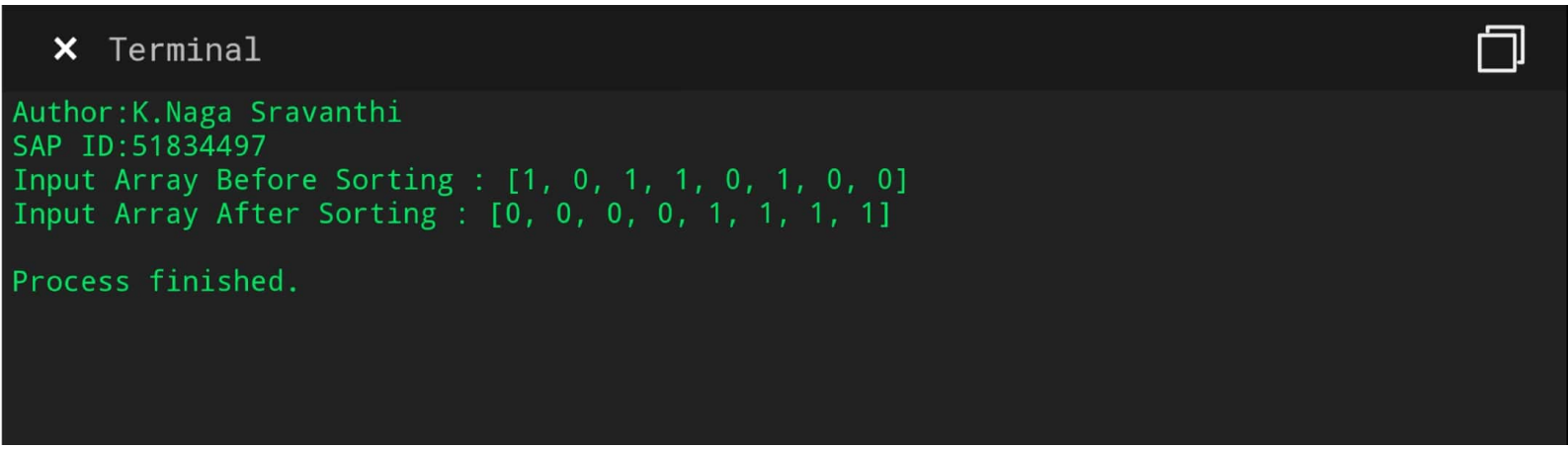
```java
import java.io.*;
public class DisariumNumber
    {
    public static void main(String[] args)throws IOException
        {
            BufferedReader br=new BufferedReader (new InputStreamReader(System.in));
            System.out.println("Author:K.Naga Sravanthi\nSAP ID:51834497");
            System.out.print("Enter a number : ");
            int n = Integer.parseInt(br.readLine());
            int copy = n, a = 0, sum = 0;
            String b = Integer.toString(n);
            int len = b.length();

            while(copy>0)
            {
                a = copy % 10;
                sum = sum + (int)Math.pow(a,len);
                len--;
                copy = copy / 10;
            }

            if(sum == n)
                System.out.println(n+" is a Disarium Number.");
            else
                System.out.println(n+" is not a Disarium Number.");
        }
    }
```

```
Author:K.Naga Sravanthi
SAP ID:51834693
Enter a number : 89
89 is a Disarium Number.

Process finished.
```

```
Author:K.Naga Sravanthi
SAP ID:51834693
Enter a number : 123
123 is not a Disarium Number.

Process finished.
```

```java
import java.util.Arrays;

public class BinaryArray
{
  private static void sortBinaryArray(int[] inputArray)
  {
    int zeroCount = 0;

    System.out.println("Author:K.Naga Sravanthi\nSAP ID:51834497");
    System.out.println("Input Array Before Sorting : "+Arrays.toString(inputArray));


    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; n++)
    {
      inputArray[n] = 1;
    }

    System.out.println("Input Array After Sorting : "+Arrays.toString(inputArray));
  }

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



```java
import java.util.*;
public class NumberReplace
{
static int replaceDigit(int a, int numbertobereplaced,
              int replacingnumber)
{
  int result = 0, multiply = 1;

  while (a % 10 > 0)
  {

    int remainder = a % 10;

    if (remainder == numbertobereplaced)
      result = result + replacingnumber * multiply;

    else
      result = result + remainder * multiply;

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

public static void main(String[] args)
{
  int a = 8534251, numbertobereplaced = 3, replacingnumber = 1;
  System.out.println("Author:K.Naga Sravanthi\nSAP ID:51834497");
  System.out.println(replaceDigit(a, numbertobereplaced, replacingnumber));
}
```

```
Author:K.Naga Sravanthi
SAP ID:51834497
8514251

Process finished.
```

```java
import java.util.*;
public class BinarySearch
{
  public static int binarySearch(int[] M, int left, int right, int n)
  {
    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, 5, 6, 8, 9, 10 };
    int key = 3;

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

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

    System.out.println("Author:K.Naga Sravanthi\nSAP ID: 51834497");
    if (index != -1) {
      System.out.println("Element found at index " + index);
    } else {
      System.out.println("Element not found in the array");
    }
  }
}
```

```
Author:K.Naga Sravanthi
SAP ID: 51834497
Element not found in the array

Process finished.
```