Lab 6 Object oriented programming

6.1 Declare a class named Rectangle in a python file called Lab6.py with

2 private attributes named width and height

Method named area to calculate the rectangle area

Method named circumference to calculate the rectangle circumference

Test the declare class by creating a new rectangle object with 22 unit of width and 15 unit

of height.

Inheritance Exercises

6.2 Declare a based class named Shape in Lab6.py with

Abstract method named area

Abstract method named circumference

Rewrite the Rectangle class to inheritance from Shape and rerun the main program to see the result.

6.3 Declare a new class named Circle inherence from Shape in Lab6.py with

A private attribute pi=3.1416

A private attribute called radius

Implement the required methods declared in the based class

Test the new declare class by creating a new circle object with 36 unit of radius.

Overriding

6.4 Create a new class named Square and inherence from Rectangle with overriding the area method with using pow() to calculate the area only. Test the new method by creating a new Square object with 30 unit of side.

Noted that you may change ALL the private attributes in Rectangle to protected attributes.