PRINTING MESSAGES

Exercise Files
Starter – "engine/exercises/chapter10/exer_004.cc"
Answers – "engine/answers/chapter10/exer_004.cc"

Exercise Mission
n/a

Special Steps
Please remember, when you modify the engine and compile, you must copy the new executable over to your Kit/ directory before you can run it and see the changes in the Kit (as instructed below).

Synopsis

In this exercise, we will test your knowledge of printing messages to the console from C++ and as a bonus learn to print messages with any of the ten color codes embedded in them.

Prerequisites
1. *ch1_001.pdf "Using The Kit"*

Exercises

PRINTING MESSAGES

1 Basic Messaging

Goal: Demonstrate your ability to write various messages to the console from C++.

Starter Code: You are provided with one function body to start this exercise.

```
ConsoleFunction(ch10_exer_004, void, 1, 1, "")
{
   // YOUR CODE GOES HERE
}
```

Steps:

1. In the location marked with "// YOUR CODE GOES HERE", please add the code needed to print the equivalent of each of these console statements.
   - `echo("Torque Rocks");`
   - `warn("Torque Rocks");`
   - `error("Torque Rocks");`
2. Next, using the normal-message function, print the string "A float " followed by the value 123.456 to the console. As part of this exercise, be sure the floating-point value is formated using these settings.
   - Flags – Pad with zeroes.
   - Width – 8
   - Precision – 2

Hints:

1. For the second step, you'll need to reference a standard C reference for the printf statement and the format string used in it.

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Expected Output:

After compiling your changes into the engine, you can start the kit and run "ch10_exer_004();" in the console. This should produce output like figure 1 below.

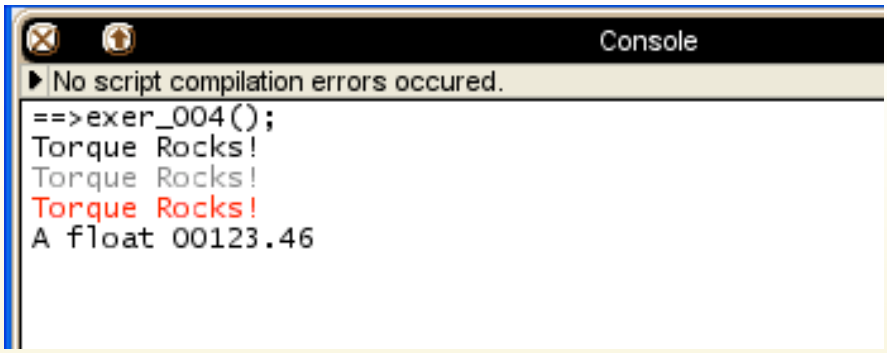

Figure 1. Output For Basic Messaging

2 Bonus – Inserting Color Codes

Goal: Learn to insert color codes into a normal message from C++.

Starter Code: Please continue to modify the console function code from above.

```
ConsoleFunction(ch10_exer_004, void, 1, 1, "")

{
   // YOUR CODE GOES HERE
}
```

Steps:

1. After your prior code, please add ten lines of code printing the following messages and using the color codes 0..9 respectively.
   - "Color Code 0"
   - "Color Code 1"
   - ...
   - "Color Code 9"

Hints:

1. The Torque color codes are represented by the following special characters:

   0 – "\x1" hex or "\001" octal

   1 – "\x2" hex or "\002" octal

   2 – "\x3" hex or "\003" octal

   3 – "\x4" hex or "\004" octal

   4 – "\x5" hex or "\005" octal

   5 – "\x6" hex or "\006" octal

   6 – "\x7" hex or "\007" octal

   7 – "\xb" hex or "\013" octal

   8 – "\xc" hex or "\014" octal

   9 – "\xe" hex or "\016" octal

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Expected Output:

After compiling your changes into the engine, you can start the kit and run "ch10_exer_004();" in the console. The console function should now produce output like figure 2 below.

(Note: You will only get these colors by using the Kit. Why? The kit has redefined the color codes for the ten message markers. In the standard SDK starter kits, colors 3..9 are black.)

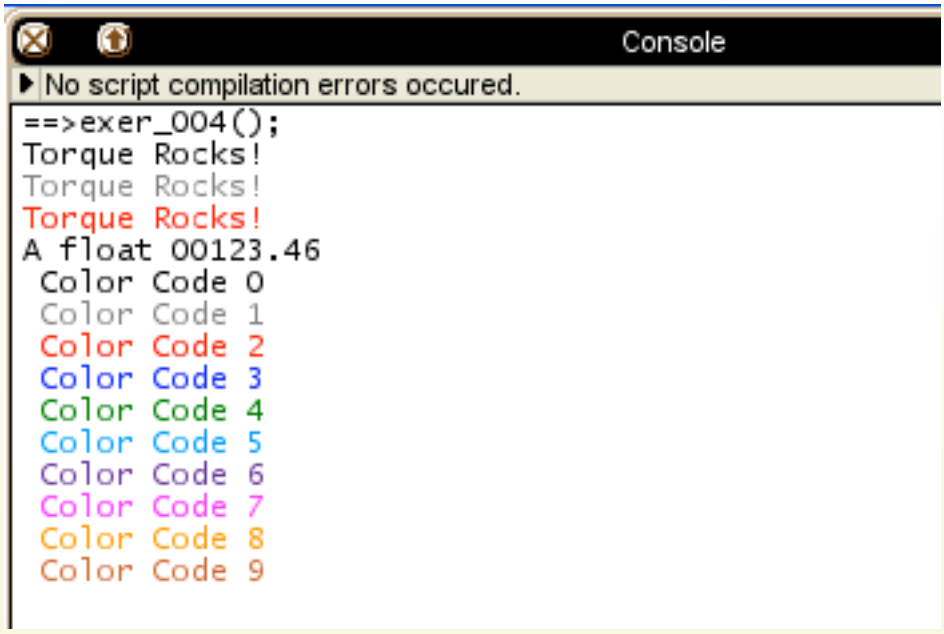

Figure 2. Output For Bonus Changes

