**CPRE/ME 557**

**COMPUTER GRAPHICS AND GEOMETRIC MODELLING**

**HOMEWORK 2**

**Problem 1.**

• *Explain each single line of this code. Discuss the sequence in your team.*

**Sol:**

# include <iostream> // includes the iostream libraries to write to console

using namespace std; // namespace

int fibonacciNumber (int n )//Function

{

int i = 0, j = 1, t, k; //define variable

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

{

t = i + j; //assign the value of i plus j to variable t

i = j; //assign the value of j to variable i

j = t; //assign the value of t to variable j

}

return j ; //return the value of j

}

int main(int argc , char \*argv[]) // Entry point to the program

{

int p = fibonacciNumber(10); //Calling fibonacciNumber with parameter of 10

cout << p << endl; //Print the value of p

}

• *This code causes an error when one try to compile / link it. What is wrong? Correct the mistake and add the information into your report*

**Sol:** Define the MyFunction before the main function. A function cannot be used in a program without being declared or defined before it is called. The return type of the function needs to be int. The data type of the variable in the function has to be int as well.

• *What is the overall functionality? Can you rename the function and find a name that identifies the functionality.*

**Sol:** Fibonacci Sequence. Any number in the sequence is a sum of the two preceding numbers.

• *Which value is stored in p after the function jumps back into the main function.*

**Sol:** p = 144