1.Swapping

Using 3rd variable

```
public class Swap {
  public static void main(String[] args) {
    int a = 10, b = 20;
    System.out.println("Before swapping ");
    System.out.println("First number = " + a);
    System.out.println("Second number = " + b);
    int temp = a;
    a = b;
    b = temp;
    System.out.println("After swapping ");
    System.out.println("First number = " + a);
    System.out.println("Second number = " + b);
  }
}
```

Without 3rd variable

```
public class Swap {
  public static void main(String[] args) {
    int a = 10, b = 20;
    System.out.println("Before swapping ");
    System.out.println("First number = " + a);
    System.out.println("Second number = " + b);
    a = a + b;
    b = a - b;
    a = a - b;
    System.out.println("After swapping ");
    System.out.println("First number = " + a);
    System.out.println("Second number = " + b);
  }
}
```

2.Largest among 3 numbers

```
public class Largest {
    public static void main(String[] args) {
        double n1 = -4.5, n2 = 3.9, n3 = 2.5;
        if( n1 >= n2 && n1 >= n3)
            System.out.println(n1 + " is the largest number.");
        else if (n2 >= n1 && n2 >= n3)
            System.out.println(n2 + " is the largest number.");
        else
            System.out.println(n3 + " is the largest number.");
    }
}
```

3.Factorial

```
import java.util.*;
public class Main
{
     public static void main(String []args)
     {
        Scanner sc=new Scanner(System.in);
         System.out.println("Enter the number: ");
        int num=sc.nextInt();
        int fact=1;
        for(int i=1;i<=num;i++)
        {
            fact=fact*i;
        }
        System.out.println("Factorial of the number: "+fact);
     }
}
```

4.Fibonacci series

```
class Main {
  public static void main(String[] args) {
    int n = 10, firstTerm = 0, secondTerm = 1;
    System.out.println("Fibonacci Series till " + n + " terms:");
    for (int i = 1; i <= n; ++i) {
      System.out.print(firstTerm + ", ");
      int nextTerm = firstTerm + secondTerm;
      firstTerm = secondTerm;
      secondTerm = nextTerm;
    }
  }
}
```

5.Reverse a number

```
class Main {
  public static void main(String[] args) {
    int num = 1234, reversed = 0;
        System.out.println("Original Number: " + num);
    while(num != 0) {
      int digit = num % 10;
      reversed = reversed * 10 + digit;
      num /= 10;
    }
    System.out.println("Reversed Number: " + reversed);
  }
}
```

6.Palindrome

```
public class Main
 {
   public static void main (String[]args)
   {
    int num = 12021, reverse = 0, rem, temp;
      temp = num;
    while (temp != 0)
      {
            rem = temp % 10;
            reverse = reverse * 10 + rem;
            temp /= 10;
      };
    if (num == reverse)
      System.out.println (num + " is Palindrome");
    else
      System.out.println (num + " is not Palindrome");
   }
 }
```

7.Prime number

```
import java.util.Scanner;
public class CodesCracker
{
   public static void main(String[] args)
   {
     int num, i, count=0;
     Scanner s = new Scanner(System.in);
          System.out.print("Enter a Number: ");
     num = s.nextInt();
          for(i=2; i<num; i++)
     {
       if(num%i == 0)
       {
         count++;
         break;
       }
     }
```

```
        if(count==0)
       System.out.println("\nIt is a Prime Number.");
     else
       System.out.println("\nIt is not a Prime Number.");
  }
}
```

8.Armstrong number

```
import java.util.Scanner;

class ArmstrongNum {

   public static void main(String[] args) {

      int originalNum, digit, cubeSum = 0,num;

      System.out.println("Enter the number:");
      Scanner sc = new Scanner(System. in );
      num = sc.nextInt();
      originalNum = num;

      while (num!= 0)
      {
         digit = num % 10;
         cubeSum += Math.pow(digit, 3);
         num /= 10;
      }

      if(cubeSum == originalNum)
         System.out.println(originalNum+ " is an Armstrong number");
      else
         System.out.println(originalNum+ " is not an Armstrong
number");
   }
```

```
}
```

9.Largest number in array

```
import java.util.Scanner;

public class Main
{
  public static void main(String args[])
  {
     int arr[] = {12, 13, 1, 10, 34, 10};
     int max = arr[0];
     for(int i=0; i<arr.length; i++)
     {
       if(max < arr[i])
       {
          max = arr[i];
       }
     }
    System.out.print(max);
  }
}
```

10.Print a array

```
public class Array {

    public static void main(String[] args) {
        int[] array = {1, 2, 3, 4, 5};
        for (int element: array) {
            System.out.println(element);
        }
    }
}
```

11.Array addition

```
import java.util.Scanner;
public class Main
{
  public static void main(String args[])
  {
     int arr[] = {12, 13, 1, 10, 34, 10};
     int sum = 0;
     for(int i=0; i<arr.length; i++)
     {
       sum = sum + arr[i];
     }
     System.out.print(sum);
  }
}
```

12.Removing whitespaces

```
public class Whitespaces {
   public static void main(String[] args) {
      String sentence = "T    his is b  ett     er.";
      System.out.println("Original sentence: " + sentence);
      sentence = sentence.replaceAll("\\s", "");
      System.out.println("After replacement: " + sentence);
   }
}
```

13.Count vowels and consonants in string

```
import java.util.Scanner;

public class CodesCracker
{
  public static void main(String[] args)
  {
    String str;
    char ch;
    int len, i, vowel=0, consonant=0;
    Scanner s = new Scanner(System.in);
        System.out.print("Enter the String: ");
    str = s.nextLine();
        len = str.length();
    for(i=0; i<len; i++)
    {
      ch = str.charAt(i);
      if(ch=='a'||ch=='e'||ch=='i'||ch=='o'||ch=='u')
        vowel++;
      else
        consonant++;
    }
        System.out.println("\nTotal Vowels = " +vowel);
    System.out.println("Total Consonants = " +consonant);
  }
}
```

14.Addition of two numbers without + operator

```
import java.util.Scanner;
public class Main{
public static void main(String args[])
{
Scanner scan=new Scanner(System.in);
int num1=scan.nextInt();
int num2=scan.nextInt();
for(int i=0; i<num2; i++)
{
  num1++;
```

```
}
System.out.print("Sum of two numbers is: "+num1);
}
}
```

15.Reverse a string

```
import java.util.Scanner;
public class Main {
  public static void main(String[] args) {
    String s = "Rashik";
    String rev = "";

    for (int i = s.length()-1; i >=0; i--) {
      rev=rev+s.charAt(i);
    }
    System.out.println(rev);
  }
}
```

16.Anagram

```
import java.util.Arrays;
import java.util.Scanner;

public class AnagramChecker {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter first string: ");
        String str1 = scanner.nextLine().toLowerCase();
        System.out.print("Enter second string: ");
        String str2 = scanner.nextLine().toLowerCase();
        if (areAnagrams(str1, str2)) {
            System.out.println("The strings are anagrams.");
        } else {
            System.out.println("The strings are not anagrams.");
        }
    }
    public static boolean areAnagrams(String str1, String str2) {
        char[] charArray1 = str1.replaceAll("\\s", "").toCharArray();
        char[] charArray2 = str2.replaceAll("\\s", "").toCharArray();
        if (charArray1.length != charArray2.length) {
            return false;
        }
        Arrays.sort(charArray1);
        Arrays.sort(charArray2);
        return Arrays.equals(charArray1, charArray2);
    }
}
```

17.Palindrome string

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

String s = "arora";
String rev = "";
for (int i = s.length()-1; i >=0 ; i--)
rev=rev+s.charAt(i);
if(s.equals(rev))
System.out.println("String is palindrome");
else
System.out.println("String is not palindrome");
}
}
```

18. How to find number of occurrences of a character in a String?

```
public class Main {
public static void main(String[] args){
String str = "abracadabra-banana";
System.out.println(str);
int count = 0;
for (int i=0; i < str.length(); i++)
{
if (str.charAt(i) == 'a')
{
count++;
}
}
System.out.println("occurrence of a: "+count);
}
}
```