**Inheritance lab sheet**

**Q1**

* Visit the notes on inheritance, and add the PartTimeEmployee class to your first oop project.
* Create an array of 5 employees, add two Employees and three part time employees to the array
* Using a for loop, calculate and print the pay of each employee

**Q2**

Consider the following inheritance hierarchy.

|  |
| --- |
| **Rectangle** |
| **- length**  **- width** |
| **+ Length()**  **+ Width()**  **+ calcArea()** |

|  |
| --- |
| **Box** |
| **- depth** |
| **+ Depth()**  **+ calcArea()**  **+ calcVolume()** |

* Write the code to implement both the base class **Rectangle** and the derived class Box.
* Include a constructor for the **Rectangle** class which accepts *length* and *width* arguments, and for the Box class a constructor which will accept argument for all attributes
* Write the calcArea() method for both classes
  + Area of a rectangle : the length \* the width.
  + Area of a box : 4 \* (the length times the width) + 2 \* (the width times the depth).
* Write the calcVolume() method in Box

* Write ToString () methods for both classes, which display all relevant attributes
* Test your code by creating an array of 5 rectanges

Q3

Write a class to represent a computer. Each computer is made by a particular manufacturer in a particular country. There should be a number of method associated with the class also.

Write a subclass of this computer class to represent a laptop and desktop computer. For each of these you should have at least two additional attributes for each and at least two methods to the ones inherited.

Write appropriate setter and getter methods for all classes to interact with them.

Write a test program to create instances of all classes and call the associated methods.