**C++ [Assignment – 1]**

**Q3.5. Explain the difference between function prototypes and function definition.**

A function prototype is a declaration of a function, but a function definition is the main algorithm for the function. In C++/C, a function prototype can help the compiler to detect a function properly. Also, a function prototype is usually put at the beginning of the code.

**Q3.6. What’s a default constructor? How are an object’s data members initialized if a class has only an implicitly defined default constructor?**

A constructor can initial data members for an object. If a class has only an implicitly defined default constructor, we have to call all constructors individually, or we can initialize the variables manually.

**Q3.7 Explain the purpose of a data member.**

Data members are members of a class which can act as a variable. In a class, variables such as an array, pointer, and … declare as data members. Data members help us to manage variables easily in a class. Also, two groups of data members can be declared in a class, public and private.

**Q3.8 What’s a header? What’s a source-code file? Discuss the purpose of each.**

To declare a class or a global variable in a project which consists of several .cpp files, we can use header files. A header file can share classes and variables between several source-code without needing to declare them individually. A source-code file consists of main algorithms, loops, functions, etc.

**Q3.9 Explain how a program could use class string without inserting a using directive.**

By writing 'std::string' instead of each “string” in the whole code.

**Q3.10 Explain why a class might provide a set function and a get function for a data member.**

This makes it easier for a developer to change a code. This flexibility is called encapsulation. For example, a developer can change the variables of an object without declaring new variables. Also, for securing variables, data members are usually declared as private members. So, a function is needed to make a change or retrieve them.