

```

1 import java.util.Scanner;
2 public class LuhnValidate
3 {
4     public static void main(String[] args)
5     {
6         Scanner input = new Scanner(System.in);
7         String num;
8         int sum, mod;
9         while(input.hasNext())
10        {
11            num = input.nextLine();
12            sum = 0;
13            for (int i = 0; i < 8; i++)
14            {
15                sum += (num.charAt(i)-'0')*(8-i);
16            }
17            mod = sum % 11;
18            if (mod == 0)
19                System.out.printf("Number %s is valid\n",num);
20            else
21                System.out.printf("Number %s is invalid\n",num);
22        }
23    }
24 }

```

```
1 import java.util.Scanner;
2 public class LuhnCalculator {
3 {
4     public static void main(String[] args)
5     {
6         Scanner input = new Scanner(System.in);
7         String num7, num8;
8         int sum;
9         int mod;
10        int last;
11        while (input.hasNext())
12        {
13
14            num7 = input.nextLine();
15            sum = 0;
16            for (int i = 0; i < 7; i++)
17            {
18                sum += (num7.charAt(i)-'0')*(8-i);
19            }
20            mod = sum % 11;
21            if (mod == 0)
22                last = mod;
23            else
24                last = 11 - mod;
25            num8 = num7 + last;
26            System.out.printf("Number = %s\n", num8);
27        }
28    }
29 }
```