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|  | Homework #5  Classes (I) |  |

1. Ensure that you have read the lesson on [cplusplus.com](http://www.cplusplus.com/doc/tutorial/). Your solution should be a Code::Blocks project. All work can be done in one .cpp file; however, you are free to use a header file if you wish. When you are ready to submit (or whenever you would like to save your work), you should “push” your work into your GitHub repository.
2. ([Structure of a program](http://www.cplusplus.com/doc/tutorial/program_structure/)) Write the basic outline of any C++ program. You should print your name followed by “TOOP HW5” at the beginning of the program’s execution.
3. ([Classes](https://www.cplusplus.com/doc/tutorial/classes/)) Write a class Dog.
   1. Dog will have the following private variables
      1. An integer age
      2. A Boolean sex, true for male and false for female
      3. A string (cstring or std::string) breed
      4. A string name
   2. Dog will have the following public methods
      1. bark()
         1. bark() will simply output “Woof!” to the console
      2. sayHello(Dog other)
         1. sayHello() will output “[this name] says hello to [other name]”
      3. getInfo()
         1. getInfo() will represent this dog instance as a single string containing its name, age, sex, and breed.
   3. Dog will have the following constructors
      1. A default constructor
         1. Initialize the age to 7, sex to true (male), breed to “Golden Retriever”, and name to “Buck”
      2. An overloaded constructor
         1. Accept input for all class variables and assign those inputs to our instance’s variables
4. ([Loops](https://www.cplusplus.com/doc/tutorial/control/)) In the main() of the program
   1. Create a default instance of the Dog class called “buck”
   2. Create an instance of Dog called “yourDog” according to either your pet or a famous dog (named Lassie, Air Bud, etc.)
   3. Print both dogs’s info to the console
   4. Have your dog bark 10 times
   5. Have Buck say hello to your dog