```java
import java.util.Scanner;
import java.lang.Math;
 class Disarium
 {
    int Check(int a)
    {
       int b=a,sum=0,count=0;
       while(a>0)
       {
          count++;
          a=a/10;
       }
       for(int i=count;b>0;i--)
       {
          sum=sum+(int)Math.pow(b%10,i);
          b=b/10;
       }
       return sum;
    }
    public static void main(String args[])
    {
       System.out.println("Name :V.
Jahnavi\nSAP ID:51834788");
       Disarium d=new Disarium();
       Scanner sc=new Scanner(System.in);
       System.out.println("Enter the number :
");
       int num=sc.nextInt();
       if(d.Check(num)==num)
       {
          System.out.println(num+" is Disarium
number");
       }
       else
       {
          System.out.println(num+" is not
Disarium number");
       }
       System.out.println("Enter number upto
disarium numbers you want to print: ");
       num=sc.nextInt();
       for(int i=1;i<=num;i++)
       {
          if(d.Check(i)==i)
          {
             System.out.print(i+" ");
```

```java
21      {
22          System.out.println("Name :V.
    Jahnavi\nSAP ID:51834788");
23          Disarium d=new Disarium();
24          Scanner sc=new Scanner(System.in);
25          System.out.println("Enter the number :
    ");
26          int num=sc.nextInt();
27          if(d.Check(num)==num)
28          {
29              System.out.println(num+" is Disarium
    number");
30          }
31          else
32          {
33              System.out.println(num+" is not
    Disarium number");
34          }
35          System.out.println("Enter number upto
    disarium numbers you want to print: ");
36          num=sc.nextInt();
37          for(int i=1;i<=num;i++)
38          {
39              if(d.Check(i)==i)
40              {
41                  System.out.print(i+" ");
42              }
43          }
44          System.out.println();
45          System.out.println("Enter the
    number1 : ");
46          int num1=sc.nextInt();
47          System.out.println("Enter the
    number2 : ");
48          int num2=sc.nextInt();
49          System.out.println("Disarium numbers
    between given numbers :");
50          for(int i=num1;i<=num2;i++)
51          {
52              if(d.Check(i)==i)
53              {
54                  System.out.print(i+" ");
55              }
56          }
57      }
58  }
```

```
Terminal                                              ☐

Name :V. Jahnavi
SAP ID:51834788
Enter the number :
50
50 is not Disarium number
Enter number upto disarium numbers you want
500
1 2 3 4 5 6 7 8 9 89 135 175
Enter the  number1 :
500
Enter the  number2 :
1300
Disarium numbers between given numbers :
518 598
Process finished.
```

```
Name :V. Jahnavi
SAP ID:51834788
Enter the number :
89
89 is Disarium number
Enter number upto disarium numbers you want
100
1 2 3 4 5 6 7 8 9 89
Enter the  number1 :
2
Enter the  number2 :
1000
Disarium numbers between given numbers :
2 3 4 5 6 7 8 9 89 135 175 518 598
Process finished.
```

```java
import java.util.Arrays;
import java.util.Scanner;
class Main
{
  // Function to sort binary array in linear
time
  public static void sort(int[] arr)
  {
    // count number of 0's
    int zeros = 0;
    for (int val : arr)
    {
      if (val == 0)
      {
        zeros++;
      }
    }

    // put 0's in the beginning
    int k = 0;
    while (zeros-- != 0)
    {
      arr[k++] = 0;
    }

    // fill all remaining elements by 1
    while (k < arr.length)
    {
      arr[k++] = 1;
    }
  }

  // Sort binary array in linear time
  public static void main (String[] args)
  {
    System.out.println("Name : V.
Jahnavi\nSAP ID : 51834788");
    Scanner sc=new Scanner(System.in);
      System.out.print("Enter the size of
array :");
      int length =sc.nextInt();
      int[] arr=new int[length];
      System.out.println("enter the binary
elements :");
      for (int i = 0; i <length; i++)
      {
```

```java
 9        int zeros = 0;
10        for (int val : arr)
11        {
12           if (val == 0)
13           {
14              zeros++;
15           }
16        }
17
18        // put 0's in the beginning
19        int k = 0;
20        while (zeros-- != 0)
21        {
22           arr[k++] = 0;
23        }
24
25        // fill all remaining elements by 1
26        while (k < arr.length)
27        {
28           arr[k++] = 1;
29        }
30     }
31
32     // Sort binary array in linear time
33     public static void main (String[] args)
34     {
35        System.out.println("Name : V.
Jahnavi\nSAP ID : 51834788");
36        Scanner sc=new Scanner(System.in);
37         System.out.print("Enter the size of
array :");
38         int length =sc.nextInt();
39         int[] arr=new int[length];
40         System.out.println("enter the binary
elements :");
41         for (int i = 0; i <length; i++)
42         {
43             arr[i]= sc.nextInt();
44         }
45         sort(arr);
46
47        // print the rearranged array
48
System.out.println(Arrays.toString(arr));
49     }
50 }
```
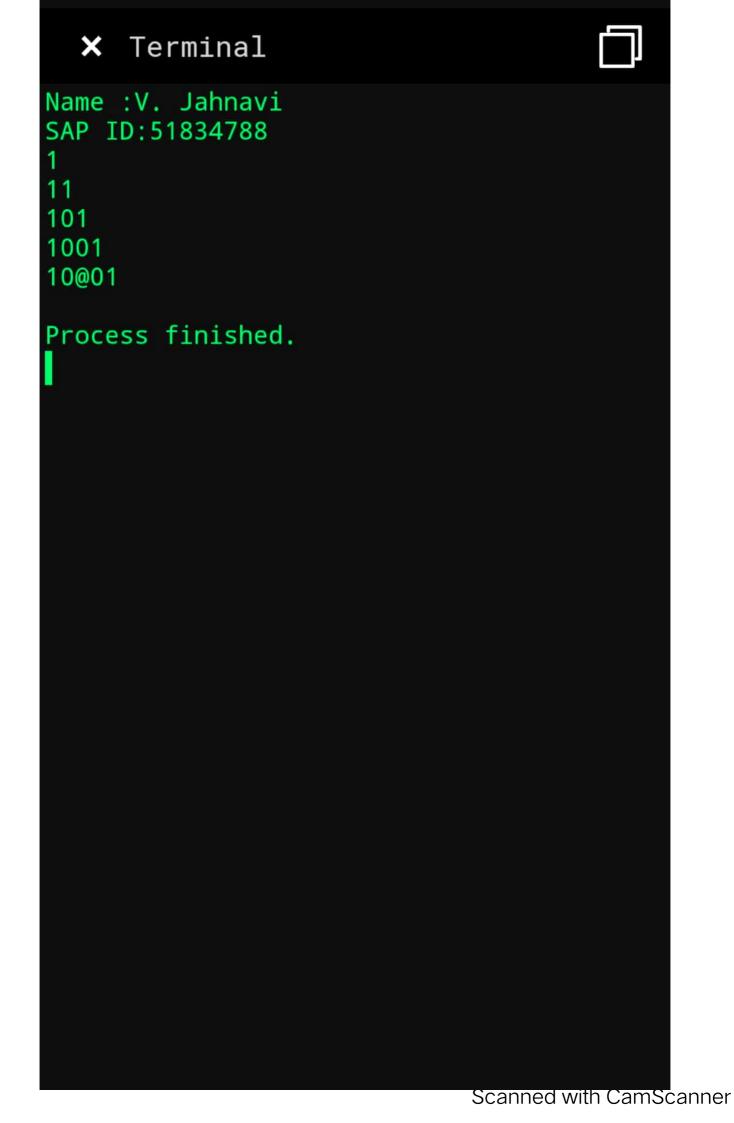
```
Name : V. Jahnavi
SAP ID : 51834788
Enter the size of array :6
enter the binary elements :
0
1
0
0
1
0
[0, 0, 0, 0, 1, 1]

Process finished.
```

```java
import java.util.Scanner;
class Conversion
{
static int replaceDigit(int x, int a,int b)
{
   int result = 0, multiply = 1;
   while (x % 10 > 0)
   {
       // Take remainder of number
       // starting from the unit
       // place digit
      int remainder = x % 10;
      // check whether it is equal
      // to the digit to be replaced.
      // if yes then replace
      if (remainder == a)
      result = result + b * multiply;
      else // else remain as such
      result = result + remainder * multiply;
      multiply *= 10;
      x = x / 10; // update the value
   }
   return result;
}
// Driver code
public static void main(String[] args)
{
   System.out.println("Name :V. Jahnavi\nSAP
   ID:51834788");
   Scanner sc=new Scanner(System.in);
   System.out.print("Enter your number : ");
   int x = sc.nextInt();
   System.out.print("Enter number to be
   converted : ");
   int a = sc.nextInt();
   System.out.println("Enter number to which
   you what to convert : ");
   int b = sc.nextInt();
   System.out.println(replaceDigit(x, a, b));
}
}
```

```
Name :V. Jahnavi
SAP ID:51834788
Enter your number : 123245627
Enter number to be converted : 2
Enter number to which you what to convert :
8
183845687

Process finished.
```

```java
class Pattern
{
   public static void main(String args[])
   {
      System.out.println("Name :V.
Jahnavi\nSAP ID:51834788");
      for(int i=1;i<=5;i++)
      {
         for(int j=1;j<=i;j++)
         {
            if(i==5 && j==3)
            {
               System.out.print("@");
            }
            else if(j==1 || j==i)
            {
               System.out.print("1");
            }
            else
            {
               System.out.print("0");
            }
         }
         System.out.println();
      }
   }
}
```

```
Name :V. Jahnavi
SAP ID:51834788
1
11
101
1001
10@01

Process finished.
```

```java
import java.util.Scanner;
class BinarySearch
{
    // Returns index of x if it is present in arr[],
    // else return -1
    static int binarySearch(String[] arr, String x)
    {
        int l = 0, r = arr.length - 1;
        while (l <= r)
        {
            int m = l + (r - l) / 2;
            int res = x.compareTo(arr[m]);
            // Check if x is present at mid
            if (res == 0)
            return m;
            // If x greater, ignore left half
            if (res > 0)
            l = m + 1;
            // If x is smaller, ignore right half
            else
            r = m - 1;
        }
        return -1;
    }
    // Driver method to test above
    public static void main(String []args)
    {
        System.out.println("Name :V. Jahnavi\nSAP ID:51843788");
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Size :");
        int n = sc.nextInt();
        sc.nextLine();
        String[] arr = new String[n];
        System.out.println("enter "+n+" elements : ");
        for (int i=0;i<n;i++)
        {
            arr[i]=sc.nextLine();
        }
        System.out.println("Enter String you want to Search :");
        String x = sc.nextLine();
        int result = binarySearch(arr, x);
```

```java
        int l = 0, r = arr.length - 1;
        while (l <= r)
        {
            int m = l + (r - l) / 2;
            int res = x.compareTo(arr[m]);
            // Check if x is present at mid
            if (res == 0)
            return m;
            // If x greater, ignore left half
            if (res > 0)
            l = m + 1;
            // If x is smaller, ignore right half
            else
            r = m - 1;
        }
        return -1;
    }
    // Driver method to test above
    public static void main(String []args)
    {
        System.out.println("Name :V.
Jahnavi\nSAP ID:51843788");
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Size :");
        int n = sc.nextInt();
        sc.nextLine();
        String[] arr = new String[n];
        System.out.println("enter "+n+"
elements : ");
        for (int i=0;i<n;i++)
        {
            arr[i]=sc.nextLine();
        }
        System.out.println("Enter String you
want to Search :");
        String x = sc.nextLine();
        int result = binarySearch(arr, x);
        if (result == -1)
        System.out.println("Element not
present");
        else
        System.out.println("Element found at "+
"index " + result);
    }
}
```

```
✕ Terminal                          ⧉

Name :V. Jahnavi
SAP ID:51843788
Enter Size :
4
enter 4 elements :
book
point
pen
sky
Enter String you want to Search :
point
Element found at index 1

Process finished.
```