

Java Basics -Part 2

Try to Solve by your own and go to the solution only when you are stuck

Problem 1: Java program to find the numbers greater than the average of the numbers of a given array

```
import java.util.*;
public class Main {
    public static void main(String[] args)
    {
        Integer nums[] = new Integer[]{1, 20, 13, 3, 25, 2, 15};
        int sum = 0;
        System.out.println("Original Array: ");
        System.out.println(Arrays.toString(nums));
        for(int i = 0; i < nums.length; i++) {
            sum = sum + nums[i];
        }
        double average = sum / nums.length;
        System.out.println("The average of the said array is: " + average);
        System.out.println("The numbers in the said array that are greater than the
average are: ");
        for(int i = 0; i < nums.length; i++) {
            if(nums[i] > average) {
                System.out.println(nums[i]);
            }
        }
    }
}
```

Output:

Original Array:

[1, 20, 13, 3, 25, 2, 15]

The average of the said array is: 11.0

The numbers in the said array that are greater than the average are:

20

13

25

15

Problem 2: Write a Java program that takes a number as input and prints its multiplication table upto 10.

```
import java.util.*;
public class Main {
    public static void main(String[] args)
```

```
{
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter the number to print the table:");
    int num = sc.nextInt();
    for(int i =1; i<=10;i++){
        System.out.println(num+"x"+i+"="+num*i);
    }
}
}
```

Output: Enter the number to print the table:

```
3
3x1=3
3x2=6
3x3=9
3x4=12
3x5=15
3x6=18
3x7=21
3x8=24
3x9=27
3x10=30
```

Problem 3: Write a java program to sum the values of an Array.

```
import java.util.*;
public class Main {
    public static void main(String[] args)
    {
        Integer nums[] = new Integer[]{1, 20, 13, 3, 25, 2, 15};
        int sum = 0;

        for(int i = 0; i < nums.length; i++) {
            sum +=  nums[i];
        }
        System.out.println("The sum of the array is:"+ sum);
    }
}
```

Output:

The sum of the array is:79

Problem 4: Write a Java program to find the maximum and minimum value of an Array.

```
import java.util.*;
public class Main {
    public static void main(String[] args)
    {
        Integer nums[] = new Integer[]{1, 90, 0, 3, 25, 2, 0};
        int max = nums[0];
        int min = nums[0];

        for(int i = 0; i < nums.length; i++) {
            if(nums[i]<min){
                min =nums[i];
            }
            if(nums[i]>max){
                max =nums[i];
            }
        }
        System.out.println("Max Value:"+ max);
        System.out.println("Min Value:"+ min);
    }
}
```

Output Max Value:90 Min Value:0

Problem 5: Write a Java program to separate 0s on the left side and 1s on the right side

```
import java.util.*;
public class Main {
    public static void main(String[] args)
    {
        Integer nums[] = new Integer[]{1, 0, 0, 1, 1, 1, 0, 1, 1, 0};
        int count = 0;

        for(int i = 0; i < nums.length; i++) {
            if(nums[i] == 0){
                count++;
            }
        }

        for(int i =0;i<count;i++){
            nums[i] = 0;
        }
        for(int i =count;i<nums.length;i++){
            nums[i] = 1;
        }
        for(int i =0;i<nums.length;i++){
            System.out.print(nums[i]+" ");
        }
    }
}
```

```
Output: 0 0 0 0 1 1 1 1 1
```

Problem 6: Write a java method to find the smallest among three numbers.

```
import java.util.*;
public class Main {
    public static void main(String[] args)
    {
        int a = 10;
        int b = 2;
        int c = 90;
        int min = 0;

        if(a < b && a < c){
            min = a;
        }else if(b < c && b < a){
            min = b;

        }else{
            min = c;
        }
        System.out.println("Min: " + min);
    }
}
```

```
Output: Min: 2
```

Problem 7: Write a Java method to print Fibonacci series of n terms where n is argument passed by user.

In fibonacci series, next number is the sum of previous two numbers for example 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55 etc.

```
import java.io.*;
import java.util.*;

class GFG {
    public static void main (String[] args) {
        int n1=0,n2=1,n3;
        Scanner sc = new Scanner(System.in);
        int N = sc.nextInt(); //10

        System.out.print(n1+" "+n2);//printing 0 and 1

        for(int i=2;i<N;++i)//loop starts from 2 because 0 and 1 are already printed
        {
            n3=n1+n2;
```

```
        System.out.print(" "+n3);
        n1=n2;
        n2=n3;
    }
}
```

Output: 0 1 1 2 3 5 8 13 21 34

Problem 8: Write a program to find the factorial value of any number entered through the keyboard.

```
import java.io.*;

class GFG {
    public static void main (String[] args) {
        int i,fact=1;
        int number=5;//It is the number to calculate factorial
        for(i=1;i<=number;i++){
            fact=fact*i;
        }
        System.out.println("Factorial of "+number+" is: "+fact);
    }
}
```

Output Factorial of 5 is: 120