Lab Marbles

Learning Objective:

- Understand how Scanner works
- Read in integers and Strings in arbitrary order
- Use `printf` to print in columns

Instructions:

1. Create a new Java file called : `LabMarbles.java`
   File > New > Java
2. Save the new file in your CS1400 directory and call it `LabMarbles.java`
   File > Save
   Use the dropdown list next to *Look In:* to navigate to your CS1400 folder
   Next to *File Name*: write `LabMarbles.java`
   Click the *Save* button
3. Create a public class that has the same name as the file
4. Inside the body of the class (within the opening and closing braces) create the main method

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

Sample Output:

```
color: red
Number of red marbles: 12
color: turquoise
Number of turquoise marbles: 7
color: yellow
Number of yellow marbles: 18

Color        Number of Marbles
------------ -----------------
red          12
turquoise    7
yellow       18
```

5. Inside the body of main (between the curly braces) do the following:
6. Create a `Scanner` to read in user `input`:
   - Add an import statement above (outside) your class declaration
   - Inside the main method create an instance of `Scanner`
7. Prompt the user for the color (use `System.out.print` so that the user input will be entered in the same line)
8. Create a variable of type `String` and name it `color1`.
9. Read in a `String` using the method `nextLine()` of the `Scanner` instance and assign it to the variable `color1`
10. Prompt the user for for the number of marbles of the specified color
    Note: you'll need to access the value of color1 to print the prompt
11. Create a variable of type `int` and name it `number1`
12. Read in an integer using the methos `nextInt()` and assign it to the variable `number1`
13. Repeat steps 7 – 12 two more times so the user can enter two more colors and the corresponding numbers of marbles.
    Use the variable names `color2, number2`, `color3`, and `number3`
14. Print the information of the data entered in a tabular form
    Use `%-12s` to print the color. This prints a column of width 12 left aligned
    FYI : Without the minus the content would be right-aligned
    e.g. `%10s` specifies a column of width 10 right aligned

    Using the format specifier is a better way to print columns than using tabulators. It guarantees the specified column width, while the width of tabulators can vary depending on user settings.
15. Include a header line (Color . . .) and dashes between the header line and the data (see output)