Assignment no - 1

Ques → Java programs to find number of vowels in the string.

Ans:-

```
public class CountVowels {

    public static void main(String [] args {

        Scanner sc = new Scanner(
                            System.in );
System.out.printIn ("Umesh shailesh");

String s = sc.nextline( );

char[] c = s.toCharArray ( );

int vowel=0;

for ( int i=0; i < s.length( ); i++) {

    if (s.charAt (i)== 'a' || s.charAt (i) = 'e'
    || s.charAt(i)== 'i' || s.charAt (i) = 'o'
    || s.charAt (i)== 'u')
        vowel ++;

System.out.printIn ("Vowels is;    " + Vowel );
```

Output :-
        Vowels is 5 .

Que 2 :- Java program to ~~find~~ reverse a string.

Ans.-
```java
public class Reverse {

    public static void main (String[] args) {

        String string = " umesh ji ";

        // Store the reverse of given String

        String reversedStr = "  ";

        for (int i = string.length()-1; i >=0; i--)
        {
            reversedStr = reversedStr + string.charAt(i)
        }

        System.out.println("original String: " + string);

        // System

        System.out.println("Reverse of given String:"
                           + reverse);
    }
}
```

Output :-

Reverse of given string; ij hsemU

Que:3 Java program to reverse a number.

Ans:

```java
public class ReverseNumber {

    public static void main (String [] args) {

        int number = 732101, reverse = 0;

        while ( number != 0)
        {
            int reminder = number % 10;

            reverse = reverse * 10 + reminder;

            number = number / 10;
        }

        System.out.println ("The reverse of given number
                is: " + reverse);
    }
}
```

Output:

The reverse of given number is: 101237

Que. 4' Java program to find sum of first n natural numbers.

Ans:
```java
public class SumOfNaturalNumber
{
    public static void main(String [] args)

    int i, num = 10, sum = 0;

    for (i = 1; i <= num; ++i)
    {
        sum = sum + i;
    }
    System.out.println("sum of first 10 Natural Number is =" + sum);
    }
}
```

Output:-

Sum of first 10 Nautural number is = 55

$$Sum = n * \frac{n+1}{2}$$

Que-5 java program to find prime numbers for 1 to 100.

Ans:

```java
class primeNumber
{
    public class void main (string [] args)
    {
        int i = 0;
        int num = 0;

        String primeNumber = "";

        for(i=1; i <=100; i++)
        {
            int counter = 0;

            for (num = i; num >= 1; num--)
            {
                if (i % num == 0)
                {
                    counter = counter + 1;
                }
            }
            if (counter == 2)
            {
                PrimeNumbers = primeNumbers + i + " ";
            }
            System.out.primeIn ("prime Numbers from 1 to 100 are
```

Output:-

prime Numbers from 1 to 100 are: 2,3,5,7,11,13
17,19,23,29,31,37,41,43,47,53,59,61,67,71,79,83
89,97

Ques:
6) Java program to calculate grade of an student.

Ans: public class studentGrade

```
{
    public static void main ( string [] args) {

        int mark [] = New int [6];          * 6 subject
        int i;
        float total = 0, avg;

        Scanner scanner - New Scanner (System.in);
        System out printIn ("Enter percentage marks);
        for (i=0; i<6; i++)

        System.out.printIn ('The student Grade is");

        if (peasentage >= 90 {
            System.out.printIn ("Excellent ; Grade A"); }

    else if (percentage >= 70 {
        System.out.printIn (" Good ; Grade B "); }

    else if ( percentage >= 35 {
        System.out.printIn ("pass ; Grade c"); }

    else if ( present <= 34 {
        System.out.printIn ('Fail ; Grade -0'); }

    Output
        Enter percentage marks
        45
        Good ; Grade - B
```

Que 7 Java program to calculate o find factorial of a given number

Ans.
```
public class factorial {

    public static void main ( String args [] ) {

    int i, factorial = 1, number;

    System.out.println ( "Enter the number to which
            you need to find the factorial: ");

    Scanner sc = new Scanner (System.in);

    number = sc.nextInt ();

    for ( i = 1 ;  i < number ;  i++ ) {

        factorial = factorial * i
    }

    System.out.println ( " factorial of the given number
            is % "1 + factorial );
    }
}
```

Output

Enter the number of which you need to find the factorial ;
3
factorial of the given number is ; : 6

3 * 2 * 1 = 6

Que 8 :- Java programs to check whether a year is Leap year or not.

Ans

```
public class leap Year {
public static void main (String[] args) {
    int year;
    System.out.println ( Enter an year: ");
    Scanner sc = new Scanner (system.In);
    year = sc.nextInt ();
    if ((year % 4 == 0) && (year ÷ 100 != 0)) ||
              year ÷ 400 == 0 ))
    System.out.println ("Specified year is a leap year");
    else
    System.out.println ("Specified year is not a leap year");
}
}
```

Output:-
Enter an year:
2020
Specified year is a leap year.

Ques-9 Java program to check number is palindrome.

Ans:

```java
public class palindrome
{
    public class main void (String[] args) {
        Scanner sc = new scanner (system.in);

        System.out.println (" Input a number : ");

        int n = sc.nextIn();
        int sum = 0, r; int temp = n;

        while (>=0) {

            r = n % 10;
            sum = (sum *10) + r;

            n = n/10 }

        if ( temp == sum)
            System.out.println ("It is a palindrome number ");

        else
            System.out.println (It is not a palindrome number)
    }
}
```

output:-

Input a number ;
5
It is a palindrome number.

Que 10 :- Java program to check number is Armstrong no

Ans :-
```java
public class Armstrong {

  public static void main (String[] args) {

    int number = 153
    int check, rem, sum = 0;

    System.out.println ("Enter the number");

    scanner = New scanner (system.in);

    number = sc nextInt ();

    Check = number;

    rem = check % 10;

    sum = sum + (rem * rem * rem);

    Check = check / 10; }

    if (sum == number)
        System.out.println ("Given number is an
                            armstrong number.");
    else
        system.out.println ("Given number is not an
                            armstrong Number.") }}
```

Output :-
Enter the number to be verified
153
Given number is an armstrong Number.