**Lab4 (30pts)**

For this lab, two python scripts will be submitted. One file for Part A and another file for Part B

**Part A (15pts)**

Write a program for the problem below. Submit your completed program in a file with a .py extension. Name your program file as follows: **firstInitial\_lastName\_wk#\_lab#\_A.py**

**e.g. p\_saweh\_wk3\_lab4\_Apy**

The population of town A is less than the population of town B. However, the population of town A is growing faster than the population of town B. Write a program that prompts the user to enter the population and growth rate (per year) of each town. The program outputs after how many years the population of town A will be greater than or equal to the population of town B and the populations of both towns at that time. (A sample input is: Population of town A = 5000, growth rate of town A = 4%, population of town B = 8000, and growth rate of town B = 2%.)

**Part B**

**Problem (15pts)**

Write a program for the problem below. Submit your completed program in a file with a .py extension. Name your program file as follows: **firstInitial\_lastName\_wk#\_lab#\_B.py**

**e.g. p\_saweh\_wk3\_lab4\_B.py**

1. Three employees in a company are up for a special pay increase. You are provided a file with the employees’ information. Each employee data is on a separate line:

Miller Andrew 65789.87 5

Green Sheila 75892.56 6

Sethi Amit 74900.50 6.1

**Note:** You will need to create a file with the data above. Once the file is created and stored somewhere on your hard drive, it can be used to read each employee data into your program.

Each input line from the file consists of an employee’s last name, first name, current salary, and percent pay increase. For example, in the first input line, the last name of the employee is Miller, the first name is Andrew, the current salary is 65789.87, and the pay increase is 5%. Write a program that reads data from the employee data file and stores the output in a new file (choose any name). For each employee, the data must be output in the following order: firstName lastName originalSalary updatedSalary SalaryIncrease. Include the following format: The first and last name fields should be formatted to 15 characters each. Format the original salary, updated salary, and salary increase fields to 2 decimal precision.