ECS PROJECT #09 Guidelines
CSCI-410

The purpose of the programming assignment for this project is primarily to ensure that you are familiar with the details of the Jack programming language so that you have a framework from which to approach writing the compiler and the operating system libraries in the remaining projects.

Unlike the other projects, the "contract" (or the project requirements) for this project are not well defined; instead, only a vague notion of what is expected is provided. This makes it difficult for students to know if they have done enough (or wasted time doing too much) and it makes it difficult for the grader to assess the programs equitably. Therefore, here are a set of reasonably clear-cut expectations:

1) You are required to develop a minimum of three classes that interact in some meaningful way.
2) Each class is required to have at least two methods.
3) At least one class is required to have at least one function.
4) At least one class is required to have more than one constructor.
5) At least one class must have both field and static variables.
6) At least one method/function is required to take zero arguments.
7) At least one method/function is required to take two or more arguments.
8) At least one method/function is required to have zero local variables.
9) At least one method/function is required to have at least two local variables.
10) At least one method/function must be a void function (does not return a value).
11) Variables of each type (int, boolean, char) must be used.
12) Each of the ten operators must be used at least once.
13) At least one positive and once negative "constant".
14) All of the reserved words must be used once.
15) At least one if() and one if()..else statement must be used.
16) At least one nested loop must be used.
17) At least one recursive method/function call must be made.
18) Must use ALL of the O/S library functions at least once.
19) At least one end of line must be used.
20) At least one single-line block, and one multiline block comment must be used.

The details of your program are open-ended. One recommendation would be to initially interact with the user via the console and the keyboard and then continue interacting with them graphically. Some kind of a game is an obvious choice, but that is not required. While it is understood that some of the requirements may end up being met through somewhat contrived means, the bulk of the program should represent a reasonable approach to the application you've chosen to develop.