Michael Hoefer

ME 557 HW 2

1a) Code explanation:

//allows us to use the iostream library functions (cout)

#include <iostream>

// declares our current namespace, eliminates the need to specify functions

// from the std library "std::cout" can be replaced with "cout"

using namespace std;

// main function, starting point for every c++ program

int main(int argc, char \*argv[])

{

//declaring an integer and defining it as the result

// of the function call "myFunction" with a argument of 10

int p = myFunction(10);

//this outputs p to the console,

// with the value of whatever was returned by "myFunction"

cout << p << endl;

system("Pause");

}

//definition of myFunction

double myFunction(int n)

{

// declares 4 integers (unsigned, so they can't be negative)

// also initializes i to be 0 and j to be 1

unsigned int i = 0, j = 1, t, k;

// for loop, will loop through the code in brackets

// n+1 number of times (until k>n). Sets k equal to zero,

// increments k after each run through of the code

for (k = 0; k <= n; ++k)

{

// set t equal to i plus j

// first time: t = 1

// second time: t = 2

t = i + j;

// set i equal to j

// first time: i = 1

// second time: i = 1

i = j;

//set j equal to t

// 1,2,3,5,8,13,21,34,55,89,144

j = t;

}

return j;

}

1b) The problem is that the main function is trying to use “myFunction” before it is declared. Main doesn’t know myFunction exists. This is easily fixed by prototyping the function, or moving the definition of “myFunction” above main (or, putting it in a separate file and #including it)

Simply adding the following line about the main function will fix the error:

double myFunction(int n);

1c) I cannot figure out the functionality. It’s almost like a buffer.

1d) 144