

**Solution LAB 07 (Nested Loop & User Function/ Methods)**

اے پیغمبر اپنی بیویوں اور بیٹیوں اور مسلمانوں کی عورتوں سے کہہ دو کہ (باہر نکالیں تو) اپنے (مومنوں) پر چادر لٹکا (کر گھونگھٹ نکال) لیا کریں۔ یہ امر ان کے لئے موجب شناخت (و امتیاز) ہو گا تو کوئی ان کو ایذا نہ دے گا۔ اور خدا بخشنے والا مہربان ہے پاک الاحزاب آیت ۵۹

Wishing to be friends is quick work, but friendship is a slow ripening fruit. Aristotle

**Use nested loop**

<p><b>Task 1:</b> Write a program to input rows and columns and print a rectangle filled by stars like given on right hand side.</p>	<pre>***** ***** ***** ***** *****</pre>
--	--

```
System.out.print("Enter rows:");
rows=in.nextInt();
System.out.print("Enter columns:");
columns=in.nextInt();
for (i=0;i<rows;i++){
    for (j=0;j<columns;j++)
        System.out.print("*");
    System.out.println();
}
```

<p><b>Task 2:</b> Modify task 1 to draw a hollow box of stars as discussed in lecture notes and displayed on right hand side.</p>	<pre>***** * * * *****</pre>
---	------------------------------

```
for (j=0;j<columns;j++)
    System.out.print("*");
System.out.println();
for (i=2;i<rows;i++){
    System.out.print("*");
    for (j=2;j<columns;j++)
        System.out.print(" ");
    System.out.println("*");
}
for (j=0;j<columns;j++)
    System.out.print("*");
```

<p><b>Task 3:</b> Write a program to generate a pattern given on right hand side.</p>	<pre>1 12 123 1234 12345 123456</pre>
---	---------------------------------------

```
for (i=1;i<=6;i++){
    for (j=1;j<=i;j++)
        System.out.print(j);
    System.out.println();
}
```

<p><b>Task 4:</b> Input 2 strings and print letters common in both strings?</p>
---

```
String s1, s2;
char c1, c2;
System.out.print("Enter String 1:");
s1=in.next();
System.out.print("Enter String 2:");
```

```

s2=in.next();
for (i=0;i<s1.length();i++){
    c1=s1.charAt(i);
    for (j=0;j<s2.length();j++){
        c2=s2.charAt(j);
        if (c1==c2)
            System.out.print(c1+" ");
    }
}

```

### Use functions/ methods

Just type code to get understanding of function creation

```

class TestFunction{
    public static void print(char c, int n){
        int i;
        for (i=1;i<=n;i++)
            System.out.print(c);
        System.out.println();
    }
}

```

```

public static void main(String []a){
    printChar('-',5);
    printChar('*',7);
    printChar('^',8);
    printChar('#',3);
}
}

```

**Task 5:** Write a function:

```

public static void printCounting(int s, int e)

```

The function will print number from s to e in ascending order like if s is 5 and e is 9, output will be 5 6 7 8 9.  
After printing move to next line as in previous program.

```

public static void main(String []a){
    printCounting(1,5);
    printCounting(3,7);
    printCounting(-5,15);
} //use main to test your code

```

```

public static void printCounting(int s, int e){
    for ( ;s<=e;s++)
        System.out.print(s+" ");
}

```

**Task 6:** Write a function:

```

public int void randomInt(int s, int e)

```

The function will generate a random integer between s and e and return.

```

public static void main(String []a){
    randomInt(100,500);
    randomInt(-100,100);
    randomInt(30,70);
} //use main to test your code

```

```

public static int randomInt(int s, int e){
    int range=e-s;
    return (int)(Math.random()*range+s);
}

```

**System.out.println("Muslims! Listen to your lord, follow his commandments")**