

## PRACTICE SECTION 6

1.

```
package pin;

import java.util.Scanner;

public class Pin {

    public static void main(String[] args) {

        int validPin = 1234;

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter your PIN: ");

        int enteredPin = scanner.nextInt();

        while (enteredPin != validPin) {

            System.out.print("Invalid PIN. Try again: ");

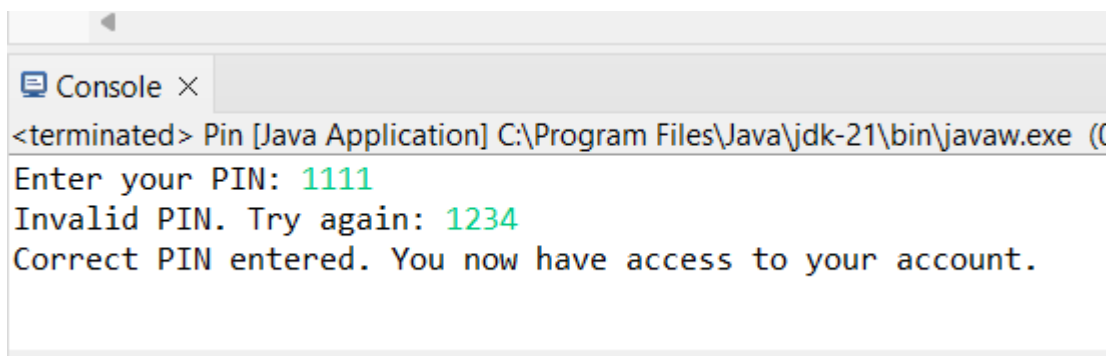
            enteredPin = scanner.nextInt();

        }

        System.out.println("Correct PIN entered. You now have access to your account.");

    }

}
```

A screenshot of a Java IDE's console window. The window has a title bar with a 'Console' tab and a close button. The text in the console shows the execution of the 'Pin' application. It starts with the command prompt '<terminated> Pin [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (C'. Then, it shows the prompt 'Enter your PIN: ' followed by the user input '1111' in green. This is followed by the prompt 'Invalid PIN. Try again: ' and the user input '1234' in green. Finally, it shows the output 'Correct PIN entered. You now have access to your account.' in blue.

2.

```
package multiple;
```

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

```
public class Multiple {
```

```
    public static void main(String[] args) {
```

```
        // Create a Scanner object to read user input
```

```
        Scanner scanner = new Scanner(System.in);
```

```
        // Prompt the user to enter a number
```

```
        System.out.print("Choose a number: ");
```

```
        // Read the user's input and store it in a variable
```

```
        int number = scanner.nextInt();
```

```
        // Use a for loop to display the multiples of the number from 1 to 12
```

```
        for (int i = 1; i <= 12; i++) {
```

```
            int multiple = number * i;
```

```
            System.out.println(number + "x" + i + " = " + multiple);
```

```
        }
```

```
    }
```

```
}
```

```
Console ×
<terminated> Multiple [Java Applicatic
Choose a number: 10
10x1 = 10
10x2 = 20
10x3 = 30
10x4 = 40
10x5 = 50
10x6 = 60
10x7 = 70
10x8 = 80
10x9 = 90
10x10 = 100
10x11 = 110
10x12 = 120
```

3.

```
package loopshape;
```

```
public class Loopshape {
```

```
    public static void createRectangle(int width, int height) {
```

```
        if (width < 1 || height < 1) {
```

```
            System.out.println("Cannot draw a shape with a dimension less than 1.");
```

```
            return;
```

```
        }
```

```
        // Print the top border
```

```
        for (int i = 0; i < width; i++) {
```

```
            System.out.print("#");
```

```
        }
```

```
        System.out.println();
```

```
        // Print the middle rows
```

```
        for (int i = 0; i < height - 2; i++) {
```

```
            System.out.print("#");
```

```

        for (int j = 0; j < width - 2; j++) {
            System.out.print(" ");
        }
        System.out.println("#");
    }

    // Print the bottom border
    if (height > 1) {
        for (int i = 0; i < width; i++) {
            System.out.print("#");
        }
        System.out.println();
    }
}

public static void createTriangle(int size) {
    if (size < 1) {
        System.out.println("Cannot draw a shape with a dimension less than 1.");
        return;
    }

    // Print the triangle
    for (int i = 0; i < size; i++) {
        for (int j = 0; j <= i; j++) {
            System.out.print("#");
        }
        System.out.println();
    }
}

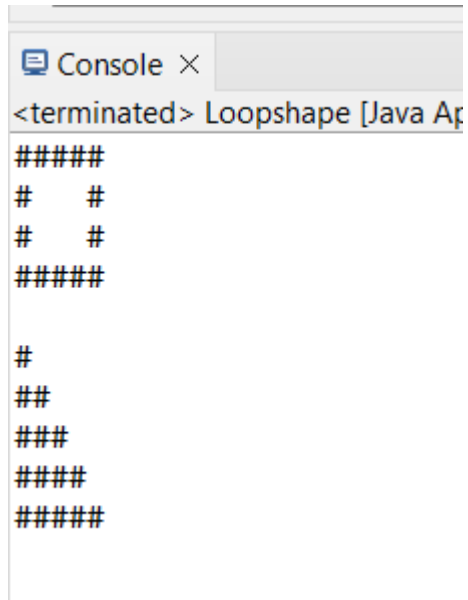
public static void main(String[] args) {

```

```
        createRectangle(5, 4);

        System.out.println();

        createTriangle(5);
    }
}
```



```
<terminated> Loopshape [Java Applet]
#####
#   #
#   #
#####

#
##
###
####
#####
```