```java
import java.io.*;
public class Main{
    private int num;
    private int size;
    public Main(int x){
        num = x;
        size = 0;
    }
    void countDigit(){
        for(int m = num; m != 0; m /= 10)
            size++;
    }
    public int sumOfDigits(int x, int p){
        if(x < 10)
            return (int)Math.pow(x, p);
        else{
            int t = (int)Math.pow(x % 10, p);
            return t + sumOfDigits(x / 10, --p);
        }
    }
    public void check(){
        if(num == sumOfDigits(num, size))
            System.out.println(num + " is a Disariu
        else
            System.out.println(num + " is not a Dis
    }
    public static void main(String args[])
    throws IOException{
        InputStreamReader in = new InputStreamReade
        BufferedReader br = new BufferedReader(in);
        System.out.println("Name:pavan kumar");
        System.out.println ("Sap id:51834695");
        System.out.print("Number: ");
        int x = Integer.parseInt(br.readLine());
        Main obj = new Main(x);
        obj.countDigit();
        obj.check();
    }
}
```

```
Name:pavan kumar
Sap id:51834695
Number: 45
45 is not a Disarium Number.

Process finished.
```

```java
import java.util.Arrays;

public class Main
{
  private static void sortBinaryArray(int[] inputAr
  {
      int zeroCount = 0;

      System.out.println("Name:pavan kumar");
      System.out.println ("Sap id:51834695");
      System.out.println("Input Array Before Sorting

      for (int n = 0; n < inputArray.length; n++)
      {
        if (inputArray[n] == 0)
        {
          zeroCount++;
        }
      }

      for (int n = 0; n < zeroCount; n++)
      {
        inputArray[n] = 0;
      }

      for (int n = zeroCount; n < inputArray.length;
      {
        inputArray[n] = 1;
      }

      System.out.println("Input Array After Sorting :
  }

  public static void main(String[] args)
  {
    sortBinaryArray(new int[] {1, 0, 1, 1, 0, 1, 0,
  }
}
```

```
avan kumar
51834695
Array Before Sorting : [1, 0, 1, 1, 0, 1, 0, 0]
Array After Sorting : [0, 0, 0, 0, 1, 1, 1, 1]

 finished.
```

```java
public class Main
{
static int replaceDigit(int a, int numbertobereplac
                                int replacingnumber)
{
    int result = 0, multiply = 1;

    while (a % 10 > 0)
    {

        int remainder = a % 10;

        if (remainder == numbertobereplaced)
            result = result + replacingnumber * mult

        else
            result = result + remainder * multiply;

        multiply *= 10;
        a = a / 10;
    }
    return result;
}

public static void main(String[] args)
{
    int a = 645, numbertobereplaced = 6, replacingn
    System.out.println("Name: pavan kumar");
    System.out.println("Sap id:51834695");
    System.out.println(replaceDigit(a, numbertobere
}
}
```

Scanned with CamScanner

```
Name: pavan kumar
Sap id:51834695
545

Process finished.
```

```java
public class Main
{
  public static int binarySearch(int[] M, int left,
    {
      if (left > right) {
        return -1;
      }


      int mid = (left + right) / 2;

      if (n == M[mid]) {
        return mid;
      }

      else if (n < M[mid]) {
        return binarySearch(M, left, mid - 1, n);
      }

      else {
        return binarySearch(M, mid + 1, right, n);
      }
    }

  public static void main(String[] args)
    {
      int[] M = { 2, 3, 6, 8, 4, 10 };
      int key = 3;

      int left = 0;
      int right = M.length - 1;

      int index = binarySearch(M, left, right, key);

      System.out.println("Name:pavan kumar");
      System.out.println("Sap id:51834695");
      if (index != -1) {
        System.out.println("Element found at index "
      } else {
        System.out.println("Element not found in the
      }
    }
}
```

```
Name:pavan kumar
Sap id:51834695
Element found at index 1

Process finished.
```