

Courtney Makua

01/29/2022

CSCI 3731 A

Dr Edward Pier

2. What is the difference between a function declaration and a function definition?

A function definition ends with curly brackets followed with the code that defines the purpose of the function. A function declaration ends with a semi colon and is meant to declare files in multiples files without having to write out all the code again.

3. Why does C/C++ need to have function declarations? Why doesn't Java have them?

C/C++ only has one pass compared to java which makes two passes. Since C only has one pass through the code, defining a function before it is declared throws errors immediately. Java on the other hand runs through the code once and then checks that all methods called match an existing method regardless of where it is in the code.

4. What is the C preprocessor, and what does it do?

C preprocessor is a separate program that does text manipulations based on directives that begin with #. For example, #include tells it to insert the contents of the named file here.

5. What do you use header files for?

The header file is where you declare all your functions. It makes it easier to use a single function in different files without having to declare them again and to declare multiple functions in a single file without looking like a long list. It basically makes it so functions get declared once in one file.

8. Suppose you have the following:

```
#define MAX_VALUE 32767
```

Is MAX VALUE a variable? If not, what is it

It is a preprocessor macro. Anywhere MAX_VALUE appears in code will get replaced with 32767 by the preprocessor.

Programming assignment 3.4

If you were using cotton balls, a modern high speed artillery, or were on a different planet, you basically just need to do some variable changes. Using cotton balls changes the mass and lowers the distance and time to reach a height of 0 because drag is increased. Using high speed can change the velocity which increases the distance and lowers the time. Changing what planet you're on just changes gravitational pull. The less pull the farther it goes and vice versa.