** **void** main(String[] args)

{

**double** litre;

**int** miliLitre;

Vehicle8 vehicle8= **new** Vehicle8("Internal Combustion Engine ","Car", "Maruti", "Maruti Suziki 800", "red", 2006, 4, 500000);

miliLitre = vehicle8.getFuelCapacity(12000);

litre = vehicle8.getFuelCapacity(120d);

System.***out***.println("Fuel capacity vehicle is : "+miliLitre+"mL");

System.***out***.println("Fuel capacity vehicle is : "+litre+"L");

System.***out***.println(vehicle8);

}

}

**package** assignment\_2;

**public** **class** Vehicle8

{

String engine\_type,vehicleType,brand, model, color;

**int** year;

**int** seater, price, speed;

**public** Vehicle8(String engine\_type, String vehicleType, String brand, String model, String color, **int** year,

**int** seater, **int** price) {

**super**();

**this**.engine\_type = engine\_type;

**this**.vehicleType = vehicleType;

**this**.brand = brand;

**this**.model = model;

**this**.color = color;

**this**.year = year;

**this**.seater = seater;

**this**.price = price;

}

@Override

**public** String toString() {

**return** "Vehicle[engine\_type=" + engine\_type + ", vehicleType=" + vehicleType + ", brand=" + brand + ", model="+ model + ", color=" + color + ", year=" + year + ", seater=" + seater + ", price=" + price + ", speed="

+ speed + "]";

}

**public** **double** getFuelCapacity(**double** fuel)

{

**return** fuel;

}.

**public** **int** getFuelCapacity(**int** fuel)

{

**return** fuel;

}

}

**Show the use of instance initializer block in Vehical class.**

**package** assignment\_2;

**public** **class** Question9 {

**public** **static** **void** main(String[] args)

{

Vehicle9 vehicle= **new** Vehicle9("Internal Combustion Engine ","Car", "Maruti Suziki 800", "red", 500000);

System.***out***.println(vehicle);

Vehicle9 vehicle1= **new** Vehicle9("External Combustion Engine ","Van","Alto", "White",6500000 );

System.***out***.println(vehicle1);

}

}

**package** assignment\_2;

**public** **class** Vehicle9

{

String engine\_type,vehicleType,brand, model, color;

**int** price;

**int** speed,year,seater;

{

brand = "Maruti";

year = 2009;

seater = 8;

speed = 120;

}

**public** Vehicle9(String engine\_type, String vehicleType,String model, String color, **int** price) {

**super**();

**this**.engine\_type = engine\_type;

**this**.vehicleType = vehicleType;

**this**.model = model;

**this**.color = color;

**this**.price = price;

}

@Override

**public** String toString() {

**return** "Vehicle [engine\_type=" + engine\_type + ", vehicleType=" + vehicleType + ", brand=" + brand + ", model=”+ model + ", color=" + color + ", price=" + price + ", speed=" + speed + "k/h, year=" + year + ", seater="

+ seater + "]";

}

}

**Q. Implement the object array of User accounts. Perform following actions by taking user input**

**- Adding new account**

**- Updating existing account**

**- Deleting existing account**

**- Searching particular account**

**- Displaying all accounts**

**-Depositing money in particular account**

**- Withdrawing money from particular account**

**package** assignment\_2;

**public** **class** Account

{

**int** accountId, accountNumber,customerContactNo,customerId, balance, minBalance =1000;

String accounType, customerName, customerAddress;

**public** Account(**int** accountId, **int** accountNumber,String accounType, **int** customerId , String customerName,

**int** customerContactNo,String customerAddress, **int** balance) {

**super**();

**this**.accountId = accountId;

**this**.accountNumber = accountNumber;

**this**.accounType = accounType;

**this**.customerId = customerId;

**this**.customerName = customerName;

**this**.customerContactNo = customerContactNo;

**this**.customerAddress = customerAddress;

**this**.balance = balance;

}

Account()

{

setBalance(10000);

}

**public** **int** getAccountId() {

**return** accountId;

}

**public** **void** setAccountId(**int** accountId)

{

**this**.accountId = accountId;

}

**public** **int** getAccountNumber() {

**return** accountNumber;

}

**public** **void** setAccountNumber(**int** accountNumber) {

**this**.accountNumber = accountNumber;

}

**public** **int** getCustomerContactNo() {

**return** customerContactNo;

}

**public** **void** setCustomerContactNo(**int** customerContactNo) {

**this**.customerContactNo = customerContactNo;

}

**public** String getAccounType() {

**return** accounType;

}

**public** **void** setAccounType(String accounType) {

**this**.accounType = accounType;

}

**public** String getCustomerName() {

**return** customerName;

}

**public** **void** setCustomerName(String customerName) {

**this**.customerName = customerName;

}

**public** String getCustomerAddress() {

**return** customerAddress;

}

**public** **void** setCustomerAddress(String customerAddress) {

**this**.customerAddress = customerAddress;

}

**public** **int** getCustomerId() {

**return** customerId;

}

**public** **void** setCustomerId(**int** customerId) {

**this**.customerId = customerId;

}

**public** **int** getBalance() {

**return** balance;

}

**public** **void** setBalance(**int** balance) {

**this**.balance = balance;

}

**public** **void** withdrawAmount(**int** amount)

{

**double** notes;

**if**((balance- (minBalance +amount))>=0 && amount > 0 )

{

**int** wamount = amount;

**if**(amount % 100 == 0){

**if**(amount >=2000)

{

notes = Math.*abs*(amount/2000);

System.***out***.println("2000 notes: "+notes);

amount=amount%2000;

}

**if**(amount >= 500)

{

notes = Math.*abs*(amount/500);

System.***out***.println("500 notes: "+notes);

amount=amount%500;

}

**if**(amount >= 200)

{

notes = Math.*abs*(amount/200);

System.***out***.println("200 notes: "+notes);

amount=amount%200;

}

**if**(amount >= 100)

{

notes = Math.*abs*(amount/100);

System.***out***.println("100 notes: "+notes);

amount=amount%100;

}

balance-=wamount;

System.***out***.println("-------------------------------");

System.***out***.println("Updated balance is Rs. "+balance);

System.***out***.println("--------------------------------");

}

**else**

{

System.***out***.println("Withdraw amount should be multiple of 100.");

}

}

**else**

{

System.***out***.println("Minimum balanace is "+balance+"\n"

+ "So you withdraw money\n"

+ "please enter valid amount");

}

}

**public** **void** depositAmount(**int** amount)

{

**if**(amount<=25000 && amount >0)

{

**if**(amount%100==0)

{

balance+=amount;

System.***out***.println("--------------------------------");

System.***out***.println("Updated balance is Rs."+balance);

System.***out***.println("--------------------------------");

}

**else**

{

System.***out***.println("Amount should be greater than 0 and multiple of 100");

}

}

**else**

{

System.***out***.println("Amount Invalid!!");

}

}

@Override

**public** String toString() {

**return** "Account [accountId=" + accountId + ", accountNumber=" + accountNumber + ", accounType=" + accounType +", balance=" +balance +",customerId=" + customerId +", customerName=" + customerName+","+ "customerContactNo="+ customerContactNo + ",customerAddress= "+customerAddress+"]";

}

}

package assignment\_2;

import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

import java.util.Scanner;

public class UserAccount {

public static void main(String[] args) throws IOException

{

int amount,choice,count=0,accountId=0, accountNumber,customerContactNo,customerId,balance;

String accountType, customerName, customerAddress;

InputStreamReader isr = new InputStreamReader(System.in);

BufferedReader br = new BufferedReader(isr);

Scanner scanner = new Scanner(System.in);

Account account[] = new Account[10];

Account acc = new Account();

System.out.println();

while(true)

{

System.out.println("1.Add account");

System.out.println("2.Update account");

System.out.println("3.Delete account");

System.out.println("4.Search account");

System.out.println("5.Show all account");

System.out.println("6.Deposit Amount");

System.out.println("7.Withdraw Amount");

System.out.println("8.Exit");

System.out.println("Enter your choice");

choice = scanner.nextInt();

switch(choice)

{

case 1:

System.out.println("----------------------Add account---------------------");

System.out.println("Enter number of accounts you want to add");

int noOfaccounts;

noOfaccounts=scanner.nextInt();

for(int i=0;i<noOfaccounts;i++)

{

System.out.println("Insert details of account:"+(count+1));

accountId +=1;

System.out.println("Enter account Number");

accountNumber = scanner.nextInt();

System.out.println("Enter account type");

accountType =br.readLine();

System.out.println("Enter customerId");

customerId = scanner.nextInt();

System.out.println("Enter customer name");

customerName = br.readLine();

System.out.println("Enter customer contact no.");

customerContactNo = scanner.nextInt();

System.out.println("Enter customer Address");

customerAddress = br.readLine();

balance = acc.getBalance();

account[count]= new Account(accountId,accountNumber,accountType,customerId,customerName,

customerContactNo,customerAddress,balance);

count++;

}

System.out.println("Added Successfully !!!");

break;

case 2:

System.out.println("----------------Update account------------------");//not working

System.out.println("Enter the accountId for Update");

accountId = scanner.nextInt();

for(int i=0;i<count;i++)

{

if(account[i]!=null && account[i].getAccountId()==accountId)

{

System.out.println("Enter account Number");

accountNumber = scanner.nextInt();

account[i].setAccountNumber(accountNumber);

System.out.println("Enter account type");

accountType =br.readLine();

account[i].setAccounType(accountType);

System.out.println("Enter customerId");

customerId = scanner.nextInt();

account[i].setCustomerId(customerId);

System.out.println("Enter customer name");

customerName = br.readLine();

account[i].setCustomerName(customerName);

System.out.println("Enter customer contact no.");

customerContactNo = scanner.nextInt();

account[i].setCustomerContactNo(customerContactNo);

System.out.println("Enter customer Address");

customerAddress = br.readLine();

account[i].setCustomerAddress(customerAddress);

account[i].setAccountId(accountId);

}

else

{

System.out.println("Account does not exist with this account id"+accountId);

}

}

System.out.println("Account update successfully!!!");

break;

case 3:

System.out.println("Delete account");

System.out.println("Enter the accountId for delete");

accountId = scanner.nextInt();

for(int i=0;i<count;i++)

{

if(account[i]!=null && account[i].getAccountId()==accountId)

{

account[i]=null;

System.out.println("account deleted successfully!!!");

}

else

{

System.out.println("Account does not exist!!");

}

}

break;

case 4:

System.out.println("Search account");

System.out.println("Enter the accountId for Search");

accountId = scanner.nextInt();

for(int i=0;i<count;i++)

{

if(account[i]!=null && account[i].getAccountId()==accountId)

{

System.out.println(account[i]);

System.out.println("Search Completed!!!");

}

else

{

System.out.println("Account id does not exist!!!");

}

}

break;

case 5:

System.out.println("Show all account");

System.out.println("All account are:");

for(int i=0;i<count;i++)

{

if(account[i] != null)

{

System.out.println(account[i]);

}

else

{

System.out.println("No record found!!!");

}

}

break;

case 6:

System.out.println("-----Deposit amount---------");

System.out.println("Enter Account id");

accountId = scanner.nextInt();

for(int i=0;i<count;i++)

{

if(account[i].accountId == accountId)

{

System.out.println("Enter amount to be deposit \n"

+"1.Amount should not be 0\n"

+ "2.Amount should be less than 25000\n"

+ "3.Multiple of 100");

amount = scanner.nextInt();

account[i].depositAmount(amount);

}

else

{

System.out.println("Account Id does not exist");

}

}

break;

case 7:

System.out.println("-----Withdraw amount---------");

System.out.println("Enter Account id");

accountId = scanner.nextInt();

for(int i=0;i<count;i++)

{

if(account[i].accountId == accountId)

{

System.out.println("Enter amount to be withdraw");

amount = scanner.nextInt();

account[i].withdrawAmount(amount);

}

else

{

System.out.println("Account Id does not exist");

}

}

break;

case 8:

System.out.println("Thank you for visiting!!!");

System.exit(0);

default:

System.out.println("Please enter valid choice!!!");

}

}

}

}

b = 20

First AnonumousBlock called.

Second AnonumousBlock called.

one parameter constructor called.

a = 10

b = 20

**13. Implement the object array of Books. Perform following actions by taking user input**

**- Adding new Book**

**- Updating existing Book**

**- Deleting existing Book**

**- Searching particular Book**

**- Displaying all Books**

**package** small\_project;

**class** Book

{

**private** **int** bookId;

**private** String authorName;

**private** **double** price;

**private** String bookName;

**public** **int** getBookId() {

**return** bookId;

}

**public** **void** setBookId(**int** bookId) {

**this**.bookId = bookId;

}

**public** String getAuthorName() {

**return** authorName;

}

**public** **void** setAuthorName(String authorName) {

**this**.authorName = authorName;

}

**public** **double** getPrice() {

**return** price;

}

**public** **void** setPrice(**double** price) {

**this**.price = price;

}

**public** String getBookName() {

**return** bookName;

}

**public** **void** setBookName(String bookName) {

**this**.bookName = bookName;

}

**public** Book(**int** bookId,String bookName,String authorName, **double** price )

{

**this**.bookId = bookId;

**this**.bookName = bookName;

**this**.authorName = authorName;

**this**.price = price;

}

@Override

**public** String toString()

{

**return** "Book [BookId: " + bookId + ",BookName: " + bookName + ", AuthorName: " + authorName

+ ",Price: "+price+"]";

}

}

**package** small\_project;

**import** java.util.Scanner;

**public** **class** BookDemo

{

**public** **static** **void** main(String[] args)

{

**int** choice,bookId,count=0;

**double** price;

String bookName,authorName;

Scanner scanner = **new** Scanner(System.***in***);

Book book[] = **new** Book[10];

**while**(**true**)

{

System.***out***.println("1.Add book");

System.***out***.println("2.Update book");

System.***out***.println("3.Delete book");

System.***out***.println("4.Search book");

System.***out***.println("5.Show all book");

System.***out***.println("6.Exit");

System.***out***.println("Enter your choice");

choice = scanner.nextInt();

**switch**(choice)

{

**case** 1:

System.***out***.println("Add book");

System.***out***.println("Enter number of books");

**int** noOfBooks;

noOfBooks=scanner.nextInt();

**for**(**int** i=0;i<noOfBooks;i++)

{

System.***out***.println("Enter Book Id");

bookId = scanner.nextInt();

System.***out***.println("Enter Book name");

bookName = scanner.next();

System.***out***.println();

System.***out***.println("Enter Author name");

authorName = scanner.next();

System.***out***.println();

System.***out***.println("Enter Book price");

price = scanner.nextDouble();

book[count] = **new** Book(bookId,bookName,authorName,price);

count++;

}

**break**;

**case** 2:

System.***out***.println("Upadate Book");

System.***out***.println("Enter the BookId for Update");

bookId = scanner.nextInt();

**for**(**int** i=0;i<count;i++)

{

**if**(book[i]!=**null** && book[i].getBookId()==bookId)

{

System.***out***.println("Enter the Book name for update ");

bookName = scanner.next();

book[i].setBookName(bookName);

System.***out***.println("Enter the Author name for update");

authorName = scanner.next();

book[i].setAuthorName(authorName);

System.***out***.println("Enter the book price");

price = scanner.nextDouble();

book[i].setPrice(price);

}

}

System.***out***.println("Book upadate successfully!!!");

**break**;

**case** 3:

System.***out***.println("Delete Book");

System.***out***.println("Enter the BookId for delete");

bookId = scanner.nextInt();

**for**(**int** i=0;i<count;i++)

{

**if**(book[i]!=**null** && book[i].getBookId()==bookId)

{

book[i]=**null**;

}

}

System.***out***.println("Book deleted successfully!!!");

**break**;

**case** 4:

System.***out***.println("Search Book");

System.***out***.println("Enter the BookId for Search");

bookId = scanner.nextInt();

**for**(**int** i=0;i<count;i++)

{

**if**(book[i]!=**null** && book[i].getBookId()==bookId)

{

System.***out***.println(book[i]);

}

}

System.***out***.println("Search Completed!!!");

**break**;

**case** 5:

System.***out***.println("Show all Book");

System.***out***.println("All Book are:");

**for**(**int** i=0;i<count;i++)

{

**if**(book[i] != **null**)

{

System.***out***.println(book[i]);

}

}

**break**;

**case** 6:

System.*exit*(0);

**default**:

System.***out***.println("Please enter valid choice!!!");

}

}

}

}