ENR 161

Ch1&2 Intro to Arduino Homework

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Exercise 1:

Setup:

Open your Arduino IDE

Select **File → Examples → Basics → Blink** to open the Blink example program

Complete the questions below.

1. What is the output after executing “Verify”?

2. What is the output after executing “Upload”? (Some users may get different answers)

3. Find “pinMode” in the setup() function, change it to “pinmode”,

1. What happens when executing “Verify”?
2. Why is pinMode orange but pinmode is black?

4. Change pinmode back to pinMode, remove a semicolon, what happens when executing “Verify”?

5. Replace the semicolon, remove a parenthesis ), what happens when executing “Verify”?

6. Replace the parenthesis, remove a curly brace }, what happens when executing “Verify”?

7. Why doesn’t “Verify” give an error if a board is not connected but “Upload” does?

8. What are the three most important things to check when setting up your environment?

9. What language is Arduino written in?

10. What are the three main elements of the Arduino Programming Structure?

## Exercise 2:

The following exercise is a simple example to verify that you can open an example and edit it. The Blink example in the github repository doesn’t utilize the LED\_BUILTIN variable from the Arduino library, your job is to fix this.

Setup:

Open your Arduino IDE

Open the **Blink** example in the Ch 1&2 folder from Github

Steps:

1. Remove the global variable **led**
2. Replace all references to the old variable **led** with the new variable **LED\_BUILTIN**
   1. Make sure you update any comments as necessary
3. Upload the program to your board and ensure it still works
4. Submit your solution named **Blink** to your github repository.