Inheritance- Allows a class to be created based on another class.

Base Class- Class from which a derived class is made.

Derived Class- Class made from a base class.

**Lab Assignment:**

**Assignment 12 update**

**Update your previous program.**

**Create independent return functions that calculate each planetary body independently.**

**In main() create a menu that controls the program.**

**The program should bring receive input only in main() and pass values to other parts of the program.**

**WE ARE GOING TO UPDATE THE PROGRAM TO INCORPORATE INHERITANCE OOP CONCEPTS.**

**Create a program that will calculate your weight in Kilograms on Mercury, Venus, Mars, Earth, and each moon connected to the planets.**

**The program will give the user the choice of planets for weight conversion. If the planet has a moon the program will output the weight on the planet and any moons orbiting the planet.**

**The user should input weight in pounds.**

**Create a Base Class**

**Create a Derived class for Each planet.**

**Use getter and setter methods as needed**

**Try to keep source code in main as minimal as possible.**

**The program should loop until the user decides to exit the program.**

**Label the output so it is clear.**

* **If the user input for weight is 0 or less than prompt the user “Input 0 or less than 0 and stop the Program.**

**Attach a snipping photo of the source code and output**

**(You are welcome to use the IDE or the Notepad text editor.)**

Please enter weight in pounds:

128

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**\* Main Menu: \***

**\* Enter # to run program or Quit \***

**\* 1) Calculate Weight on Mercury \***

**\* 2) Calculate Weight on Venus \***

**\* 3) Calculate Weight on Earth \***

**\* 4) Calculate Weight on Mars \***

**\* 5) Quit \***

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

3

Weight on Earth is 58.05982336 Kilograms

Weight on Earth’s moon is 8.89041045 Kilograms

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**\* Main Menu: \***

**\* Enter # to run program or Quit \***

**\* 1) Calculate Weight on Mercury \***

**\* 2) Calculate Weight on Venus \***

**\* 3) Calculate Weight on Earth \***

**\* 4) Calculate Weight on Mars \***

**\* 5) Quit \***

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

