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Lab 1 Football Questions

1. The & symbol before a variable means that you’re passing an address of the variable rather than the actual variable. In this case you’re passing a pointer of the variable instead of the variable itself.
2. Using a loop wouldn’t be in good practice. Theoretically you may be able to code it using a loop but when you’re setting values of pointers inside an array it wouldn’t be the best idea. This method keeps it simpler and less prone to a mistake. Furthermore, the actual implementation of a loop would be difficult. You would need to have a loop to each player, inside that a nested loop to set the value of tackles/yards/etc, would get expensive for processing time (O(N^2)?)
3. Commonly referred to as “Include Guards”, #ifndef checks whether the file and code between #endif is defined to make decisions when it comes to redefining. Define is used for preprocessor macros. In the future it will replace any occurrence of the defined item with the replacement that was included in the parameter.
4. Because the name is private, it means that we can’t use it outside of the class. This means we must use a friend declaration to access the name variable.
5. The difference is that number/minutes are protected and will be derived from this class. It gets around using private/friend relationship since our players will be using this structure as “Offense” class or “Defense” class.
6. This method of declaration makes it slightly more abstract and the classes can’t use the method without defining a real value. If I’m not mistaken this could be set to any abstract number if it doesn’t work in the sense of the program (negative for instance).
7. The const keyword makes sure that the function can’t be modified. In this case you’re calling this function to print a specific set of data and that function shouldn’t (in this case, can’t) be modified to print something else.
8. I don’t fully understand this question but I think the answer is the printStats() method, both the Offense and Defense classes will be utilizing this const function and just supplying information to print.
9. The player class is an abstract class. All this class is doing is setting numbers and minutes played, using virtual functions to setMinutes and print the stats of the players. Past that, it’s not really doing anything to contribute in the program.
10. I forgot most of the specific keyword issues that come along with Protected and Private. I know WHY they exist and why you should use them, but I learned the specifics behind Protected when doing this assignment. The specifics of Protected weren’t covered very well in my previous classes.