CSCI3180 Assignment 3 Report

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1. Using your code for Task 1, discuss features of object-oriented Perl that are different from the object-oriented features of Ruby.

Ruby is a pure object-oriented programming language, every thing in ruby is object while Perl is not.

2. Using your codes for Task 2, compare the differences of scoping in C/C++ and Perl. Also, explain and justify the variable type declarations of your correct Perl program.

In C, there are two type of scoping rules, one is local variables, another one is global variables. The variables that are declared inside a function or block are called local variables. Local variable can access only inside the same function or block and be clear after the block of statement is finished. Global variables are the variables that define outside the function block, usually on the top of the program. Since it defined outside any of the function block, it can be accessed everywhere through the whole program.

In Perl, there are three types of scoping rule. They are "my", "local", and with no prefix. My and global variable is just like the behavior of local and global variable in C, while "local" is a little different. It can create a temporary scope that replace the behavior of a global variable. For example, there is already a global variable in the program, when you declare a local variable with the same name, the variable will treat as a local variable instead accessing the value of global variable in that statement block as well as the function call inside in that block even though you don't pass that variable to that function.

3. Using your codes for Task 2, explain whether dynamic scoping is needed in a programming language.

In my opinion, dynamic scoping is not necessary in programming language since the behavior of dynamic scoping in Task 2 can also be performed perfectly in C which does not have dynamic scoping. Also, I think dynamic scoping easy to make mistake as well as hard to debug. A part from mistake, the readability also is a concern.