JAVA Worksheet 4

20pt05

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 \*/  
package worksheet4;  
  
abstract class Book {  
  
    String title;  
    int dayTaken;  
    Book(String title,int dayTaken){  
        this.title=title;  
        this.dayTaken=dayTaken;  
    }  
  
    abstract int daysOverdue(int today);  
  
    abstract boolean isOverdue(int day);  
  
    abstract int computeFine(int day);  
  
}  
  
class RegularBook extends Book {  
  
    String author;  
  
    RegularBook(String title, int dayTaken,String author) {  
        super(title,dayTaken);  
        this.author = author;  
         
    }  
  
    @Override  
    int daysOverdue(int today) {  
        return (today - dayTaken);  
    }  
  
    @Override  
    boolean isOverdue(int day) {  
        int days = daysOverdue(day);  
        if (days > 14) {  
            return true;  
        } else if (days < 14) {  
            return false;  
        }  
        return false;  
    }  
  
    @Override  
    int computeFine(int day) {  
        int days = daysOverdue(day);  
        return days \* 1;  
  
    }  
  
}  
  
class RefBook extends Book {  
  
    RefBook(String title, int dayTaken) {  
       super(title,dayTaken);  
    }  
  
    @Override  
    int daysOverdue(int today) {  
        return (today - dayTaken);  
    }  
  
    @Override  
    boolean isOverdue(int day) {  
        int days = daysOverdue(day);  
        if (days > 2) {  
            return true;  
        } else if (days < 2) {  
            return false;  
        }  
        return false;  
    }  
  
    @Override  
    int computeFine(int day) {  
        int days = daysOverdue(day);  
        return days \* 1;  
    }  
  
}  
  
class AudioBook extends Book {  
  
     
    String author;  
     
  
    AudioBook(String title,int dayTaken, String author) {  
        super(title,dayTaken);  
        this.author = author;  
         
    }  
  
    @Override  
    int daysOverdue(int today) {  
        return (today - dayTaken);  
    }  
  
    @Override  
    boolean isOverdue(int day) {  
        int days = daysOverdue(day);  
        if (days > 14) {  
            return true;  
        } else if (days < 14) {  
            return false;  
        }  
        return false;  
    }  
  
    @Override  
    int computeFine(int day) {  
        int days = daysOverdue(day);  
        return days \* 2;  
    }  
  
}  
  
  
public class Library{  
    public static void main(String[] argc){  
        RefBook refbook=new RefBook("Cpp",13);  
        System.out.println(refbook.daysOverdue(1));  
        System.out.println(refbook.daysOverdue(3));  
        System.out.println(refbook.computeFine(1));  
        System.out.println(refbook.computeFine(3));  
        System.out.println(refbook.isOverdue(1));  
        System.out.println(refbook.isOverdue(3));  
         
        RegularBook regbook=new RegularBook("one point someone",15,"Chethan bhagath");  
        System.out.println(regbook.daysOverdue(16));  
        System.out.println(regbook.daysOverdue(30));  
        System.out.println(regbook.computeFine(16));  
        System.out.println(regbook.computeFine(30));  
        System.out.println(regbook.isOverdue(16));  
        System.out.println(regbook.isOverdue(30));  
         
        AudioBook audiobook=new AudioBook("The Crown",13,"Keira Steve");  
        System.out.println(audiobook.daysOverdue(11));  
        System.out.println(audiobook.daysOverdue(31));  
        System.out.println(audiobook.computeFine(11));  
        System.out.println(audiobook.computeFine(31));  
        System.out.println(audiobook.isOverdue(11));  
        System.out.println(audiobook.isOverdue(31));  
         
         
         
         
    }

}

//passenger ticket

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 \*/  
package worksheet4;  
  
/\*\*  
 \*  
 \* @author 20pt05  
 \*/  
public class PassengerTicket {  
  
    int seatNo;  
    boolean seatAvailable;  
    String seatStatus;  
    String passengerName;  
    String passengerGender;  
    String departure;  
    String destination;  
    String departureDateTime;  
    String issueDateTime;  
    double totalPrice;  
  
    PassengerTicket(int seatNo, boolean seatAvailable, String seatStatus, String passengerName, String passengerGender, String departure, String destination, String departureDateTime, String issueDateTime, double totalPrice) {  
        this.seatNo = seatNo;  
        this.seatAvailable = seatAvailable;  
        this.seatStatus = seatStatus;  
        this.passengerName = passengerName;  
        this.passengerGender = passengerGender;  
        this.departure = departure;  
        this.destination = destination;  
        this.departureDateTime = departureDateTime;  
        this.issueDateTime = issueDateTime;  
        this.totalPrice = totalPrice;  
  
    }  
     
    PassengerTicket() {  
        this.seatNo = 0;  
        this.seatAvailable = true;  
        this.seatStatus = "";  
        this.passengerName = "";  
        this.passengerGender = "";  
        this.departure = "";  
        this.destination = "";  
        this.departureDateTime = "yyyy/mm/dd HH:mm:ss";  
        this.issueDateTime = "yyyy/mm/dd HH:mm:ss";  
        this.totalPrice = 0.0;  
  
    }  
  
    int getSeatNo() {  
        return seatNo;  
    }  
  
    boolean getSeatAvailable() {  
        return seatAvailable;  
    }  
  
    String getSeatStatus() {  
        return seatStatus;  
    }  
  
    String getPassengerName() {  
        return passengerName;  
    }  
  
    String getPassengerGender() {  
        return passengerGender;  
    }  
  
    String getDeparture() {  
        return departure;  
    }  
  
    String getDestination() {  
        return destination;  
    }  
  
    String getDepartureDateTime() {  
        return departureDateTime;  
    }  
  
    String getIssueDateTime() {  
        return issueDateTime;  
    }  
  
    double getTotelPrice() {  
        return totalPrice;  
    }  
  
    void setSeatNo(int seatNo) {  
        this.seatNo = seatNo;  
    }  
  
    void setSeatAvailable(boolean seatavailable) {  
        this.seatAvailable = seatavailable;  
    }  
  
    void getSeatStatus(String seatStatus) {  
        this.seatStatus = seatStatus;  
    }  
  
    void getPassengerName(String passengername) {  
        this.passengerName = passengerName;  
    }  
  
    void getPassengerGender(String passengergender) {  
        this.passengerGender = passengerGender;  
    }  
  
    void getDeparture(String departure) {  
        this.departure = departure;  
    }  
  
    void getDestination(String destination) {  
        this.destination = destination;  
    }  
  
    void getDepartureDateTime(String departureDateTime) {  
        this.departureDateTime = departureDateTime;  
    }  
  
    void getIssueDateTime(String issueDateTime) {  
        this.issueDateTime = issueDateTime;  
    }  
  
    abstract void getTotelPrice(double totalPrice);  
//    {  
//        this.totalPrice = totalPrice;  
//    }  
     
    String toString(){  
        System.out.println(seatNo+" "+seatAvailable+" "+);  
    }  
  
}

2)   
import java.text.DateFormat;  
import java.text.SimpleDateFormat;  
import java.util.Date;  
  
public abstract class PassengerTicket {  
 private int seatNo;  
 private boolean seatAvailable;  
 private String seatStatus;  
 private String passengerName;  
 private String passengerGender;  
 private String departure;  
 private String destination;  
 private String departureDateTime;  
 private String issueDateTime;  
 private double totalPrice;  
  
 public PassengerTicket(int seatNo, boolean seatAvailable, String seatStatus, String passengerName, String passengerGender, String departure, String destination, String departureDateTime, String issueDateTime, double totalPrice) {  
 this.seatNo = seatNo;  
 this.seatAvailable = seatAvailable;  
 this.seatStatus = seatStatus;  
 this.passengerName = passengerName;  
 this.passengerGender = passengerGender;  
 this.departure = departure;  
 this.destination = destination;  
 this.departureDateTime = departureDateTime;  
 this.issueDateTime = issueDateTime;  
 this.totalPrice = totalPrice;  
 }  
  
 public PassengerTicket() {  
 this.seatNo = 0;  
 this.seatAvailable = true;  
 this.seatStatus = "";  
 this.passengerName = "";  
 this.passengerGender = "";  
 this.departure = "";  
 this.destination = "";  
 this.departureDateTime = "yyyy/mm/dd HH:mm:ss";  
 this.issueDateTime = "yyyy/mm/dd HH:mm:ss";  
 this.totalPrice =0;  
 }  
  
  
  
 public int getSeatNo() {  
 return seatNo;  
 }  
  
 public void setSeatNo(int seatNo) {  
 this.seatNo = seatNo;  
 }  
  
 public boolean isSeatAvailable() {  
 return seatAvailable;  
 }  
  
 public void setSeatAvailable(boolean seatAvailable) {  
 this.seatAvailable = seatAvailable;  
 }  
  
 public String getSeatStatus() {  
 return seatStatus;  
 }  
  
 public void setSeatStatus(String seatStatus) {  
 this.seatStatus = seatStatus;  
 }  
  
 public String getPassengerName() {  
 return passengerName;  
 }  
  
 public void setPassengerName(String passengerName) {  
 this.passengerName = passengerName;  
 }  
  
 public String getPassengerGender() {  
 return passengerGender;  
 }  
  
 public void setPassengerGender(String passengerGender) {  
 this.passengerGender = passengerGender;  
 }  
  
 public String getDeparture() {  
 return departure;  
 }  
  
 public void setDeparture(String departure) {  
 this.departure = departure;  
 }  
  
 public String getDestination() {  
 return destination;  
 }  
  
 public void setDestination(String destination) {  
 this.destination = destination;  
 }  
  
 public String getDepartureDateTime() {  
 return departureDateTime;  
 }  
  
 public void setDepartureDateTime(String departureDateTime) {  
 this.departureDateTime = departureDateTime;  
 }  
  
 public String getIssueDateTime() {  
 return issueDateTime;  
 }  
  
 public void setIssueDateTime(String issueDateTime) {  
 this.issueDateTime = issueDateTime;  
 }  
  
 public double getTotalPrice() {  
 return totalPrice;  
 }  
  
 abstract void setTotalPrice(double totalPrice);  
  
 @Override  
 public String toString() {  
 return "PassengerTicket{" +  
 "seatNo=" + seatNo +  
 ", seatAvailable=" + seatAvailable +  
 ", seatStatus='" + seatStatus + '\'' +  
 ", passengerName='" + passengerName + '\'' +  
 ", passengerGender='" + passengerGender + '\'' +  
 ", departure='" + departure + '\'' +  
 ", destination='" + destination + '\'' +  
 ", departureDateTime='" + departureDateTime + '\'' +  
 ", issueDateTime='" + issueDateTime + '\'' +  
 ", totalPrice=" + totalPrice +  
 '}';  
 }  
}  
  
  
class BusTicket extends PassengerTicket{  
 private int distance;  
 private double serviceCharge;  
  
 public BusTicket(int seatNo, boolean seatAvailable, String seatStatus, String passengerName, String passengerGender, String departure, String destination, String departureDateTime, String issueDateTime, double totalPrice, int distance) {  
 super(seatNo, seatAvailable, seatStatus, passengerName, passengerGender, departure, destination, departureDateTime, issueDateTime, totalPrice);  
 this.distance = distance;  
  
 }  
  
 public BusTicket(int distance) {  
 this.distance = distance;  
 }  
  
 BusTicket(){  
 this.distance=0;  
 this.serviceCharge=0;  
 }  
  
 @Override  
 void setTotalPrice(double totalPrice) {  
 totalPrice=distance\*0.08+serviceCharge;  
 }  
}  
  
interface TicketOperations{  
 public boolean makeReservation(BusTicket ticket,String name,String gender);  
 public boolean cancelReservation(BusTicket ticket);  
  
 public boolean buyTicket(BusTicket ticket,String name,String gender);  
  
 public boolean cancelTicketSold(BusTicket ticket);  
  
}  
  
class Officer implements TicketOperations{  
 private String name;  
 private String address;  
  
 Officer(){  
 this.name="";  
 this.address="";  
 }  
  
 Officer(String name,String address){  
 this.name=name;  
 this.address=address;  
 }  
  
 public String getName() {  
 return name;  
 }  
  
 public void setName(String name) {  
 this.name = name;  
 }  
  
 public String getAddress() {  
 return address;  
 }  
  
 public void setAddress(String address) {  
 this.address = address;  
 }  
  
 @Override  
 public boolean makeReservation(BusTicket ticket, String name, String gender) {  
 ticket.setSeatStatus("RESERVED");  
 ticket.setPassengerName(name);  
 ticket.setPassengerGender(gender);  
 DateFormat df = new SimpleDateFormat("yyyy/MM/dd HH:mm:ss");  
 Date date = new Date();  
 String dt = df.format(date);  
 ticket.setIssueDateTime(dt);  
 return true;  
 }  
  
 @Override  
 public boolean cancelReservation(BusTicket ticket) {  
 ticket.setSeatAvailable(true);  
 ticket.setSeatStatus("AVAILABLE");  
 ticket.setPassengerName("");  
 ticket.setPassengerGender("");  
 ticket.setIssueDateTime("yyyy/MM/dd HH:mm:ss");  
 return true;  
 }  
  
 @Override  
 public boolean buyTicket(BusTicket ticket, String name, String gender) {  
 ticket.setPassengerName(name);  
 ticket.setPassengerGender(gender);  
 ticket.setSeatAvailable(false);  
 ticket.setSeatStatus("SOLD");  
 DateFormat df = new SimpleDateFormat("yyyy/MM/dd HH:mm:ss");  
 Date date = new Date();  
 String dt = df.format(date);  
 ticket.setIssueDateTime(dt);  
 return true;  
 }  
  
 @Override  
 public boolean cancelTicketSold(BusTicket ticket) {  
 ticket.setSeatAvailable(true);  
 ticket.setSeatStatus("AVAILABLE");  
 ticket.setPassengerName("");  
 ticket.setPassengerGender("");  
 ticket.setIssueDateTime("yyyy/MM/dd HH:mm:ss");  
 return true;  
 }  
}