

Assignment Methods

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1. Write a Java program to generate OTP of user defined length for n users using Methods.

Program:

```
import java.util.Scanner;
import java.util.Random;

public class password {

    static int values(int num) {

        int count = 0;

        while (num != 0) {

            num /= 10;
            count++;
        }

        return count;
    }

    static int generate(int n) {

        Random rand = new Random();

        int num = 1; int nvalue; int result = 0;

        for (int i=1; i<=n; i++) {

            int x = rand.nextInt(9);
            num += x * Math.pow(10,i-1);

            nvalue = values(num);

            if (nvalue == n) {

                result = num;
            }

            else {

                result = (int) (Math.pow(10,n-1)) + num;
            }
        }

        return result;
    }

    public static void main(String args[]) {

        Scanner nuser = new Scanner(System.in);
        Scanner nleng = new Scanner(System.in);

        System.out.println("\nEnter number of users:");
        int users = nuser.nextInt();

        System.out.println("\nEnter length of password:");
        int length = nleng.nextInt();
    }
}
```

```
System.out.println("\nRandomly generated OTP:");

for (int i=1; i<=users; i++) {

    int value = generate(length);

    System.out.println("User "+ i +" : "+ value);
}
}
```

Output:

Enter number of users:

7

Enter length of password:

9

Randomly generated OTP:

User 1 : 262808206

User 2 : 848730874

User 3 : 258558562

User 4 : 651157078

User 5 : 418621561

User 6 : 466180153

User 7 : 270510436