**CST–321 Systems and Tools**

# Activity Directions:

Explore various features of the operating system on your computer. Choose 5 features and explain what (in your opinion) you think happens when you access them. For example, access the list of files in a folder, then try to explain what happens "behind the scenes" inside the operating system. Use your own words and do not attempt to search for the answer on the internet. You will be evaluated based on your ability to explain what you think happens and NOT based on how correct you are. Later in this class, you will have the opportunity to revisit your explanation and assess how correct and accurate you actually were, with a greater deal of technical detail.

In addition, as preparation for subsequent projects, you are required to demonstrate readiness to write and run C programs in a Linux or UNIX environment. If you are using a Mac or Windows PC, install a Linux distribution (such as Ubuntu Desktop) onto a virtual machine (see the approved GCU Virtualization Solutions referenced in the syllabus). Use a UNIX/Linux text editor (*TextEdit,* *touch, vi, emacs, Atom*) to create a simple HelloWorld.c file as shown below. Compile and execute the simple HelloWorld.o program using the gcc C compiler included in your UNIX/Linux installation. Complete the assignment per the following instructions:

1. Create a directory on your desktop called CST-321. Create a directory inside CST-321 called Assignment1.
2. Create and compile HelloWorld.c in the Assignment1 directory.
3. Zip up the source code (not the binaries) in a single zip file.

/* My Hello World Program */
#include<stdio.h>

int main()
{
printf("Hello World \n");
return 1;
}

**Deliverables:**

1. Cover sheet with your name, the name of this assignment, and the date.
2. Operating system exploration results:
   1. A table listing the features, what exactly you did to access each one, and your explanation on how do you think it works.
   2. A set of screenshots showing the testing of each feature.
   3. A list of resources you used (e.g., software, websites, articles)
3. Screenshots showing availability of UNIX or Linux on your computer.
4. Screenshot showing successful execution of the HelloWorld.c program.
5. Package all of the above into one document and upload it to the digital classroom.
6. Zip up the source code (not the binaries) in a single zip file and upload it to the digital classroom.