

ASSIGNMENT

Q1 ans-

```
import java.util.Scanner;

public class sumofdigit
{
    public static int sod(int n)
    {
        int result = 0; //storing ans
        if(n == 1)
        {
            return 1;
        }else
        {
            result = n%10 + sod(n/10);
        }
        return result;
    }

    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the target value : ");
        int n = sc.nextInt();
        //function calling
        int ans = sod(n);
        System.out.println("The sum of digit is : "+ans);
    }
}
```

Q2 ans-

```
import java.util.Scanner;

public class ALternativesign
{
    public static int altsign(int n)
    {
        if(n == 0) return 0;

        if(n % 2 == 0)
        {
            return altsign(n-1) - n;
        }
        else
```

```

{
return altsign(n-1) + n;
}
}

```

```

public static void main(String[] args)
{
Scanner sc = new Scanner(System.in);
System.out.print("Enter the target : ");
int n = sc.nextInt(); //getting input from the user
//callingFunctions
int ans = altsign(n);
System.out.println("The ans is : " + ans);

}
}

```

Q3 ans-

```

import java.util.*;
public class Main
{
public static int Maximum(int[] arr ,int idx)

```

```

{
if(idx == arr.length-1)
{
return arr[idx];
}else
{
int misa = Maximum(arr ,idx + 1);
if(misa > arr[idx])
{
return misa;
}else
{
return arr[idx];
}
}
}
}

```

```

public static void main(String[] args)
{
// int[] arr = {2, 1, -3, 22, 5};
int[] arr = {22,33,20,24,5};
int idx = 0;
//function calling
int ans = Maximum(arr , idx);

```

```
System.out.println(ans);  
}  
}
```

Q4 ans-

```
import java.util.Scanner;  
  
public class SumofArray  
{  
    public static int soa(int[] arr , int idx)  
    {  
        int result = 0;  
        if (idx == 0)  
        {  
            result += arr[idx];  
            return result;  
        }  
        result = soa(arr,idx-1);  
        result = result + arr[idx];  
        return result;  
    }  
  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        int[] arr = {1,2,3,4};  
        int idx = 3;  
        int ans = soa(arr , idx);  
        System.out.println(ans);  
    }  
}
```

