

Lab II: Adventure of the Secret Password

Pablo - the weak link

Professor James Moriarty is the archenemy of Sherlock Holmes. Holmes has been trying to break into Moriarty's criminal network in order to stop him.

Pablo is a petty C++ programmer/hacker who works for Moriarty. Pablo has decided to send the password to Holmes that he can use to hack into Moriarty's computer and gain crucial evidence. Pablo has hidden the password inside a C++ program that Holmes do not understand. In this assignment, we are going to complete Pablo's C++ program so that Sherlock can figure out the password.

The Program

Pablo has intentionally made the C++ program incomplete. Realizing the fact that Sherlock Holmes does not know how to read a C++ program, Pablo has provided him some basic rules that he can use to complete the program and decipher the secret password. The rules are the following:

1. Rule: Variable name syntax
 - Variable names can start with only alphabets (both upper and lower cases)
 - variable names can have only `_` character, all other characters are not allowed
 - variable names can have digits
 - variable names should not have space in them
2. Rule: Statements
 - all statements should end with a semicolon
3. Rule: main function
 - all C++ program must have a main function
 - all function starts with a `{` and ends with a `}`
4. Rule: Comments
 - comments are not part of the program
 - in single line comments, we use `//`
 - multi line comments start with a `/*` and ends with a `*/`

The Password

There are four characters in the password. In a comment Pablo has provided hints about the password; it should be a name of an animal that can swim.

Secret Key

Once you have the program working correctly both syntactically, use it to figure out the password by guessing a secret key. The value of the secret key can be any integer number between 1 and 5.

Use the supplied template file and use the code to create a project (named lab02Secret) and a C++ source code file (maybe call it secretPassword.cpp) that completes the program.

Make sure you have header comments that give your name, student ID information. Use comments and meaningful variable names in order to make your program more readable. In particular, pay attention to the following:

- Indent levels consist of two spaces
- Matching curly braces are aligned vertically

When you are satisfied with your program, by the due date of 5:00 pm on Friday, 24 January, submit it on the Blackboard. The link for the submission will be in the "Labs and Assignment" page. Thank you.