

Page 103, *Java Programming A Comprehensive Introduction*

Explain the execution of the following Nested **while** loops

```
for (int a =0; a <3; a++){  
    System.out.println("Outer loop count: " + a);  
    System.out.print("    Inner loop count: ");  
  
    int t = 0;  
    while(t<100){  
        if(t == 10) break;  
        System.out.print(t + " ");  
        t++; }  
    System.out.println();  
}  
System.out.println("Loops complete");
```

First It would loop the 1st time of outerloop, and go to the inner loop and print 1 to 9

Then It would loop the 2nd times of outerloop, and go to the inner loop and print 1 to 9

Next it would loop the 3rd times of counter loop, and go to the inner loop and print 1 to 9

At the last, it would print loops complete.

Programming Assignments

Page 116 #20, *Java Programming A Comprehensive Introduction*

Task 1: Print the following combination of stars using a **for** loop nested inside a **for** loop. Then a **while** loop nested inside a **for** loop.

Each letter will have two separate programs that produce the same output.

Attach Snipping photo of the source code for all 6 exercises and output.

A.

**

*

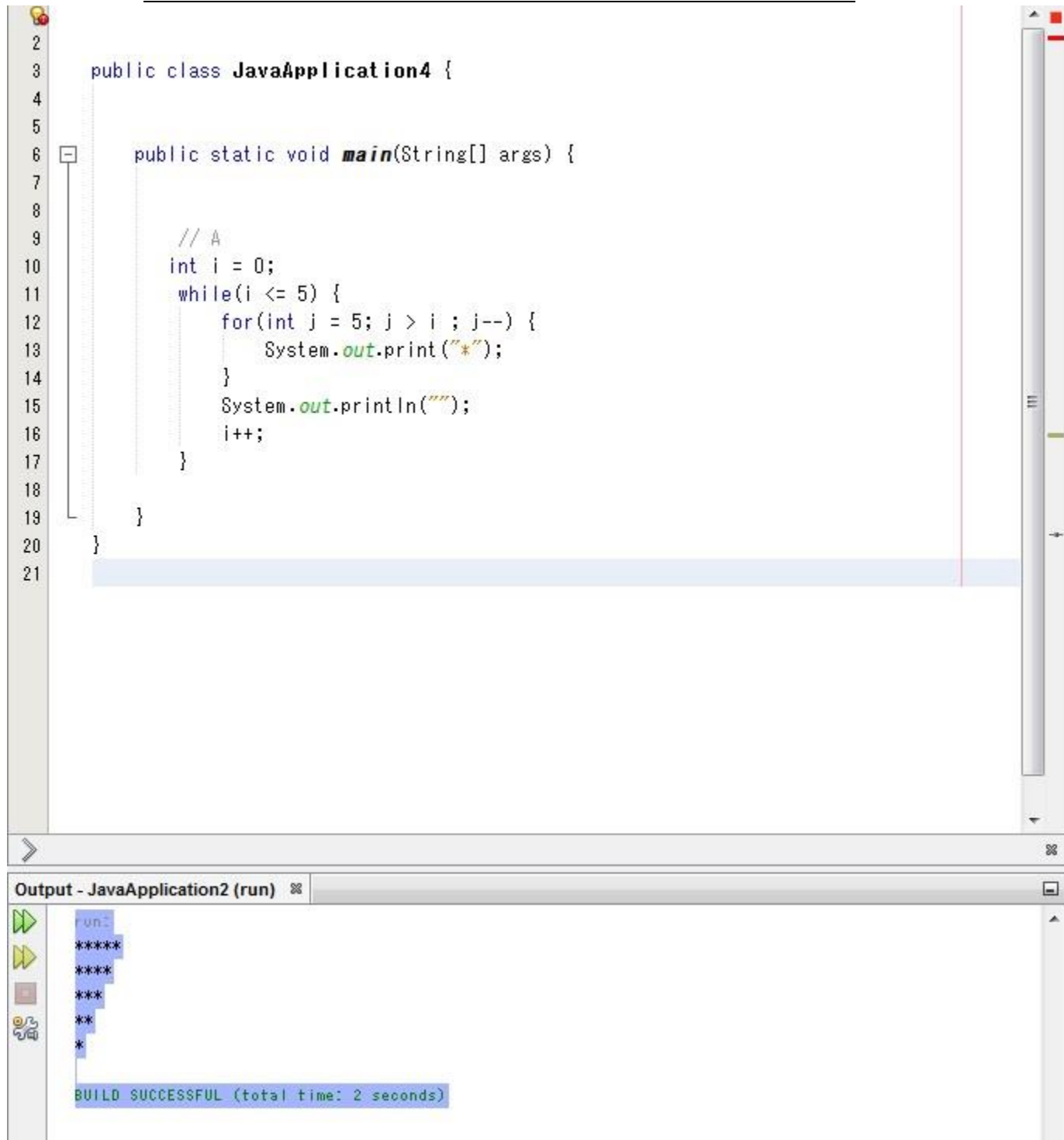
```
2
3 public class JavaApplication4 {
4
5
6     public static void main(String[] args) {
7
8
9         // A
10        for(int i = 0; i <= 5; i++) {
11
12            for(int j = 5; j > i ; j--) {
13
14                System.out.print("*");
15            }
16            System.out.println("");
17        }
18    }
19 }
20
21
```

JavaApplication4 > main > for (inti = 0; i <= 5; i++) > for (intj = 5; j > i; j--) >

Output - JavaApplication2 (run) >

```
run:
*****
****
***
**
*

BUILD SUCCESSFUL (total time: 1 second)
|
```



The screenshot shows an IDE with a Java file named `JavaApplication4`. The code is a `main` method that prints a pattern of asterisks. The output window shows the result of running the program, which is a pattern of asterisks arranged in a right-angled triangle. The build was successful.

```
2  
3 public class JavaApplication4 {  
4  
5  
6     public static void main(String[] args) {  
7  
8  
9         // A  
10        int i = 0;  
11        while(i <= 5) {  
12            for(int j = 5; j > i ; j--) {  
13                System.out.print("*");  
14            }  
15            System.out.println("");  
16            i++;  
17        }  
18    }  
19 }  
20  
21
```

Output - JavaApplication2 (run) ✖

```
run:  
*****  
****  
***  
**  
*  
  
BUILD SUCCESSFUL (total time: 2 seconds)
```

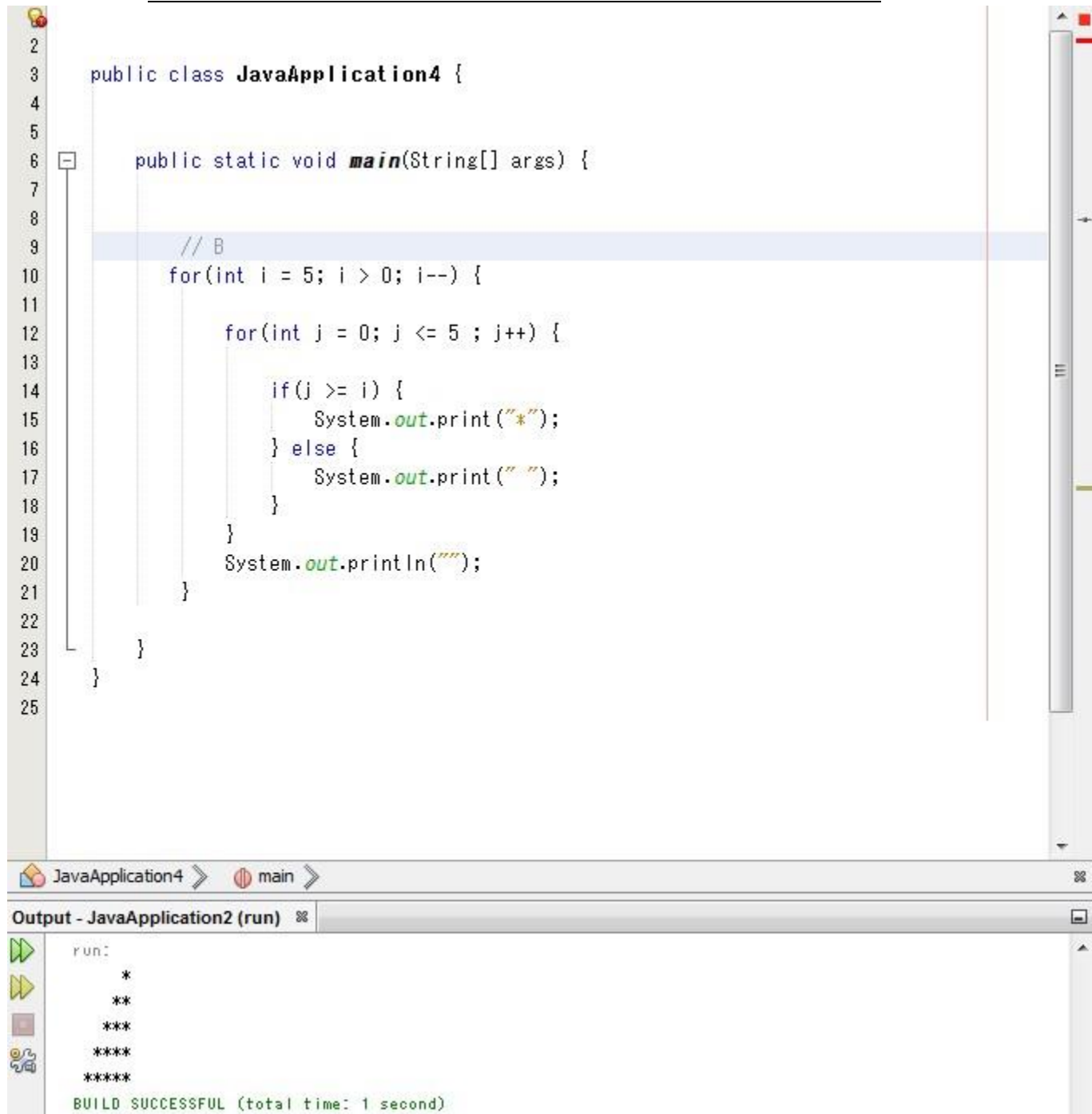
B.

*

**

CIS 36A – 9th In Class / Take Home Assignment – **10 Points**

Student Name	Ka Chi Lau	Student ID	10819338	Point Total
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The screenshot shows an IDE with a Java class named `JavaApplication4`. The code defines a `main` method that prints a pattern of asterisks. The output window shows the result of running the program, which is a 5x5 grid of asterisks. The build was successful and took 1 second.

```
2  
3 public class JavaApplication4 {  
4  
5  
6     public static void main(String[] args) {  
7  
8  
9         // B  
10        for(int i = 5; i > 0; i--) {  
11            for(int j = 0; j <= 5 ; j++) {  
12                if(j >= i) {  
13                    System.out.print("*");  
14                } else {  
15                    System.out.print(" ");  
16                }  
17            }  
18            System.out.println("");  
19        }  
20    }  
21 }  
22  
23  
24  
25
```

JavaApplication4 > main >

Output - JavaApplication2 (run) %

run:
*
**

BUILD SUCCESSFUL (total time: 1 second)

```
2
3 public class JavaApplication4 {
4
5
6     public static void main(String[] args) {
7
8
9         // B
10        int i = 5;
11        while(i > 0){
12            for(int j = 0; j <= 5 ; j++) {
13                if(j >= i) {
14                    System.out.print("*");
15                } else {
16                    System.out.print(" ");
17                }
18            }
19            System.out.println("");
20            i--;
21        }
22    }
23 }
24
25
```

JavaApplication4 > main > i >

Output - JavaApplication2 (run) ☒

```
run:
*
**
***
****
*****
BUILD SUCCESSFUL (total time: 1 second)
```

C.

CIS 36A – 9th In Class / Take Home Assignment – **10 Points**

Student Name Ka Chi Lau **Student ID** 10819338 **Point Total**

**


```
2
3 public class JavaApplication4 {
4
5
6     public static void main(String[] args) {
7
8
9         // 0
10        for(int i = 10; i > 1; i--) {
11            for(int j = 10; j > 0; j--) {
12                if(i >= j && i % 2 == 0) {
13                    System.out.print("*");
14                } else {
15                    System.out.print(" ");
16                }
17                System.out.print(" ");
18            }
19            System.out.println();
20        }
21    }
22 }
23
24
```

JavaApplication4 > main > for (int i = 10; i > 1; i--) > for (int j = 10; j > 0; j--) > if (i >= j && i % 2 == 0) e

Output - JavaApplication2 (run) %

```
run:
*****
*****
*****
*****
**
BUILD SUCCESSFUL (total time: 1 second)
```

```
2
3 public class JavaApplication4 {
4
5
6     public static void main(String[] args) {
7
8
9         // C
10        int i = 10;
11        while(i > 1){
12            for(int j = 10; j > 0; j--) {
13                if(i >= j && i % 2 == 0) {
14                    System.out.print("*");
15                } else {
16                    System.out.print(" ");
17                }
18                System.out.print(" ");
19            }
20            System.out.println();
21            i--;
22        }
23    }
24 }
25
26
```

JavaApplication4 > main >

Output - JavaApplication2 (run) ☒

run:

```
*****
*****
*****
****
**
BUILD SUCCESSFUL (total time: 1 second)
```