

CSA0993 - Java Program

1) Write a program to reverse a word using loop?

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```
public class Reverseword {
    public static void main(String[] args) {
        String word = "TEMPLE";
        String reversedword = "";
        for (int i = word.length() - 1; i >= 0; i--) {
            reversedword += word.charAt(i);
        }
        System.out.println("original word :" + word);
        System.out.println("Reversed word :" + reversedword);
    }
}
```

Output:-

Original word : TEMPLE
Reversed word : ELPMET

2) Write a program to check the entered user name is valid or not. Get both the inputs from the user.

```
import java.util.Scanner;
public class Validusernamechecker {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter your username:");
        String userName = scanner.nextLine();

        if (isValidUserName(userName)) {
            System.out.println("valid username entered.");
        } else {
            System.out.println("invalid username entered.");
        }
    }
}
```

```
Scanner.close();
```

```
}  
private static boolean isValidUserName(String userName){  
    return userName.matches("^[a-zA-Z0-9_-]{3,16}$");  
}  
}
```

Output :- Enter your username: Saneetha@123
Invalid username entered.

3) Write a program to Reverse a number using a loop.

```
import Java.util.Scanner;  
Public class Reversenumber {  
    Public static void main(String [] args){  
        Scanner scanner = new Scanner(System.in);  
        System.out.print ("Enter a num to reverse :");  
        int num = scanner.nextInt();  
        int revnum = 0;  
        while(num != 0){  
            int digit = num % 10;  
            revnum = revnum * 10 + digit;  
            num /= 10;  
        }  
        System.out.println ("Reversed Number : " +  
                           revnum);  
    }  
}
```

Output :-

Num : 14567

Reversed Number : 76541

```

for(int i=0; i<n; i++)
{
    res = gcd(res, a[i]);
    if (res == 1)
        return 1;
}
return res;
}

public static void main(String[] args)
{
    Scanner input = new Scanner(System.in);
    int n = input.nextInt();
    int a[] = new int[n];
    for(int i=0; i<n; i++)
    {
        a[i] = input.nextInt();
    }
    System.out.println(findgcd(a, n));
    int gcd = findgcd(a, n);
    int mul = 1;
    for(int i=0; i<n; i++)
    {
        mul = mul * a[i];
    }
    int lcm = mul / gcd;
    System.out.println(lcm);
}

```

Output :- N value = 2

num 1 = 16

num 2 = 20

$$LCM = 80$$

$$GCD = 4$$

4) Check Voter Eligibility

```
import java.util.Scanner;  
Public class VoterEligibility {  
    Public static void main (String [] args) {  
        Scanner scanner = new Scanner (System.in);  
        System.out.print ("Enter your age:");  
        int age = scanner.nextInt();  
        if (age >= 18) {  
            System.out.println ("You are eligible to vote!");  
        } else {  
            int yearsLeft = 18 - age;  
            System.out.println ("You are not eligible to  
vote. You need to wait for " + yearsLeft +  
" more years.");  
        }  
        scanner.close();  
    }  
}
```

Output:- Enter your age: 7
You are allowed to vote after 11 years

5) Find the LCM and GCD of n numbers?

```
import java.util.Scanner;  
Public class ak {  
    static int gcd (int a, int b)  
    {  
        if (a == 0)  
            return b;  
        return gcd (b % a, a);  
    }  
}
```

```
static int findgcd (int a [], int n)  
{  
    int res = a [0];  
}
```

```

        for (int i=0; i<n; i++)
    {
        res = gcd (res, a[i]);
        if (res == 1)
            return 1;
    }
    return res;
}

public static void main (String [] args)
{
    Scanner input = new Scanner (System.in);
    int n = input.nextInt();
    int a[] = new int [n];
    for (int i=0; i<n; i++)
    {
        a[i] = input.nextInt();
    }
    System.out.println (findgcd (a, n));
    int gcd = findgcd (a, n);
    int mul = 1;
    for (int i=0; i<n; i++)
    {
        mul = mul * a[i];
    }
    int lcm = mul / gcd;
    System.out.println (lcm);
}

```

Output :-

N value = 2
 num 1 = 16
 num 2 = 20

$$\text{LCM} = 80$$

$$\text{GCD} = 4$$

6) Right Triangle Star Pattern

```
Public class Pattern {  
    Public static void main (String [], args) {  
        int n=5  
        for (int i=1; i<=5; i++) {  
            for (int j=0; j<=n-i; j++) {  
                System.out.print (" ");  
            }  
            for (int k=1; k<=i; k++) {  
                System.out.print ("*");  
            }  
            System.out.println ();  
        }  
    }  
}
```

Output
 $n=5$
*
* *
* * *
* * * *
* * * * *

7) Pattern :-

```
Public class Pattern {  
    Public static void main (String [], args) {  
        int n=5, i, j;  
        for (i=1; i<=n; i++) {  
            System.out.print (" ");  
            for (j=1; j<=i; j++) {  
                System.out.print (*);  
                a = a * (i-j)/j;  
            }  
            System.out.println ();  
        }  
    }  
}
```

Output

$n=5$

1 2 1
1 3 3 1
1 4 6 4 1

8) Simple Interest :-

```
import java.util.Scanner;
public class Java {
    public static void main(Strings [] args) {
        Scanner input = new Scanner (System.in);
        int pri = input.nextInt();
        int year = input.nextInt();
        char age = input.next().charAt(0);
        double interest = 0.0;
        if (age == 'y') {
            interest = (pri * year * 0.1) / 100;
            System.out.print (interest);
        } else {
            interest = (pri * year * 0.1) / 100;
            System.out.print (interest);
        }
    }
}
```

Output :-

200000
3
2
600.0

9) To find even sum of fibonacci series

```
import java.util.Scanner;
public class Java {
    public static void main(String [] args) {
        int n = input.nextInt();
        int a1 = 0; a2 = 1; a3;
        int a[] = new int [50];
    }
}
```

```

for (int i=0; i<10; i++) {
    a[i]=a1;
    System.out.print(a[i]+ " ");
    a3=a1+a2;
    a1=a2;
    a2=a3;
}
int sum =0;
for (int i=0; i<n*2; i=i+2)
{
    sum =sum +a[i];
}
System.out.print ("*"; +sum);

```

Output :-

4
33

o) Print m to n numbers skipping t numbers in between -

```

import java.util.Scanner;
public class Java {
    public static void main (String [] args) {
        Scanner input = new Scanner (System.in);
        int m = input.nextInt();
        int n = input.nextInt();
        int k = input.nextInt();
    }
}

```

```
for (int i=m; i<=n; i=i+k+1){  
    System.out.print (i+" ");
```

y
y
y

Output :-

50
100

7

50 58 66 74 82 90 98 ~