IRC_SKCT_Java2_SB_COD_Polymorphism

Test Summary

- No. of Sections: 1
- No. of Questions: 5
- Total Duration: 120 min

Section 1 - Coding

Section Summary

- No. of Questions: 5
- Duration: 120 min

Additional Instructions:

None

Q1.   Write a Multiply function for two integers and use overload the function by changing the no.of.parameter for three integers.

Input Format

Input of five integers in seperate lines

Output Format

Output of Two integers in seperate lines

Sample Input	Sample Output
1 2 3 4	2 60

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q2.   **METHOD OVERLOADING**

Create a class named '**Hello**'. Define a method '**sayHello**'

1. Create an object obj.
2. Call method 'sayHello' without argument, Output should display 'Hello'.
3. Call method 'sayHello' with one argument, Output should display 'Hello 'argument value" (Ex: If the argument passed is 'John' Output should display 'Hello John')

Input Format

The input contains a string.

Output Format

The first line of the output should display 'Hello'
The second line of the output should display 'Hello <input>'

Sample Input	Sample Output
John	Hello Hello John

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q3.   Write a Multiply function for two integers and use overload the function by changing the parameter for double data type.

Input Format

Input two Integers in a separate line & two Double in a separate line.

Output Format

One Integer value and Double value after performing multiplication in a separate line.

Sample Input

```
2
3
1.2
2 2
```

Sample Output

```
6
2.76
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q4.   Write two subclasses named Dog and Cat to override the method Animal.

Input Format

No console input.

Output Format

Print the String from subclass named Dog and Cat in seperate lines.

Sample Input

Sample Output

```
Dog
Cat
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q5.   **Function Overloading**
Write a program to implement function overloading.
Ram is given two or three input as an integer,if he has two integers then add the two numbers. If he has three input,then multiply the three numbers.
Function Header:
public void fun1(int a,int b,int c)
public void fun1(int a,int b)

Input Format

First line represents the number of elements(N) followed by the elements separated by the single space.
If the number of the elements exceed 2 or 3, then display message as WRONG INPUT.

Output Format

Display the sum,if there are two integers or
Displays product,if there are three integers.

Constraints

N > 0 and N < 4

Sample Input

```
3 1 2 3
```

Sample Output

```
6
```

Sample Input

```
2 14 56
```

Sample Output

```
70
```

Sample Input

```
4 67 89 43 21
```

Sample Output

```
WRONG INPUT
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Section 1 - Coding

Q1

Test Case

Input	Output
2 3 2 2	6 12

Weightage - 100

Sample Input	Sample Output
1 2 3 4	2 60

Solution

Header

```java
import java.util.*;
class Main {
```

```java
    int Multiply(int a, int b)
    {
        return a * b;
    }

    // Method with the same name but 3 parameter
    int Multiply(int a, int b, int c)
    {
        return a * b * c;
    }
```

Footer

```java
    public static void main(String[] args)
    {
        Scanner in=new Scanner(System.in);
        int a=in.nextInt();
        int b=in.nextInt();
        int c=in.nextInt();
        int d=in.nextInt();
        int e=in.nextInt();
        Main m=new Main();
        System.out.println(m.Multiply(a, b));
        System.out.println(m.Multiply(c, d, e));
    }
}
```

Q2

Test Case

Input	Output

| examly | Hello
Hello examly |

Weightage - 50

Input	**Output**
example	Hello Hello example

Weightage - 50

Sample Input	**Sample Output**
John	Hello Hello John

Solution

Header

```
import java.util.*;
class Hello {




public String sayHello(){
    return "Hello";
}
public String sayHello(String s){
    return ("Hello "+s);
}
```

Footer

```
public static void main(String args[])
    {
        Scanner in=new Scanner(System.in);
        String str=in.nextLine();
        Hello s = new Hello();
        System.out.println(s.sayHello());
        System.out.println(s.sayHello(str));
    }
}
```

Q3

Test Case

Input	**Output**
12 23 1.32 4.21	276 5.5572

Weightage - 50

Input

```
76
21
3.211
43.21
```

Output

```
1596
138.74731
```

Weightage - 50

Sample Input

```
2
3
1.2
2.3
```

Sample Output

```
6
2.76
```

Solution

Header

```java
import java.util.*;
class Main {


    int Multiply(int a, int b)
    {
        return a * b;
    }

    double Multiply(double a, double b)
    {
        return a * b;
    }
```

Footer

```java
public static void main(String[] args)
    {
        Scanner in=new Scanner(System.in);
        int a=in.nextInt();
        int b=in.nextInt();
        double c = in.nextDouble();
        double d=in.nextDouble();
        Main m=new Main();
        System.out.println(m.Multiply(a, b));
        System.out.println(m.Multiply(c, d));
    }
}
```

Q4

Test Case

Input

Output

```
Dog
Cat
```

Weightage - 100

Sample Input

Sample Output

```
Dog
Cat
```

Solution

Header

```java
class Animal {

    void Print()
    {
        System.out.println("Animal");
    }
}



class Dog extends Animal {

    void Print()
    {
        System.out.println("Dog");
    }
}

class Cat extends Animal {

    void Print()
    {
        System.out.println("Cat");
    }
}
```

Footer

```java
class Main {
    public static void main(String[] args)
    {

        Animal a;

        a = new Dog();
        a.Print();

        a = new Cat();
        a.Print();
    }
}
```

Q5   **Test Case**

Input   **Output**

```
3 18 23 0
```

```
0
```

Weightage - 20

Input

```
2 3456 7890
```

Output

```
11346
```

Weightage - 20

Input

```
2 12345 678432
```

Output

```
690777
```

Weightage - 20

Input

```
3 14 56 88
```

Output

```
68992
```

Weightage - 20

Input

```
3 687 900 567
```

Output

```
350576100
```

Weightage - 20

Sample Input

```
3 1 2 3
```

Sample Output

```
6
```

Sample Input

```
2 14 56
```

Sample Output

```
70
```

Sample Input

```
4 67 89 43 21
```

Sample Output

```
WRONG INPUT
```

Solution

Header

```java
import java.util.*;
class Main{
public int fun1(int a,int b){
    return a+b;
}
public int fun1(int a,int b,int c){
    return a*b*c;
}
public static void main(String args[]){
    Scanner in=new Scanner(System.in);
    int a=in.nextInt();
    int[] arr=new int[a];
    for(int i=0;i<a;i++){
        arr[i]=in.nextInt();
    }



Main m=new Main();
if(a==2)
        System.out.println(m.fun1(arr[0],arr[1]));
else if(a==3)
        System.out.println(m.fun1(arr[0],arr[1],arr[2]));
else
        System.out.println("WRONG INPUT");
    }
```

Footer

```java
}
```