CIT130 – Class 2 - Lab exercise 2 – Linux environment & chapter 2 basics

Date Assigned: 9/5/18

In-class students - Due date: 9/5/18 @ 8:50 PM

Online students - Date Due: 9/11/18 @ 11:59 PM

Total Points: 20

Expected time of completion: Less than 1 hour

Objective: Demonstrate an understanding of using the Linux environment to write, compile and test your programs.

Assignment: Use the ***MobaXterm*** tool to connect to the Linux server (Bellagio) and write, compile, and run programs. Use the ***geany*** **IDE** on the Server to write/compile/run code.

Process: Look in Canvas under the Lectures and Files module for Week 1 activities page for instructions to use MobaXterm, Textpad, NetBeans, and geany. **Submit your work to the assignment dropbox.**

Assignment details:

Write the code for the following exercises in one Java file. Save your file with the format: **firstnameLastnamecit130_lab02.java. Make sure to use the documentation style covered in the Guideline file posted in Canvas.**

a) Prompt the user to enter the number of quarters, dimes, and nickels. Output the total value of coins in pennies.

b) Newton's law states the force, F, between two bodies of masses (in kilograms) M_1 and M_2 is given by:

$$F = k (M_1M_2)/d^2$$

K is the gravitational constant and d is the distance between the bodies in meters. The value of k is approximately $6.673x10^{-11}$ Nm^2/kg^2. The program should input what it needs, calculate, and display the force between the bodies. USE named CONSTANTS!

c) Ask the user for his or her name, gender, employee identification number, hours worked and pay rate. Calculate and display the total pay along with all of the user's input information. Pick the best data types for the variables.

SAMPLE RUN:

Please enter the number of quarters: 3

Please enter the number of dimes: 2

Please enter the number of nickels: 1

The total number of pennies is 100.

Please enter the distance between two masses in meters: 6.38e6

Please enter the mass of object one in kilograms: 5.98e24

Please enter the mass of object two in kilograms: 70

The total force according to Newton's law is 686.245 N

Please enter your name: foo

Please enter your gender: male

Please enter your 4-digit employee ID: 1234

Please enter your hours worked: 40

Please enter your pay rate: 20.5

Name: foo

Gender: male

Employee ID: 1234

Total Pay: $820