```java
import java.util.Scanner;
import java.lang.Math;
class Diasarium
{
  int Check(int n)
  {
    int m=n,sum=0,count=0;
    while(n>0)
    {
      count++;
      n=n/10;
    }
    for(int i=count;m>0;i--)
    {
      sum=sum+(int)Math.pow(m%10,i);
      m=m/10;
    }
    return sum;
}
public static void main(String args[])
{
  Diasarium d=new Diasarium();
  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 Diasarium number");
  }
else
  {
    System.out.println(num+" is not Diasarium number");
  }
  System.out.println("Enter the number upto which the [
  num=sc.nextInt();
  for(int i=1;i<=num;i++)
  {
    if(d.Check(i)==i)
    {
      System.out.print(i+" ");
    }
  }
  System.out.println();
  System.out.println("Enter the start number : ");
  int num1=sc.nextInt();
  System.out.println("Enter the end number : ");
  int num2=sc.nextInt();
  for(int i=num1;i<=num2;i++)
  {
    if(d.Check(i)==i)
    {
      System.out.print(i+" ");
    }
    }
    }
    }
  }
```

```
Enter the number :
175
175 is Diasarium number
Enter the number upto which the Diasarium numbe
100
1 2 3 4 5 6 7 8 9 89
Enter the start number :
5
Enter the end number :
9
5 6 7 8 9
Process finished.
R.Hemanthkumar
SAP I'd-51834684
```

```java
import java.util.Arrays;
import java.util.Scanner;
class BinaryNumbers
{
  public static void sort(int[] arr)
  {
    int zeros = 0;
    for (int val : arr)
    {
      if (val == 0)
      {
        zeros++;
      }
    }
    int k = 0;
    while (zeros-- != 0)
    {
      arr[k++] = 0;
    }
    while (k < arr.length)
    {
      arr[k++] = 1;
    }
  }
  public static void main (String[] args)
  {
    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++)
    {
      arr[i]= sc.nextInt();
    }
     sort(arr);
    System.out.println("After Sorting: ");
    System.out.println(Arrays.toString(arr));
  }
}
```

```
Terminal                                    ⧉

Enter the size of array: 8
Enter the binary elements:
0 1 0 1 1 0 1 0 0
After Sorting:
[0, 0, 0, 0, 1, 1, 1, 1]

Process finished.
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```

```java
import java.util.Scanner;
class ReplaceNumber
{
static int replaceDigit(int x, int d1, int d2)
{
   int result = 0, multiply = 1;

   while (x % 10 > 0)
   {
      int remainder = x % 10;
      if (remainder == d1)
         result = result + d2 * multiply;
      else
         result = result + remainder * multiply;
      multiply *= 10;
      x = x / 10;
   }
   return result;
}
public static void main(String[] args)
{
Scanner s = new Scanner(System.in);
System.out.println("Enter the number: ");
   int v1= s.nextInt();
System.out.println("Enter the Number you want to chan
   int v2 = s.nextInt();
System.out.println("Enter the number you want to chan
   int v3 = s.nextInt();
System.out.println("Output: ");
System.out.println(replaceDigit(v1,v2,v3));
}
}
```

```
Enter the number:
1347232
Enter the Number you want to change:
2
Enter the number to which you want to change:
6
Output:
1347636

Process finished.
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```

```java
class Pattern
{
  public static void main(String args[])
  {
    System.out.println("Output: ");
    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();
    }
  }
}
```

```
Output:
1
11
101
1001
10@01


Process finished.
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```

```java
import java.util.*;
public class Program
{
    public static void main(String[] args)
    {
        Scanner s = new Scanner (System.in);
        System.out.println("Enter the length of the S
        int length = s.nextInt();
        s.nextLine();
        String name[] = new String [length];
        int std[] = new int [length];
        boolean chk = false;
        System.out.println("Enter the string");
        for (int i = 0; i<length; i++)
        {
            name[i] = s.nextLine();
        }
        System.out.println("Enter the String  name you want t
        String search = s.nextLine();
        int f = 0;
        int l = length-1;
        int m;
        while (f<=l)
        {
            m = (f+l)/2;
            if (search.compareTo(name[m])>0)
            {
                f = m+1;
            }
            else if (search.compareTo(name[m])<0)
            {
                l = m-1;
            }
            else
            {
                chk = true;
                System.out.println("Search successful")
                System.out.println("String is found at : "+m+" "+ "In
                break;
            }
        }
        if (chk == false)
        {
            System.out.println("Search unsuccessful");
        }
    }
}
```

```
Enter the length of the String
5
Enter the string
Hemanth
Muneer
Sai
Tarun
Manoj
Enter the String you want to search
Tarun
Search successful
String is found at: 3 Index

Process finished.
R.Hemanthkumar
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```