COP2800C Module 1 Practice Exercise

This is the first practice exercise for the course. In this exercise we will create a simple Java program which represents a factory containing packing boxes.

Design a public Java class named "BoxFactory" which describes three boxes using their colors. You'll need a main module in the class which displays the expected output shown below (pay attention to the formatting).

Declare three static String constants in the class (above the main method) which represent the box colors. Remember that constant names must always be spelled with all upper case. These strings should contain _only_ the box colors, do not include any surrounding text and the names must be meaningful, do not use constant names that are too short or do not indicate the contents of the constant. Here's an example:

```
static final String COL_RED = "Red";
```

Declare a static int constant which represents the total number of boxes.

In your main method, use concatenation with string literals in your output statements to match the formatting in the expected output. Here's an example:

```
System.out.println("First Box is a " + COL_RED + " box.");
```

Use concatenation to insert the static int constant value in the last line (refer to the expected output to see how this is displayed).

Be sure your submission uses correct indentation and includes a 4-line ID header at the top of the file:

// filename (should be BoxFactory.java)
// your name
// submission date
// 1-line summary of program's purpose

Expected output is as follows (you can use different colors if you choose to do so):

```
Box Factory contains 3 boxes.
First box is a RED box.
Second box is a GREEN box.
Third box is a BLUE box.
```

- Start by creating a public class named BoxFactory. This means that your Java source code file must be named BoxFactory.java.

```
public class BoxFactory {
```

- Here is the declaration of the static int constant:

```
public static final int NUMBER_OF_BOXES = 3;
```

- Here are the declarations of the color constants:

```
public static final String COL_RED = "RED";
```

```
        public static final String COL_GREEN = "GREEN";
        public static final String COL_RED = "BLUE";
```

- In the main method, provide the necessary output statements to match the expected output using the declared constants (refer to the solution provided below).
- Keep your lines at < 81 columns. Notice how I have broken up the long line which displays the NUMBER_OF_BOXES constant to prevent it from getting too long.

```java
// BoxFactory.java
// Iam A. Programmer
// 6/21/22
// Program which represents a box factory

public class BoxFactory {

    public static final int NUMBER_OF_BOXES = 3;
    public static final String COL_RED = "RED";
    public static final String COL_GREEN = "GREEN";
    public static final String COL_BLUE = "BLUE";

    public static void main(String[] args) {
        System.out.println("Box Factory contains " +
                            NUMBER_OF_BOXES + " boxes.");
        System.out.println("First box is a " + COL_RED + " box.");
        System.out.println("Second box is a " + COL_GREEN + " box.");
        System.out.println("Third box is a " + COL_BLUE + " box.");
    }
}
```