



## CSE22: Introduction to Programming Practice

### Midterm Examination

#### 1 General [10 points]

1. What is the difference between an appliance and a tool? [2 points]
2. Describe two use cases for computers, one as an appliance, the other as a tool. [3 points]
3. Describe an everyday task that people used to do manually, which has been transformed by computers. Name one advantage and one disadvantage of that. [5 points]

#### 2 Linux Terminal Commands [15 points]

1. What is the command for printing the current folder we are in? [3 points]
2. Write the terminal commands for performing the following sequence. [12 points]
  - Navigate to the home directory
  - From that point, create a folder called `test`
  - Navigate to the `test` folder
  - Inside the `test` folder, create a file called `my_file.txt`
  - Rename the file from `my_file.txt` to `some_file.txt`
  - Delete the entire `test` folder

#### 3 Basic Python [15 points]

1. Assuming we are in a folder and there is a file called `program.py`, what is the terminal command to run that Python program? [3 points]
2. Write a “hello world” program that asks for the user’s name, and prints out a greeting message for them, in the form of “Hello, <name>” [5 points]
3. Write a unit converter for distance. Your Python program should ask the user to input a numerical value representing the amount in feet, and convert it to meters. 1 meter = 3.28084 feet.

## 4 If Statements

[15 points]

1. Write a program asks the user for their age. If the age they entered is 18 or more, print out "Welcome" otherwise print out "You may not enter". [5 points]
2. Write a Python program that asks the user for a point in 2D Cartesian space. Your program should output whether the point is in the FIRST, SECOND, THIRD or FOURTH quadrant. [10 points]

## 5 While Loops

[15 points]

1. Write the output produced by the following program. [15 points]

```
x = 1
total = 0

while x <= 5:
    total = total + x
    print(x, total)
    x = x + 1

print("Answer:", total)
```