C++ Basics

- A C++ source-code program is a collection of files containing class definitions and function definitions, with *exactly one* of the functions named `int main( )`, where the control flow begins.

- A useful program will almost always also contain

  — *preprocessor directives*. E.g., `#include <iostream>`

  — *using declarations*. E.g., `using std::cout;`

  — globally defined *constants* and *namespaces*.

  — *Comments* `/* Like this */` `// or this` .

- Many programs also contain *global variables*. These are accessible to all functions and classes in the program. *Their use should generally be avoided as much as possible.*

- A *class* or *struct* is a programmer-defined type. E.g.,

  `struct Date{ int month, day, year; };`

  defines a `Date` type to hold three integer *members*: `month`, `day` and `year`.

- A *variable* is an *object* with an *identifier*. E.g., `Date today;` creates a variable of type `Date` named `today`.

- A legal C++ identifier is any sequence of letters, digits, and underscores (_) that begins with either a letter or an underscore and is not one of the C++ keywords.

- The programmer creates and assigns identifiers to his/her variables, functions, and classes.