Lab 1 Reflection

# Proof

# Question 1

In your own words, explain what the HAL is and why it is used in a general embedded project.

## Answer:

# Question 2

In your own words, explain what the \_\_io\_putchar function does and why it is needed.

## Answer:

# Question 3

Why did we have to use the debugger in this lab? Why didn’t we just use printf to instrument our code and make sure it worked?

## Answer:

# Question 4

Explain how the stack allocation method we used works. Start by assuming that we have obtained the value for MSP\_init\_val. How did we get a new value for PSP\_val? Why did we need to know the initial location of MSP for this to work?

## Answer:

# Question 5

Say that we wanted to use the same stack allocation method to allocate a number of new stacks for use in multiple threads. Say this number is known at compile-time. What would we need to change in our code to make this work? Do not worry about actually using multiple stacks. This question is purely asking about how you would know where each stack starts in memory.

## Answer:

# Grading

Each question is evaluated based on the following scale.

**Meets expectations:** The answer is entirely correct. The answer is sufficiently detailed to include the major ideas necessary to prove that the student understands the concept. The answer is clear.

**Approaching expectations:** The answer contains no incorrect statements, but requires more detail or is too vague to convince the grader that the student understands the concept. The answer is clear.

**Does not meet expectations:** The answer either contains some incorrect statements or lacks detail to the degree that major portions of the question are left unanswered. The answer is not clear.

**Not observed:** the answer is largely incorrect or absent.

To get a grade for a question, you must obtain a rating of “meets expectations” on that question. You may resubmit as many times you like until you achieve that rating.