1.1)

//Create a class person with properties Age and Name  
public class Person {  
  
  
 int age = 18;  
 String name;  
  
 Person(String name)  
 {  
 this.name=name;  
 }  
 Person(int age,String name)  
 {  
 this.age=age;  
 this.name=name;  
 }  
 //method use to display the person Name and Age,  
 // if only name parameter is given then default age will be 18  
 public void displayDetails()  
 {  
 System.*out*.println("Age of the person "+this.age );  
 System.*out*.println("Name of the person "+this.name);  
 }

}

public class Sol1 {  
 public static void main(String[] args) {  
//person object initialize Name and Age  
 Person person1= new Person(29," Bala Jyothi");  
 Person person2= new Person("Dishali Aadhya");  
 person1.displayDetails();  
 person2.displayDetails();  
  
 }  
}

Solution1.1)

Output:

Age of the person 29

Name of the person Bala Jyothi

Age of the person 18

Name of the person Dishali Aadhya

1.2)Create a class Product(pid,price ,quantity) with parameterized constructor.Create a main function in different class( says XYZ)and perform tasks

//Create a class Product(pid,price ,quantity) with parameterized constructor  
public class Product {  
 public Product()  
 {}  
 public int pid;  
 public double price;  
 public int quantity;  
  
  
 // Parameterized constructor  
 public Product(int pid, double price, int quantity) {  
 this.pid = pid;  
 this.price = price;  
 this.quantity = quantity;  
 }  
  
  
 //Method to display pid of the product with highest price  
 public void highestPriceProduct(Product[] products) {  
 double max=0;  
 int id=0;  
 for (int i = 0; i < 5; i++)  
 {  
 if(products[i].price>max)  
 {  
 max=products[i].price;  
 id=products[i].pid;  
 }  
 }  
 System.*out*.println("The pid " + id+" is with highest price "+max);  
 }  
 // Method to calculate total value of the product  
  
}

//Create a main function in different class( says XYZ)and perform tasks  
import java.util.Scanner;  
  
public class XYZ {  
  
 public void totalAmount(Product[] products )  
 {  
double total=0;  
  
 for (int i = 0; i < 5; i++) {  
 total=total+products[i].price\*products[i].quantity;  
  
  
 }  
 System.*out*.println("Total amount spent on all products total is "+total);  
 }  
  
  
 public static void main(String[] args) {  
 // Create a scanner object for user input  
 Scanner scanner = new Scanner(System.*in*);  
 Product product = new Product();  
 // Create an array of 5 Product objects  
 Product[] products = new Product[5];  
 int pid;  
 double price;  
 int quantity;  
  
  
 // Accept product information from the user  
 for (int i = 0; i < 5; i++) {  
 System.*out*.println("Enter details for Product " + (i + 1) + ":");  
 System.*out*.print("Enter Product ID: ");  
 pid = scanner.nextInt();  
  
 System.*out*.print("Enter Product Price: ");  
 price = scanner.nextDouble();  
  
 System.*out*.print("Enter Product Quantity: ");  
 quantity = scanner.nextInt();  
  
 // Create a new Product object and store it in the array  
 products[i] = new Product(pid, price, quantity);  
 }  
 // Method to calculate the total price of all products  
 product.highestPriceProduct(products);  
 XYZ xyz=new XYZ();  
 xyz.totalAmount(products);  
  
 }  
}

Solution1.2 )

Output:

Enter details for Product 1:

Enter Product ID: 1

Enter Product Price: 10

Enter Product Quantity: 3

Enter details for Product 2:

Enter Product ID: 2

Enter Product Price: 20

Enter Product Quantity: 4

Enter details for Product 3:

Enter Product ID: 3

Enter Product Price: 30

Enter Product Quantity: 5

Enter details for Product 4:

Enter Product ID: 4

Enter Product Price: 40

Enter Product Quantity: 5

Enter details for Product 5:

Enter Product ID: 5

Enter Product Price: 50

Enter Product Quantity: 2

The pid 5 is with highest price 50.0

Total amount spent on all products total is 560.0

1.3) Create a class Account with data member as Balance create two constructors no arguments and two arguments and perform deposite withdraw and display opertaions

/ Create a class Account with data member as Balance   
// create two constructors no arguments and two arguments   
// and perform deposite withdraw and display opertaions  
import java.util.Scanner;  
  
public class Account {  
 private double balance;  
 private int accountNo;  
  
 // Constructor to initialize balance and account holder  
 public Account(double balance, int accountNo) {  
 this.balance = balance;  
 this.accountNo = accountNo;  
 }  
  
 // Method to deposit the amount to the account  
 public void deposit() {  
 double amount;  
 System.*out*.println("enter amount to deposit");  
 Scanner scanner = new Scanner(System.*in*);  
 amount=scanner.nextDouble();  
 if (amount > 0) {  
  
 balance += amount;  
 System.*out*.println("Deposited " + amount + " successfully.");  
  
 }  
 }  
  
 // Method to withdraw the amount from the account  
 public void withdraw() {  
 double amount;  
 System.*out*.println("Enter amount to withdraw");  
 Scanner scanner = new Scanner(System.*in*);  
 amount=scanner.nextDouble();  
  
 if (amount > 0) {  
 if (amount <= balance) {  
 balance -= amount;  
 System.*out*.println("Withdrew " + amount + " successfully.");  
 } else {  
 System.*out*.println("Insufficient balance.");  
 }  
 }  
 }  
  
 // Method to display the balance  
 public void displayBalance() {  
 System.*out*.println("Account number: " + accountNo);  
 System.*out*.println("Current Balance: " + balance);  
 }  
  
  
 public static void main(String[] args) {  
 Account account = new Account(1000, 1022080911);  
 account.deposit();  
 account.displayBalance();  
 account.withdraw();  
 account.displayBalance();  
  
 }  
}

Solution 1.3)

Output:

Enter amount to deposit

1000

Deposited 1000.0 successfully.

Account number: 1022080911

Current Balance: 2000.0

Enter amount to withdraw

500

Withdrew 500.0 successfully.

Account number: 1022080911

Current Balance: 1500.0

1.4)Define a base class Person with attributes name and age create a subclass Employee and inherits from Person and perform tasks.

//Create a class person with properties Age and Name  
public class Person {  
  
  
 int age;  
 String name;  
  
   
 Person(int age,String name)  
 {  
 this.age=age;  
 this.name=name;  
 }

public class Employee extends Person{  
 Employee(int age, String name) {  
 super(age, name);  
 }  
  
 int employid;  
 double salary;  
  
//method to pass employid and salary  
 void displaydetails(int employid,double salary)  
 {  
 this.employid=employid;  
 this.salary=salary;  
 System.*out*.println("Name of the person "+super.name);  
 System.*out*.println("Age of the person "+super.age);  
 System.*out*.println("Employeeid of the person "+this.employid);  
 System.*out*.println("Salary of the person "+this.salary);  
 }  
  
public static void main(String[] args){  
 Employee employee=new Employee(29,"Bala Jyothi");  
 employee.displaydetails(10001,40000);  
}  
  
}

Solution 1.4)

Output:

Name of the person Bala Jyothi

Age of the person 29

Employeeid of the person 10001

Salary of the person 40000.0