

Assignment 4

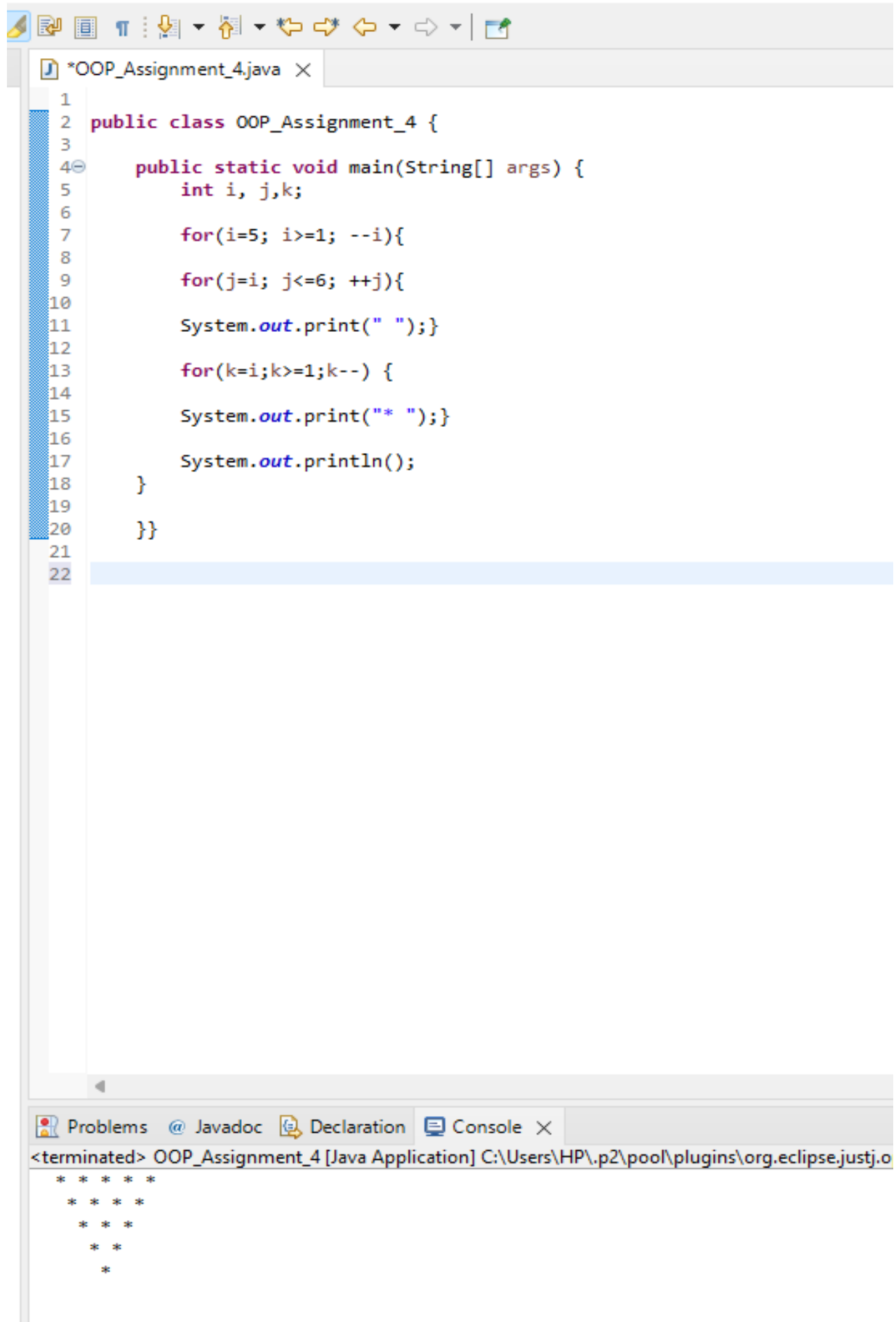
1. Write a Java code to display the following patterns

a)

```
* * * * *  
* * * *  
* * *  
* *  
*
```

CODE:-

```
public class OOP_Assignment_4 {  
  
    public static void main(String[] args) {  
        int i, j,k;  
  
        for(i=5; i>=1; --i){  
  
            for(j=i; j<=6; ++j){  
  
                System.out.print(" ");  
  
                for(k=i;k>=1;k--) {  
  
                    System.out.print("* ");  
  
                    System.out.println();  
                }  
  
            }  
  
        }  
    }  
}
```



```
1
2 public class OOP_Assignment_4 {
3
4     public static void main(String[] args) {
5         int i, j, k;
6
7         for(i=5; i>=1; --i){
8
9             for(j=i; j<=6; ++j){
10
11                 System.out.print(" ");
12
13                 for(k=i; k>=1; k--) {
14
15                     System.out.print("* ");
16
17                 System.out.println();
18             }
19         }
20     }
21 }
22
```

Problems @ Javadoc Declaration Console X

<terminated> OOP_Assignment_4 [Java Application] C:\Users\HP\.p2\pool\plugins\org.eclipse.justj.o

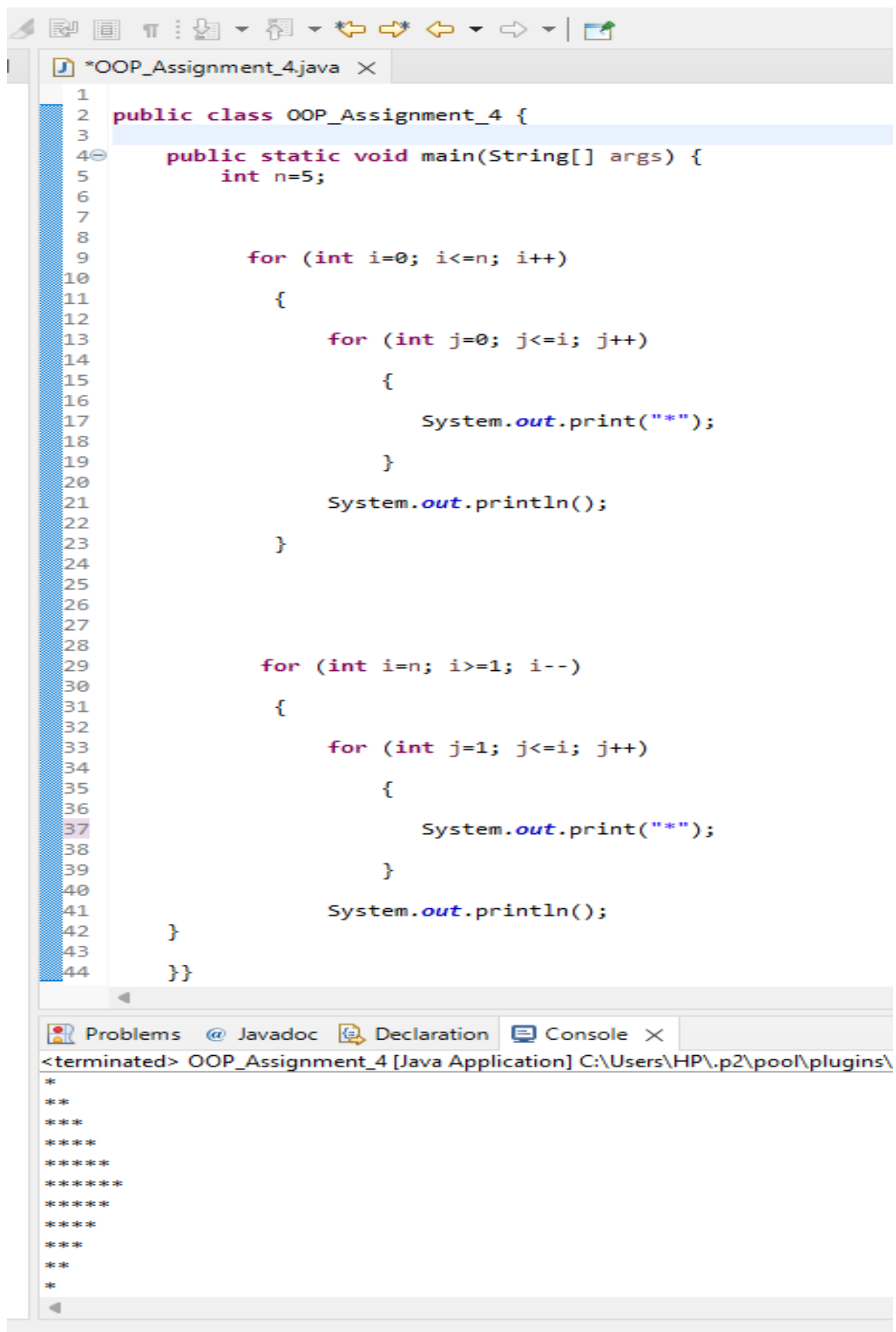
```
* * * * *
* * * *
* * *
* *
*
```

b)

```
*  
**  
***  
****  
*****  
****  
***  
**  
*
```

CODE:-

```
public class OOP_Assignment_4 {  
  
    public static void main(String[] args) {  
        int n=5;  
  
        for (int i=0; i<=n; i++)  
        {  
            for (int j=0; j<=i; j++)  
            {  
                System.out.print("*");  
            }  
            System.out.println();  
        }  
  
        for (int i=n; i>=1; i--)  
        {  
            for (int j=1; j<=i; j++)  
            {  
                System.out.print("*");  
            }  
            System.out.println();  
        }  
    }  
}
```



The screenshot shows an IDE with a Java file named `*OOP_Assignment_4.java`. The code is a Java class `OOP_Assignment_4` with a `main` method. The `main` method initializes `n=5` and contains two nested loops. The first loop prints a pattern of asterisks that increases from 1 to 5 asterisks per line. The second loop prints a pattern of asterisks that decreases from 5 to 1 asterisk per line. The output in the console shows the combined result of these two loops, forming a diamond shape.

```
1 public class OOP_Assignment_4 {
2
3
4     public static void main(String[] args) {
5         int n=5;
6
7
8
9         for (int i=0; i<=n; i++)
10            {
11                for (int j=0; j<=i; j++)
12                    {
13                        System.out.print("*");
14                    }
15                System.out.println();
16            }
17
18
19         for (int i=n; i>=1; i--)
20            {
21                for (int j=1; j<=i; j++)
22                    {
23                        System.out.print("*");
24                    }
25                System.out.println();
26            }
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44 }
```

Problems Javadoc Declaration Console X

<terminated> OOP_Assignment_4 [Java Application] C:\Users\HP\.p2\pool\plugins\
*
**

**
*

c)

```
*  
**  
***  
****  
*****  
*****  
*****  
*****  
****  
***  
**  
*
```

CODE:-

```
public class OOP_Assignment_4 {  
    public static void main(String[] args) {  
        int i,j,k,l,m,n;  
        for(l=1;l<=6;++l) {  
            for(m=6;m>=l;--m) {  
                System.out.print(" ");  
                for(n=1;n<=l;n++) {  
                    System.out.print("* ");  
                    System.out.println();  
                }  
                for(i=5; i>=1; --i){  
                    for(j=i; j<=6; ++j){  
                        System.out.print(" ");  
                        for(k=i;k>=1;k--) {  
                            System.out.print("* ");  
                            System.out.println();  
                        }  
                    }  
                }  
            }  
        }  
    }  
}
```

ie IDE

v Help

The screenshot shows an IDE window with a Java file named `OOP_Assignment_4.java`. The code is a Java application that prints a diamond-shaped pattern of asterisks. The code is as follows:

```
1
2 public class OOP_Assignment_4 {
3
4     public static void main(String[] args) {
5         int i,j,k,l,m,n;
6
7         for(l=1;l<=6;++l) {
8
9             for(m=6;m>=l;--m) {
10
11                 System.out.print(" ");
12
13                 for(n=1;n<=l;n++) {
14
15                     System.out.print("* ");
16
17                     System.out.println();
18
19                     for(i=5; i>=1; --i){
20
21                         for(j=i; j<=6; ++j){
22
23                             System.out.print(" ");
24
25                             for(k=i;k>=1;k--) {
26
27                                 System.out.print("* ");
28
29                                 System.out.println();
30                             }
31                         }
32                     }
33                 }
34             }
35         }
36     }
```

The output of the program, displayed in the Console window, is a diamond-shaped pattern of asterisks:

```
<terminated> OOP_Assignment_4 [Java Application] C:\Users\HP\.p2\pool
*
* *
* * *
* * * *
* * * * *
* * * * * *
* * * * *
* * * *
* * *
* *
*
```

d)

```
*  
  
* *  
  
* *  
  
* *  
  
* *
```

CODE:-

```
public class OOP_Assignment_4 {  
  
    public static void main(String[] args) {  
  
        int i,j,k,l;  
  
        for(i=1; i<=5; ++i){  
  
            for(j=1; j<=9; ++j){  
  
                k=Math.abs(5-j);  
  
                if (k==i-1) {  
  
                    System.out.print("*");  
  
                else {  
  
                    System.out.print(" ");  
  
                }  
  
                System.out.println();  
  
            }  
  
        }  
  
    }  
  
}
```

help

The screenshot shows an IDE window titled "OOP_Assignment_4.java". The code is as follows:

```
1
2 public class OOP_Assignment_4 {
3
4     public static void main(String[] args) {
5
6         int i,j,k,l;
7
8         for(i=1; i<=5; ++i){
9
10            for(j=1; j<=9; ++j){
11
12                k=Math.abs(5-j);
13
14                if (k==i-1) {
15
16                    System.out.print("*");
17
18                else {
19
20                    System.out.print(" ");
21
22                }
23
24                System.out.println();
25
26            }
27        }
28
29
```

The output in the console is:

```
<terminated> OOP_Assignment_4 [Java Application] C:\Users\HP\.p2\pool\
*
* *
*  *
*   *
*    *
```


e)

```
*  *  
*  *  
*  *  
* *  
*
```

CODE:-

```
public class OOP_Assignment_4 {  
  
    public static void main(String[] args) {  
  
        int i,j,k,l;  
  
        for(i=1; i<=5; ++i){  
  
            for(j=1; j<=9; ++j){  
  
                k=Math.abs(5-j);  
  
                if (k==5-i) {  
  
                    System.out.print("*");  
  
                else {  
  
                    System.out.print(" ");  
  
                }  
  
                System.out.println();  
  
            }  
  
        }  
  
    }  
  
}
```

elp

The screenshot shows an IDE window titled "OOP_Assignment_4.java". The code is as follows:

```
1
2 public class OOP_Assignment_4 {
3
4     public static void main(String[] args) {
5
6         int i,j,k,l;
7
8         for(i=1; i<=5; ++i){
9
10            for(j=1; j<=9; ++j){
11
12                k=Math.abs(5-j);
13
14                if (k==5-i) {
15
16                    System.out.print("*");
17
18                else {
19
20                    System.out.print(" ");
21
22                }
23
24                System.out.println();
25
26            }
27        }
28
29    }
```

The output in the console is:

```
<terminated> OOP_Assignment_4 [Java Application] C:\Users\HP\.p2\p
*
*
*
*
*
```


Date & Time: 04-12-2021, 5 PM

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Copy the code to a word document and following the below mentioned format to name the document.

Naming format for the document:

Batch 'A' students - 'A_name.docx'

Batch 'B' students - 'B_name.docx'