Human-Powered Computing – Class Handout

Code A: Defining Variables	Code B: Defining Variables in Loops
Line 01 `x=3`	Line 01 `n=3`
Line 02 `y=4`	Line 02 `for i=1:n`
Line 03 `A=x+y`	Line 03 `   b=i^2`
Line 04 `c=a+x`	Line 04 `   a=a+b`
Line 05 `d=A+B`	Line 05 `   i=i+1`
Line 06 `B=-4`	Line 06 `end`
Line 07 `F=A+B+c+d`	Line 07 `a`

After attempting to execute the sample codes above on your computer, complete the following problems. Do not attempt to fix any errors until asked.

1. Are variable names dependent on capitalization?

2. What happens if your code calls a variable that has not yet been defined?

3. Does code run properly if you define a variable and then never use it? Is it a good idea? Explain.

4. In Code A, what is the first error message you receive? Write it down verbatim.

5. What do you think that first error message you received means? Fix it. Briefly explain how you modified the code to fix this issue.

6. Continue to debug Code A. What error messages do you get, and what do you do to fix them?

7. When you try to run Code B, you probably notice that you do not have a value for `a` in line 4. Suppose that we meant for `a` to start with a value of 2. You could address this by adding a new line before Line 02 that initializes `a` to 2, or by adding a new line before Line 04 initializing `a` to 2. Briefly explain the differences in these solutions.

8. Which of the following are acceptable variable names? If you find any that are unacceptable, explain why.
   `F, f, f1, f2*, f 4, function1`

9. Will you get an error message when running your code if you have two different variables, one named `function1` and another named `Function1` in the same code? Do you think this is a good idea? Explain your response.