### Name: Put Your Name here

This reflection is to be completed individually, although consultations with TAs and classmates are encouraged as long as they are appropriately acknowledged. This document is intended to help you think about the various concepts covered in Chapter 8 of the textbook we asked you to SKIM. Remember, we are asking you to SKIM through the chapter, hopefully presenting material you have already read in the PDF document in a different way, thereby reinforcing the ideas.

## The Compilation Process

Our programs written in Python are interpreted, meaning that there is a small program called an interpreter that takes each line in the Python module one at a time and converts it to machine code before executing it. As discussed in the text, a C++ program is compiled, which means that the entire source code is analyzed and translated into an executable file. We will consider a broad understanding of the compiling process.

Consider Figure 8.1 in page 272 of the textbook and reproduced with slight changes below, and answer the following questions.

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1. What does the "preprocessor" stage do? Specifically, what does it do with the header files?

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| It processes all of the lines in the source file that start with “#” so with the header files, it copies everything that is in those files into the source file. |

1. Briefly describe the process that the compiler goes through to generate object files from source code, making sure to explain the impact of syntax errors into this process.

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| It first scans your file for syntax errors. If there are any, the compiler isn’t sure what you meant to type so it produces an error. Once your source code has no syntax errors, it produces machine code which is the 1’s and 0’s the computer interprets. |

1. Briefly describe how the linker takes the various object files and creates an executable file.

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| It makes sure that all functions that are called exists at least once in one of the object files. It then copies all of the code from the object files the program uses into the final executable file. |