

```

1 import java.util.Scanner;
2 import java.lang.Math;
3 class Disarium
4 {
5     int Check(int a)
6     {
7         int b=a,sum=0,count=0;
8         while(a>0)
9         {
10             count++;
11             a=a/10;
12         }
13         for(int i=count;b>0;i--)
14         {
15             sum=sum+(int)Math.pow(b%10,i);
16             b=b/10;
17         }
18         return sum;
19     }
20     public static void main(String args[])
21     {
22         System.out.println("Name :O.
23 Jahnvi\nSAP ID:51834504");
24         Disarium d=new Disarium();
25         Scanner sc=new Scanner(System.in);
26         System.out.println("Enter the number :
27 ");
28         int num=sc.nextInt();
29         if(d.Check(num)==num)
30         {
31             System.out.println(num+" is Disarium
32 number");
33         }
34         else
35         {
36             System.out.println(num+" is not
37 Disarium number");
38         }
39         System.out.println("Enter number upto
40 disarium numbers you want to print: ");
41         num=sc.nextInt();
42         for(int i=1;i<=num;i++)
43         {
44             if(d.Check(i)==i)
45             {
46                 System.out.print(i+" ");

```

```

21     {
22         System.out.println("Name :O.
Jahnavi\nSAP ID:51834504");
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 }

```



Name :O. Jahnavi

SAP ID:51834504

Enter the number :

89

89 is Disarium number

Enter number upto disarium numbers you want

89

1 2 3 4 5 6 7 8 9 89

Enter the number1 :

100

Enter the number2 :

500

Disarium numbers between given numbers :

135 175

Process finished.

```

1 import java.util.Arrays;
2 import java.util.Scanner;
3 class Main
4 {
5     // Function to sort binary array in linear
    time
6     public static void sort(int[] arr)
7     {
8         // count number of 0's
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 : O.
        Jahnavi\nSAP ID : 51834504");
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        {

```



```

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 : O.
36     Jahnavi\nSAP ID : 51834504");
37     Scanner sc=new Scanner(System.in);
38     System.out.print("Enter the size of
39     array :");
40     int length =sc.nextInt();
41     int[] arr=new int[length];
42     System.out.println("enter the binary
43     elements :");
44     for (int i = 0; i <length; i++)
45     {
46         arr[i]= sc.nextInt();
47     }
48     sort(arr);
49
50     // print the rearranged array
51     System.out.println(Arrays.toString(arr));
52 }

```



```
Name : O. Jahnavi
SAP ID : 51834504
Enter the size of array :8
enter the binary elements :
0
1
0
0
1
1
0
1
[0, 0, 0, 0, 1, 1, 1, 1]

Process finished.
```

```

1 import java.util.Scanner;
2 class Conversion
3 {
4     static int replaceDigit(int x, int a,int b)
5     {
6         int result = 0, multiply = 1;
7         while (x % 10 > 0)
8         {
9             // Take remainder of number
10            // starting from the unit
11            // place digit
12            int remainder = x % 10;
13            // check whether it is equal
14            // to the digit to be replaced.
15            // if yes then replace
16            if (remainder == a)
17                result = result + b * multiply;
18            else // else remain as such
19                result = result + remainder * multiply;
20            multiply *= 10;
21            x = x / 10; // update the value
22        }
23        return result;
24    }
25    // Driver code
26    public static void main(String[] args)
27    {
28        System.out.println("Name :O. Jahnavi\nSAP
29        ID:51834504");
30        Scanner sc=new Scanner(System.in);
31        System.out.print("Enter your number : ");
32        int x = sc.nextInt();
33        System.out.print("Enter number to be
34        converted : ");
35        int a = sc.nextInt();
36        System.out.println("Enter number to which
37        you what to convert : ");
38        int b = sc.nextInt();
39        System.out.println(replaceDigit(x, a, b));
40    }
41 }
42

```



Name :O. Jahnavi

SAP ID:51834504

Enter your number : 12377677

Enter number to be converted : 7

Enter number to which you what to convert :  
2

12322622

Process finished.



```
1 class Dcoder
2 {
3     public static void main(String args[])
4     {
5         System.out.println("Name :O.
Jahnavi\nSAP ID:51834504");
6         for(int i=1;i<=5;i++)
7         {
8             for(int j=1;j<=i;j++)
9             {
10                 if(i==5 && j==3)
11                 {
12                     System.out.print("@");
13                 }
14                 else if(j==1 || j==i)
15                 {
16                     System.out.print("1");
17                 }
18                 else
19                 {
20                     System.out.print("0");
21                 }
22             }
23             System.out.println();
24         }
25     }
26 }
```



Name :O. Jahnavi

SAP ID:51834504

1

11

101

1001

10@01

Process finished.



```

1 import java.util.Scanner;
2 class BinarySearch
3 {
4     // Returns index of x if it is present in
5     // arr[],
6     // else return -1
7     static int binarySearch(String[] arr,
8     String x)
9     {
10         int l = 0, r = arr.length - 1;
11         while (l <= r)
12         {
13             int m = l + (r - l) / 2;
14             int res = x.compareTo(arr[m]);
15             // Check if x is present at mid
16             if (res == 0)
17                 return m;
18             // If x greater, ignore left half
19             if (res > 0)
20                 l = m + 1;
21             // If x is smaller, ignore right half
22             else
23                 r = m - 1;
24         }
25         return -1;
26     }
27     // Driver method to test above
28     public static void main(String []args)
29     {
30         System.out.println("Name :O.
31         Jahnavi\nSAP ID:51834504");
32         Scanner sc = new Scanner(System.in);
33         System.out.println("Enter Size :");
34         int n = sc.nextInt();
35         sc.nextLine();
36         String[] arr = new String[n];
37         System.out.println("enter "+n+"
38         elements : ");
39         for (int i=0;i<n;i++)
40         {
41             arr[i]=sc.nextLine();
42         }
43         System.out.println("Enter String you
44         want to Search :");
45         String x = sc.nextLine();
46         int result = binarySearch(arr, x);

```

```

8      int l = 0, r = arr.length - 1;
9      while (l <= r)
10     {
11         int m = l + (r - l) / 2;
12         int res = x.compareTo(arr[m]);
13         // Check if x is present at mid
14         if (res == 0)
15             return m;
16         // If x greater, ignore left half
17         if (res > 0)
18             l = m + 1;
19         // If x is smaller, ignore right half
20         else
21             r = m - 1;
22     }
23     return -1;
24 }
25 // Driver method to test above
26 public static void main(String []args)
27 {
28     System.out.println("Name :O.
Jahnavi\nSAP ID:51834504");
29     Scanner sc = new Scanner(System.in);
30     System.out.println("Enter Size :");
31     int n = sc.nextInt();
32     sc.nextLine();
33     String[] arr = new String[n];
34     System.out.println("enter "+n+"
elements : ");
35     for (int i=0;i<n;i++)
36     {
37         arr[i]=sc.nextLine();
38     }
39     System.out.println("Enter String you
want to Search :");
40     String x = sc.nextLine();
41     int result = binarySearch(arr, x);
42     if (result == -1)
43         System.out.println("Element not
present");
44     else
45         System.out.println("Element found at "+
"index " + result);
46     }
47 }
48

```



Name :O. Jahnavi

SAP ID:51834504

Enter Size :

4

enter 4 elements :

skin

bag

book

pen

Enter String you want to Search :

bag

Element found at index 1

Process finished.