JAVA Worksheet -3

20pt05

1) import java.util.\*;

class Account

{

double balance;

Account(double balance)

{

this.balance = balance;

}

public void deposit(double amount)

{

balance+=amount;

}

public void withdraw(double amount)

{

if(amount>balance)

{

System.out.println("Insufficient Funds");

return;

}

balance-=amount;

}

}

class SavingsAccount extends Account

{

static double defaultinitialRate = 2.5;

double interestRate;

SavingsAccount(double balance)

{

super(balance);

interestRate = defaultinitialRate;

}

public static void setDefaultinitialRate(double interestRate)

{

defaultinitialRate = interestRate;

}

public void applyMonthlyInterest()

{

balance+=(balance/interestRate);

}

}

public class BankingAccounts {

public static void main(String[]args)

{

Account myAccount = new Account(980.56);

}

}

2)

//employee

/\*  
 \* To change this license header, choose License Headers in Project Properties.  
 \* To change this template file, choose Tools | Templates  
 \* and open the template in the editor.  
 \*/  
package worksheet3;  
  
/\*\*  
 \*  
 \* @author 20pt05  
 \*/  
public class Employee {  
  
    int age;  
    int salary;  
    Company[] company;  
  
    public Employee(){  
        this.age=0;  
        this.salary=0;  
    }  
    public Employee(int age, int salary) {  
        this.age = age;  
        this.salary = salary;  
    }  
  
    void setAge(int age) {  
        this.age = age;  
    }  
  
    void increaseSalary(int salaryIncrease) {  
        salary = salary \* (salaryIncrease + 1);  
    }  
  
    Boolean checkRetirement(int age) {  
        if (age >= 65) {  
            return true;  
        } else {  
            return false;  
        }  
    }  
     
    void paySalary(int i){  
        System.out.println(company[i]+" pays the employee "+i);  
    }  
     
    void display(){  
        System.out.print("Age:"+age+" Salary:"+salary);  
    }  
     
     
    public static void main(String[] args) {  
  
    }  
  
}

//clerk

package worksheet3;  
  
/\*\*  
 \*  
 \* @author 20pt05  
 \*/  
public class Clerk extends Employee {  
  
    int illDays;  
  
    Clerk(int age, int salary, int illDays) {  
  
        this.age=age;  
        this.salary=salary;  
//        super(age,salary);  
        this.illDays = illDays;  
    }  
     
    Clerk(){  
        age=0;  
        salary=0;  
        illDays=0;  
    }  
  
     
    void addIllDays(int days) {  
        illDays = illDays + days;  
    }  
  
    int getIllDays() {  
        return illDays;  
    }  
     
    public void display(){  
        super.display();  
        System.out.print(" Ill Days:"+illDays);  
    }  
}

//director

package worksheet3;  
  
/\*\*  
 \*  
 \* @author 20pt05  
 \*/  
public class Director extends Employee {  
    double gratification;  
    Company[] company;  
     
     Director(int age, int salary,double gratification) {  
         this.age=age;  
         this.salary=salary;  
           
//        super(age,salary);  
        this.gratification=gratification;  
    }  
       
     Director(){  
         age=0;  
         salary=0;  
         gratification=0;  
     }  
     
     
    void payGratification(int i){  
        System.out.print(gratification);  
    }  
     
    public void display(){  
        super.display();  
        System.out.println(" Gratification:"+gratification);  
    }  
     
     
}

//comapny

package worksheet3;  
  
/\*\*  
 \*  
 \* @author 20pt05  
 \*/  
public class Company {  
  
    private int numberOfEmployees;  
    private int profit;  
    Employee[] employees;  
  
    Company(int maxSize) {  
        this.employees = new Employee[maxSize];  
    }  
    Company(){  
        numberOfEmployees=0;  
        profit=0;  
    }  
  
     
  
    void addClerk(int age, int salary, int illDays) {  
        employees[numberOfEmployees] = new Clerk(age, salary, illDays);  
        numberOfEmployees += 1;  
    }  
  
    void addDirector(int age, int salary, int gratification) {  
        employees[numberOfEmployees] = new Director(age, salary, gratification);  
        numberOfEmployees += 1;  
    }  
     
    int getNumberOfEmployee(){  
        return numberOfEmployees;  
    }  
     
    int getProfit(){  
        return profit;  
    }  
  
    void printCompany(int i) {  
        employees[i].display();  
        System.out.println(" Number of employees:" + numberOfEmployees + " Profit:" + profit);  
  
    }  
  
}

//comapny test

package worksheet3;  
  
/\*\*  
 \*  
 \* @author 20pt05  
 \*/  
public class ComapnyTest {  
  
    public static void main(String[] argc) {  
  
        Company c = new Company(100);  
        c.addClerk(23, 23000, 5);  
        c.addClerk(45, 23000, 8);  
        c.addClerk(55, 23000, 9);  
        c.addClerk(39, 23000, 20);  
        c.addClerk(25, 23000, 15);  
        c.addClerk(48, 23000, 2);  
        c.addClerk(50, 23000, 1);  
        c.addClerk(31, 23000, 14);  
        c.addClerk(26, 23000, 5);  
        c.addClerk(47, 23000, 7);  
  
        c.addDirector(45, 50000, 20000);  
        c.addDirector(45, 100000, 200000);  
        c.addDirector(45, 40000, 60000);  
        System.out.println(c.getNumberOfEmployee());  
        c.printCompany(5);  
        Clerk c1=new Clerk();  
        c.employees[3].increaseSalary(120);  
        System.out.println(c.employees[3].checkRetirement(23));  
   
        c.employees[12].display();  
         
  
    }  
  
}

3) public class OrderItem {  
 protected String upc;  
 protected int quantity;  
 protected int price;  
  
 OrderItem(){  
 this.upc="";  
 this.price=0;  
 this.quantity=0;  
 }  
  
 OrderItem(String upd,int price,int quantity){  
 this.upc=upd;  
 this.price=price;  
 this.quantity=quantity;  
 }  
  
  
  
 public String getUpc() {  
 return upc;  
 }  
  
 public void setUpc(String upc) {  
 this.upc = upc;  
 }  
  
 public int getQuantity() {  
 return quantity;  
 }  
  
 public void setQuantity(int quantity) {  
 this.quantity = quantity;  
 }  
  
 public int getPrice() {  
 return price;  
 }  
  
 public void setPrice(int price) {  
 this.price = price;  
 }  
  
 int getCost(){  
 return quantity\*price;  
 }  
  
 @Override  
 public String toString() {  
 return upc+" "+quantity+" "+price;  
 }  
}

public class RushOrder extends Order {  
  
 protected int deliveryDay;  
 protected int deliveryCharge;  
  
 RushOrder() {  
  
 deliveryCharge = 0;  
 deliveryDay = 0;  
 }  
  
 RushOrder(int deliveryDay) {  
 super();  
  
 this.deliveryDay = deliveryDay;  
 this.deliveryCharge=0;  
  
 }  
  
  
 void setDeliveryCharge() {  
 if (deliveryDay == 1) {  
 deliveryCharge = 25;  
 } else if (deliveryDay == 2) {  
 deliveryCharge = 15;  
 } else if (deliveryDay == 3) {  
 deliveryCharge = 10;  
 } else {  
 deliveryCharge = 0;  
 }  
 }  
  
 int getTotal() {  
 setDeliveryCharge();  
 if (super.getTotal() == 0) {  
 return super.getTotal();  
 }  
 return super.getTotal() + deliveryCharge;  
  
 }  
}

import java.util.ArrayList;  
import java.util.List;  
  
public class Order {  
  
 private ArrayList<OrderItem> items;  
 private int totalCost ;  
 private int it=0;  
// private int totalItems;  
  
  
  
  
 Order(int numberOfOrders) {  
 this.items =new ArrayList<OrderItem>(numberOfOrders);  
  
 }  
  
 public Order() {  
 this.items =new ArrayList<OrderItem>();  
  
 }  
  
  
 void addOrderItem(OrderItem item) {  
// items[it].setPrice(item.getPrice());  
// items[it].setUpc(item.getUpc());  
// items[it].setQuantity(item.getQuantity());  
 items.add(item);  
 it++;  
// totalItems++;  
  
 }  
  
 int getTotal() {  
  
 for (int i = 0; i < items.size(); i++) {  
 totalCost = totalCost + items.get(i).getPrice();  
 }  
 return totalCost;  
 }  
  
 void printOrderItems() {  
 for (int i = 0; i < items.size(); i++) {  
 items.get(i).toString();  
 }  
 }  
  
  
}

import java.util.Scanner;  
  
public class Delivery {  
 public static void main(String[] argc) {  
 Order[] orders = new Order[4];  
 orders[0] = new Order();  
 orders[1] = new RushOrder(1);  
 orders[2] = new RushOrder(2);  
 orders[3] = new RushOrder(3);  
  
 Scanner sc = new Scanner(System.*in*);  
  
 String option;  
  
  
 int price = 300;  
 int deliveryDay = 4;  
 String UPC;  
 int quantity;  
  
  
 do {  
 System.*out*.println("Order/done:");  
 option = sc.nextLine();  
 switch (option) {  
 case "order":  
 System.*out*.println("Enter the UPC:");  
 UPC = sc.nextLine();  
 System.*out*.println("Enter the quantity:");  
 quantity = sc.nextInt();  
 OrderItem orderItem = new OrderItem(UPC, quantity, price);  
 //1 to 7  
  
 if (deliveryDay >= 4) {  
 orders[0].addOrderItem(orderItem);  
 } else if (deliveryDay == 3) {  
 orders[3].addOrderItem(orderItem);  
  
 } else if (deliveryDay == 2) {  
 orders[2].addOrderItem(orderItem);  
 } else if (deliveryDay == 1) {  
 orders[1].addOrderItem(orderItem);  
 }  
  
  
 for (int i = 0; i < orders.length; i++) {  
// orders[i].printOrderItems();  
 orders[i].getTotal();  
 }  
  
 break;  
  
 case "done":  
 break;  
  
  
 }  
  
  
 } while (option != "done");  
  
  
 }  
}