1. a) Recall our `Hello World!` program. Reproduce the steps we did to create that program in order to prepare our environment for this assignment.

   - If it does not already exist, create a Java *package* and name it `com.bjfles.`*chris*`.topic5` (except replace "*chris*" with your own name)
   - Create a new Java *class* and name it `Topic5Activity9a`. Be sure to check the appropriate box so you don't need to type out the `public static void main…`
   - Add a line to the `main` method that will print some text (any text is fine, we're just checking if we have the basic program working).

   Your code should look similar to the following:

```
1  package com.bjfles.chris.topic5;

2  public class Topic5Activity9a {

3     public static void main(String[] args) {
4        System.out.println("Topic 5, Activity 9a");
5     }

6  }
```

   Before you continue to part (b), ensure that when you run your program, "`Topic 5, Activity 9a`" (or whatever string you put within the quotation marks) is output to the console.

   b) Translate the pseudocode below into Java code and, starting with the code you wrote for part (a), insert the Java code after the print statement (between lines 4 and 5). *Hint*: the Pearson pseudocode *modulo* operator is `MOD`, while Java uses the percent sign (`%`), and the Pearson pseudocode *equality operator* is a single equal sign (`=`), while Java requires a double equal sign (`==`).

```
1  SET num TO 1

2  IF num MOD 2 = 0 THEN
3     SEND "even" TO DISPLAY
4  ELSE
5     SEND "odd" TO DISPLAY
6  END IF
```

   Run your code and ensure the output is as you expect. Change the value for `num` and re-run the program to test that both branches of the selection will be followed under the appropriate conditions. **After you test your code**, write only the code you translated into Java for part (b) into the box below. Do <u>not</u> copy the `main` method signature nor any other part of the program into this box. Pay careful attention to accuracy in punctuation, especially semicolons (`;`), and to ***indentation***.

```java
1  int num = 1;

2  if(num % 2 == 0) {
3     System.out.println("even");
4  } else {
5     System.out.println("odd");
6  }
```

c) Translate the pseudocode below into Java code, and insert it below your code for part (b).

```
1  SET index TO 1
2  WHILE index <= 10 DO
3     SEND index * index * index TO DISPLAY
4     SET index TO index + 1
   END WHILE
```

After you test your code, write only the code you translated into Java for part (c) into the box below.

```
1  int index = 1;
2  while(index <= 10) {
3      System.out.println(index * index * index);
4      index++;
5  }
```

d) Translate the pseudocode procedure below into a Java method.

```
1  PROCEDURE blastOff(start)
2  BEGIN PROCEDURE
3  WHILE start > 0 DO
4     SEND start TO DISPLAY
5     SET start TO start – 1
6  END WHILE
7  SEND "blast off!" TO DISPLAY
```

Your Java method must be at the same level as your `main` method. This means it must be within the `class`, but it should not be inside your `main` method. If you look at the original template code given in part (a), it should be between lines `5` and `6`.

Call the Java `blastOff` method from within your main method after the code for part (c).

After you test your code, write only the code translated into a Java method in the box below.

```
1  public static void blastOff(int start) {
2      while (start > 0) {
3          System.out.println(start);
4          start--;
5      }
6      System.out.println("blast off!");
7  }
```

Below is the final solution for the entire assignment.

```java
1  package com.bjfles.chris.topic5;
2  public class Topic5Activity9a {
3      public static void main(String[] args) {
4          // Part a
5          System.out.println("Topic 5 Activity 9");
6          // Part b
7          int num = 1;
8          if(num % 2 == 0) {
9              System.out.println("even");
10         } else {
11             System.out.println("odd");
12         }
13         // Part c
14         int index = 1;
15         while(index <= 10) {
16             System.out.println(index * index * index);
17             index++;
18         }
19         // Part d
20         blastOff(5);
21     }

22     public static void blastOff(int start) {
23         while (start > 0) {
24             System.out.println(start);
25             start--;
26         }
27         System.out.println("blast off!");
28     }
29 }
```