Name:

Do your work in this directory:

/data/courses/ece\_1111/current/quizzes/qu\_09/lastname\_firstname

Make sure your directory permissions are set so that only you can view the contents of the directory. You must use a make file (Makefile), a header file (Apple.h), a main program (myprog.cc) and an implementation file (myfuncts.cc). Your make file should compile and link you code and generate a binary named *myprog.exe*.

1. Create a class called MyApple that includes two pieces of protected data: a character string containing the name of the apple (e.g., fuji, golden\_delicious, granny\_smith, gala) and the circumference of the apple in inches.
2. Include a constructor that takes a name and floating-point value as arguments, a destructor that cleans up memory, a member function called add that take an Apple object as an argument and adds the circumference of the argument to the calling object’s circumference.
3. Overload the “+” operator to call your add method.
4. Add a display method that accepts a file pointer as an argument and prints the information shown below to a file pointer.
5. Use the following main program:

int main(int argc, char\*\* argv) {

MyApple x(argv[1], atof(argv[2]);

MyApple y(argv[3], atof(argv[4]);

MyApple z(argv[5], (float)0.0);

MyApple z = x + y + x + y;

z.display(stdout);

}

The display method should display the current value of the circumference:

ece-000\_[1]: myprog.exe fiji 1.0 gala 2.0 macintosh

macintosh: circumference = 6.0000 inches

You should print **exactly** the output shown, and your program obviously must work for any values of the arguments.

Be careful – to implement the above you might need to implement some additional functions inside your class. Your code should compile without using any special C++ libraries.