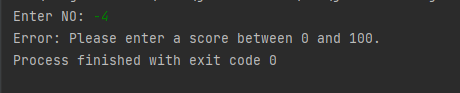
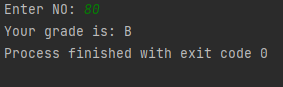
Question 1)

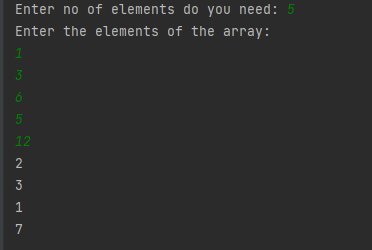
import java.util.Scanner;  
public class q1 {  
  
 public static String calculateGrade(int s){  
 if (s>=90){  
 return "A" ;  
 } else if (s>=80) {  
 return "B";  
 }else if(s<=70 &&s>=0){  
 return "C";  
 }else{  
 return "Error: Please enter a score between 0 and 100.";  
 }  
 }  
  
 public static void main(String[] args) {  
  
 Scanner input = new Scanner(System.*in*);  
 System.*out*.print("Enter NO: ");  
 int no = input.nextInt();  
  
 System.*out*.print(*calculateGrade*(no));  
  
  
 }  
}





Question 2)

import java.util.Scanner;  
public class q2 {  
  
 public static void minGap(int[] arr) {  
 for (int i=1;i<arr.length;i++){  
 int no = Math.*abs*((arr[i]-arr[i-1]));  
 System.*out*.println(no);  
 }  
  
 }  
  
  
 public static void main(String[] args) {  
 Scanner input = new Scanner(System.*in*);  
 System.*out*.print("Enter no of elements do you need: ");  
 int elements = input.nextInt();  
  
 // int[] createdAr = {1, 3, 6, 5,12};  
 int[] array = new int[elements];  
  
 System.*out*.println("Enter the elements of the array:");  
 for (int i = 0; i < elements; i++) {  
 array[i] = input.nextInt();  
 }  
  
 *minGap*(array);  
  
/\* for (int i=0; i<elements;i++){  
 int[] newArray = new int[elements];  
 System.out.print("Enter element "+i+": ");  
 int count = input.nextInt();  
 newArray[i]=count;  
 System.out.print(newArray[0]);  
 }  
 \*/  
  
 }  
}



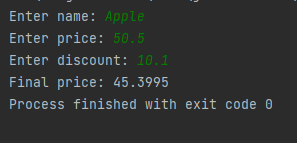
Question 3)

import java.util.Scanner;  
public class q3 {  
  
 public static boolean allLess(int[] arr,int[] arr2) {  
 if (arr.length != arr2.length){  
 return false;  
 }else {  
 for (int i=0;i<arr.length;i++){  
 if(arr[i]<arr2[i]){  
 continue;  
 }else {  
 return false;  
 }  
  
 }  
 return true;  
 }  
  
 }  
  
  
 public static void main(String[] args) {  
 Scanner input = new Scanner(System.*in*);  
 int[] array1={10, 20, 30, 40, 50};  
 int[] array2={35, 30, 60, 73, 55};  
  
 System.*out*.println(*allLess*(array1,array2));  
  
  
 }  
}



Question 4)

import java.util.Scanner;  
public class q4 {  
 String name;  
 double price;  
 double discount;  
  
 public String initialize(String n,double p,double d) {  
 this.name = n;  
 this.price=p;  
 this.discount =d;  
 double newPrice = p-(p\*(d/100));  
 return "Final price: "+newPrice;  
 // System.out.println("Final price: "+newPrice);  
 }  
  
  
 public static void main(String[] args) {  
 Scanner input = new Scanner(System.*in*);  
 q4 newObject = new q4();  
  
 System.*out*.print("Enter name: ");  
 String name = input.nextLine();  
  
 System.*out*.print("Enter price: ");  
 double price = input.nextDouble();  
  
 System.*out*.print("Enter discount: ");  
 double discount = input.nextDouble();  
  
 System.*out*.print(newObject.initialize(name,price,discount));  
  
 }  
}



Question 5)

1. Cant make both class public , only 1 class should be public and that class name should be the file name

public class BankAccount {  
 String name;  
 double balance;  
  
 BankAccount() {  
 name = null;  
 balance = 0;  
 }  
 BankAccount(String name,double balance) {  
 this.name = name;  
 this.balance = balance;  
  
 }  
  
 public void getName(){  
 System.*out*.println(name);  
 }  
  
 public void getBalance(){  
 System.*out*.println(balance);  
 }  
  
 public void deposit(double amount){  
 balance = balance+amount;  
 }  
  
 public void withdraw(double amount){  
 balance = balance-amount;  
 }  
  
 public String displayInfo(){  
 return name + ", RS." + balance;  
 }  
  
  
}  
class BankAccountClient {  
 public static void main(String[] args) {  
  
 BankAccount B1 = new BankAccount("peter",10000);  
  
 B1.deposit(8000);  
 B1.getBalance();  
 B1.withdraw(3000);  
 System.*out*.println(B1.displayInfo());  
  
 BankAccount B2 = new BankAccount();  
 B2.getName();  
 B2.getBalance();  
  
  
  
 }  
}

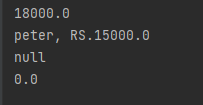
ii)

file 1)

public class BankAccount {  
 String name;  
 double balance;  
  
 BankAccount() {  
 name = null;  
 balance = 0;  
 }  
 BankAccount(String name,double balance) {  
 this.name = name;  
 this.balance = balance;  
  
 }  
  
 public void getName(){  
 System.*out*.println(name);  
 }  
  
 public void getBalance(){  
 System.*out*.println(balance);  
 }  
  
 public void deposit(double amount){  
 balance = balance+amount;  
 }  
  
 public void withdraw(double amount){  
 balance = balance-amount;  
 }  
  
 public String displayInfo(){  
 return name + ", RS." + balance;  
 }  
  
  
}

file 2)

public class BankAccountClient {  
 public static void main(String[] args) {  
  
 BankAccount B1 = new BankAccount("peter",10000);  
  
 B1.deposit(8000);  
 B1.getBalance();  
 B1.withdraw(3000);  
 System.*out*.println(B1.displayInfo());  
  
 BankAccount B2 = new BankAccount();  
 B2.getName();  
 B2.getBalance();  
  
  
  
 }  
}



Question 6)

***Staff.java***

public class Staff {  
 String NIC;  
 String Name;  
 String Email;  
 int ContactNumber;  
 String UniversityID;  
 double Salary;  
 String department;  
  
  
 void displaystaffInfo(){  
 System.*out*.println("Name: "+Name+  
 ", Email: "+Email+  
 ". ContactNumber: "+ContactNumber);  
 }  
  
 void salaryIncrement(){  
 if (department=="CS"){  
 System.*out*.println(Salary+=(Salary\*0.05));  
 }  
 }  
  
}

***Student.java***

public class Student {  
 String NIC;  
 String Name;  
 String Email;  
 int ContactNumber;  
 String UniversityID;  
 int AcademicYr;  
 double GPA;  
 String Path;  
  
  
 void displayInfo(){  
 System.*out*.println("Name: "+Name+  
 ", Email: "+Email+  
 ". ContactNumber: "+ContactNumber);  
 }  
  
 void GpaIncrease(){  
 if (AcademicYr==2){  
 System.*out*.println(GPA+=0.0001);  
 }  
  
 }  
  
}

**StudentStaff.java**

public class StudentStaff {  
  
 public static void main(String[] args) {  
  
 Staff staffMember = new Staff();  
 Student studentMemeber = new Student();  
  
 staffMember.Name ="Dr. Saman Perera";  
 staffMember.UniversityID ="U001";  
 staffMember.NIC ="1111";  
  
 studentMemeber.Name ="Ms. Nilanka Silva";  
 studentMemeber.UniversityID ="PS/2016 /001";  
 studentMemeber.NIC ="9999";  
  
 studentMemeber.displayInfo();  
 studentMemeber.GpaIncrease();  
  
 staffMember.displaystaffInfo();  
 staffMember.salaryIncrement();  
  
  
  
  
  
 }  
}

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Description automatically generated

Question 7 )

public class Triangle {  
 int a,b,c;  
 Triangle(){  
 a=3;  
 b=4;  
 c=5;  
 }  
 int perimeter() {  
 return a + b + c;  
 }  
 double area() {  
 double s = perimeter() / 2.0;  
 return Math.*sqrt*(s \* (s - a) \* (s - b) \* (s - c));  
 }  
  
 public static void main(String[] args) {  
 Triangle T1 = new Triangle();  
 System.*out*.println("Perimeter : " + T1.perimeter() );  
 System.*out*.println("Area : " + T1.area());  
 }  
}

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Question 8 )

public class Tri {  
 int a,b,c;  
 Tri(int a,int b,int c){  
 this.a = a;  
 this.b = b;  
 this.c = c;  
 }  
 int perimeter() {  
 return a + b + c;  
 }  
 double area() {  
 double s = perimeter() / 2.0;  
 return Math.*sqrt*(s \* (s - a) \* (s - b) \* (s - c));  
 }  
  
 public static void main(String[] args) {  
 Tri T1 = new Tri(3,4,5);  
 System.*out*.println("Perimeter : " + T1.perimeter() );  
 System.*out*.println("Area : " + T1.area());  
 }  
}

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Question 9)

public class StudentN {  
 String Name;  
 StudentN(String Name){  
 this.Name = Name;  
 };  
 StudentN(){  
 this.Name="Unknown";  
 }  
  
 public static void main(String[] args) {  
 StudentN S1 = new StudentN("Malan");  
 System.*out*.println(S1.Name);  
 StudentN S2 = new StudentN();  
 System.*out*.println(S2.Name);  
 }  
}



Question 10)

public class BankAcc {  
 String Member;  
 Double Amount = 0.00;  
  
 public BankAcc(){  
 this.Amount = 0.00 ;  
 }  
  
 public BankAcc(double Amount){  
 this.Amount = this.Amount + Amount;  
 }  
 public static void main(String[] args) {  
 BankAcc B1 = new BankAcc(1000);  
 System.*out*.println("Amount : " + B1.Amount);  
 }  
}



Question 11)

A)



B) yes

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Because Static Not Changed with New Object.