Ch11

1. This exercise is intended to illustrate namespaces and separate compilation in your development environment. You should use the development environment you regularly use in this course for this exercise. In a file **f.h**, place a declaration of **void f( )** in namespace **A**. In a file **g.h**, place a declaration of **void g( )** in namespace **A**. In files **f.cpp** and **g.cpp**, place the definitions of **void f( )** and **void g( )**, respectively. Place the definitions of **void f( )** and **void g( )** in namespace **A**. The functions can do anything you want, but to keep track of execution include something like
   cout << "Function_Name called" << endl;
   where **Function_Name** is the name of the particular function. In another file, **main.cpp**, put your **main** function, **#include** the minimum collection of files to provide access to the names from namespace **A**. In your **main** function call the functions **f** then **g**. Compile, link, and execute using your development environment. To provide access to names in namespaces, you may use local **using** declarations such as
   using std::cout;
   or use local **using** directives such as
   using namespace std;
   inside a block, or qualify names using the names of namespaces, such as **std::cout**. You may not use global namespace directives such as the following which are not in a block and apply to the entire file:
   using namespace std;
   Of Course you must handle namespace **A** and function names **f** and **g**, in addition to possibly **std** and **cout**. After doing this, write a one page description of how to create and use namespaces and separate compilation in your environment.

3. Extend Programming Project 7.1 from Chapter 7 in which you implemented a **RainbowColor** class by placing the class definition and implementation in a namespace, then providing access to the names in the namespace. Test your code. To provide access to names in namespaces, you may use local **using** declarations, such as
   using std::cout;
   or use local **using** directives such as
   using namespace std;
   inside a block, or qualify names using the names of namespaces, such as **std::cout**. You may not use global namespace directives such as the following which are not in a block and apply to the entire file:
   using namespace std;