

Exercise 2.1: What happens if you do not have a main function in your file? Try compiling and executing such a file.

When you do not have a main function in a java file, it yields a runtime error.

Results of compiling and executing such a file:

```
Timothys-MacBook-Pro:1 timothylytkine$ javac Test.java
Timothys-MacBook-Pro:1 timothylytkine$ java Test
Error: Main method not found in class Test, please define the main
method as:
    public static void main(String[] args)
or a JavaFX application class must extend
javafx.application.Application
```

Exercise 2.2: Find out what happens if you use an assignment in an if-expression, e.g.,

Using an assignment in an if-expression yields a compiler error stating that an int cannot be converted to a boolean. If the expression were to be “if (i == 4)” instead of “if (i=4)” this error would not have occurred.

Results of compiling and executing:

```
Timothys-MacBook-Pro:2 timothylytkine$ javac Exercise2p2.java
Exercise2p2.java:9: error: incompatible types: int cannot be converted
to boolean
    if (i = 4) {
        ^
1 error
Timothys-MacBook-Pro:2 timothylytkine$ java Exercise2p2
Error: Could not find or load main class Exercise2p2
```

Exercise 2.3: Write a program that takes in command line arguments, prints out each argument, the length of each argument and the average length of all the arguments. Name your program TestCommandLine Here's sample output:

```
% java TestCommandLine aaa aaaa
Arg#0 = aaa, length = 3
Arg#1 = aaaa, length = 4
Average: 3.5
```

Solution is in java file

Exercise 2.4: Compile and execute the above program. Then modify the above code to create and print Pascal's triangle. Sample output:

```
1 1
1 2 1
1 3 3 1
1 4 6 4 1
```

Solution is in java file