

ASSIGNMENT 23RDJULY

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1)

```
1 import java.util.Scanner;
2
3 public class DisariumNumber
4 {
5     private static boolean isItDisariumNumber(int
6     {
7         int noOfDigits = Integer.toString(inputNu
8
9         int copyOfInputNumber = inputNumber;
10
11        int sum = 0;
12
13        while (inputNumber > 0)
14        {
15            int lastDigit = inputNumber % 10;
16
17            sum = sum + (int) Math.pow(lastDigit,
18
19            inputNumber = inputNumber / 10;
20
21            noOfDigits--;
22        }
23
24        if (sum == copyOfInputNumber)
25        {
26            return true;
27        }
28        else
29        {
30            return false;
31        }
32    }
33
34    public static void main(String[] args)
35    {
36        Scanner sc = new Scanner(System.in);
37
38        System.out.println("Enter a number :");
39
40        int inputNumber = sc.nextInt();
41
42        if (isItDisariumNumber(inputNumber))
43        {
44            System.out.println(inputNumber+" is a
45        }
```

```
1 r;
2
3 mber
4
5 ean isItDisariumNumber(int inputNumber)
6
7 = Integer.toString(inputNumber).length();
8
9 Number = inputNumber;
10
11
12
13 ber > 0)
14
15 it = inputNumber % 10;
16
17 (int) Math.pow(lastDigit, noOfDigits);
18
19 = inputNumber / 10;
20
21 -;
22
23
24 OfInputNumber)
25
26 ;
27
28
29
30 e;
31
32
33
34 main(String[] args)
35
36 w Scanner(System.in);
37
38 tln("Enter a number :");
39
40 = sc.nextInt();
41
42 mNumber(inputNumber))
43
44 println(inputNumber+" is a Disarium number");
45
46
```

```
45     }
46     else
47     {
48         System.out.println(inputNumber+" is no
49     }
50
51     sc.close();
52 }
53 }
54 // This code is created by AASHISH //
```

x Terminal

```
Enter a number :
135
135 is a Disarium number

Process finished.
```

```
1 import java.util.Scanner;
2
3 public class DisariumNumber
4 {
5     private static boolean isItDisariumNumber(int inputNumber)
6     {
7         int noOfDigits = Integer.toString(inputNumber).length();
8
9         int copyOfInputNumber = inputNumber;
10
11        int sum = 0;
12
13        while (inputNumber > 0)
14        {
15            int lastDigit = inputNumber % 10;
16
17            sum = sum + (int) Math.pow(lastDigit, noOfDigits);
18
19            inputNumber = inputNumber / 10;
20
21            noOfDigits--;
22        }
23
24
25        if (sum == copyOfInputNumber)
26        {
27            return true;
28        }
29        else
30        {
31            return false;
32        }
33
34    public static void main(String[] args)
35    {
36        Scanner sc = new Scanner(System.in);
37
38        System.out.println("How many Disarium numbers do you want to print?");
39
40        int n = sc.nextInt();
41
42        int counter = 1;
43
44        int inputNumber = 10;
45    }
```

```
2
3     intNumber
4
5     boolean isItDisariumNumber(int inputNumber)
6
7     digits = Integer.toString(inputNumber).length();
8
9     fInputNumber = inputNumber;
10
11    0;
12
13    if (inputNumber > 0)
14
15    lastDigit = inputNumber % 10;
16
17    sum + (int) Math.pow(lastDigit, noOfDigits);
18
19    number = inputNumber / 10;
20
21    digits--;
22
23
24    = copyOfInputNumber)
25
26    true;
27
28
29
30    false;
31
32
33
34    void main(String[] args)
35
36    = new Scanner(System.in);
37
38    System.out.println("How many Disarium numbers you want?");
39
40    .nextInt();
41
42    er = 1;
43
44    number = 10;
```

```
45
46 System.out.println("First "+n+" Disarium Numbers"
47
48 while (counter <= n)
49 {
50     if (isItDisariumNumber(inputNumber))
51     {
52         System.out.println(inputNumber);
53
54         inputNumber++;
55
56         counter++;
57     }
58     else
59     {
60         inputNumber++;
61     }
62 }
63
64 sc.close();
65 }
66 }
67 // This code is created by AASHISH //
```

* Terminal



How many Disarium numbers you want?

9

First 9 Disarium Numbers :

89

135

175

518

598

1306

1676

2427

2646798

```
2 public class JavaDisariumNumber
3 {
4     private static boolean isItDisariumNumber(int
5     {
6         int noOfDigits = Integer.toString(inputNu
7
8         int copyOfInputNumber = inputNumber;
9
10        int sum = 0;
11
12        while (inputNumber > 0)
13        {
14            int lastDigit = inputNumber % 10;
15
16            sum = sum + (int) Math.pow(lastDigit,
17
18            inputNumber = inputNumber / 10;
19
20            noOfDigits--;
21        }
22
23        if (sum == copyOfInputNumber)
24        {
25            return true;
26        }
27        else
28        {
29            return false;
30        }
31    }
32
33    public static void main(String[] args)
34    {
35        Scanner sc = new Scanner(System.in);
36
37        System.out.println("Enter start number : "
38
39        int start = sc.nextInt();
40
41        System.out.println("Enter end number : ")
42
43        int end = sc.nextInt();
44
45        System.out.println("Disarium numbers betw
```

```
1 Number
2
3
4    int isItDisariumNumber(int inputNumber)
5
6    Integer.toString(inputNumber).length();
7
8    nber = inputNumber;
9
10
11
12    > 0)
13
14    = inputNumber % 10;
15
16    int) Math.pow(lastDigit, noofDigits);
17
18    inputNumber / 10;
19
20
21
22
23    InputNumber)
24
25
26
27
28
29
30
31
32
33    in(String[] args)
34
35    Scanner(System.in);
36
37    ("Enter start number : ");
38
39    ();
40
41    ("Enter end number : ");
42
43    nt();
44
45    ("Disarium numbers between "+start+" and "+end);
46
```

```
+0
47     for (int i = start; i <= end; i++)
48     {
49         if (isItDisariumNumber(i))
50         {
51             System.out.println(i);
52         }
53     }
54
55     sc.close();
56 }
57 }
58 // This code is created by AASHISH //
```

```
Enter start number :
1500
Enter end number :
5000
Disarium numbers between 1500 and 5000
1676
2427
```

```
Process finished.
```

```
1 class zeroesOnesSorting{
2
3
4
5     // function to segregate 0s and 1s
6
7     static void segregate0and1(int arr[], int n)
8
9     {
10
11         int count = 0; // counts the no of zeros
12
13
14
15         for (int i = 0; i < n; i++) {
16
17             if (arr[i] == 0)
18
19                 count++;
20
21         }
22
23
24
25         // loop fills the arr with 0 until count
26
27         for (int i = 0; i < count; i++)
28
29             arr[i] = 0;
30
31
32
33         // loop fills remaining arr space with 1
34
35         for (int i = count; i < n; i++)
36
37             arr[i] = 1;
38
39     }
40
41
42
43     // function to print segregated array
44
45     static void print(int arr[], int n)
46
```

```
39 }
40
41
42
43 // function to print segregated array
44
45 static void print(int arr[], int n)
46 {
47
48     System.out.print("Array after segregation is : ");
49     for (int i = 0; i < n; i++)
50         System.out.print(arr[i] + " ");
51
52 }
53
54
55
56
57
58
59 // driver function
60
61 public static void main(String[] args)
62 {
63
64     int arr[] = new int[]{ 0, 1, 0, 1, 1, 1 };
65
66     int n = arr.length;
67
68
69
70
71     segregate0and1(arr, n);
72
73     print(arr, n);
74
75
76 }
77 }
78 // This code is created by AASHISH //
```

* Terminal



```
Array after segregation is 0 0 1 1 1 1  
Process finished.
```

5)

```
1 class Binarsearch {  
2  
3  
4  
5     // Returns index of x if it is present in arr  
6  
7     // else return -1  
8  
9     static int binarySearch(String[] arr, String  
10    {  
11        int l = 0, r = arr.length - 1;  
12  
13        while (l <= r) {  
14            int m = l + (r - l) / 2;  
15  
16            int res = x.compareTo(arr[m]);  
17  
18            // Check if x is present at mid  
19  
20            if (res == 0)  
21                return m;  
22  
23  
24            // If x greater, ignore left half  
25  
26            if (res > 0)  
27                l = m + 1;  
28  
29            // If x is smaller, ignore right half  
30  
31            else  
32  
33                r = m - 1;  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46
```

```
43     else
44
45         r = m - 1;
46
47     }
48
49
50
51     return -1;
52
53 }
54
55
56
57 // Driver method to test above
58
59 public static void main(String []args)
60 {
61
62     String[] arr = { "contribute", "creators", "
63
64     String x = "for";
65
66     int result = binarySearch(arr, x);
67
68
69
70
71     if (result == -1)
72
73         System.out.println("Element not present"
74
75     else
76
77         System.out.println("Element found at "
78
79                     + "index " + result);
80
81     }
82 }
83 // This code is created by AASHISH //
```

x Terminal



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