**Unx511/DPS912: Unix Systems Programming**

Quiz 2

Consider the following program and answer the questions on the next page.

***#include <fcntl.h>***

***#include <iostream>***

***#include <sys/types.h>***

***#include <sys/stat.h>***

***#include <unistd.h>***

***char inFile[] = "/home/miguelwatler/src/Week1/Math.cpp";***

***char outFile[]= "/home/miguelwatler/src/Week1/MathCopy.cpp";***

***const int BUF\_SIZE=16;***

***using namespace std;***

***int main()***

***{***

***int fdIn, fdOut;***

***int openFlags;***

***mode\_t filePerms;***

***char buf[BUF\_SIZE];***

***ssize\_t numRead, numWrite;***

***fdIn = open(inFile, O\_RDONLY);***

***int err = lseek(fdIn, 100, SEEK\_SET);***

***openFlags = O\_CREAT | O\_WRONLY | O\_TRUNC;***

***filePerms = S\_IRUSR | S\_IWUSR | S\_IRGRP | S\_IWGRP | S\_IROTH | S\_IWOTH;***

***fdOut = open(outFile, openFlags, filePerms);***

***do {***

***numRead = read(fdIn, buf, BUF\_SIZE);***

***numWrite = write(1, buf, numRead);***

***numWrite = write(fdOut, buf, numRead);***

***sleep(1);***

***} while (numRead>0);***

***close(fdIn);***

***close(fdOut);***

***return 0;***

***}***

1. What does the following line do: [1 mark]

***fdIn = open(inFile, O\_RDONLY);***

1. What does the following line do: [1 mark]

***int err = lseek(fdIn, 100, SEEK\_SET);***

1. What do these flags mean: [1 mark]

***openFlags = O\_CREAT | O\_WRONLY | O\_TRUNC;***

1. What do these flags mean: [1 mark]

***filePerms = S\_IRUSR | S\_IWUSR | S\_IRGRP | S\_IWGRP | S\_IROTH | S\_IWOTH;***

1. What does the following line do: [1 mark]

***fdOut = open(outFile, openFlags, filePerms);***

1. What do the following three lines do: [3 marks]

***numRead = read(fdIn, buf, BUF\_SIZE);***

***numWrite = write(1, buf, numRead);***

***numWrite = write(fdOut, buf, numRead);***

1. What do the following two lines do: [2 marks]

***close(fdIn);***

***close(fdOut);***