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| Section | 2A |
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| Subject | Opp lab |
| Task | 3 |
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**Task 3**

**Create a Python class called Rectangle with the following attributes:**

3. width (float): representing the width of the rectangle.

4. height (float): representing the height of the rectangle.

Implement the following methods for the Rectangle class:

1. \_\_init\_\_(self, width, height): Constructor method to initialize the attributes of the rectangle object. 2. \_\_str\_\_(self): Method to return a string representation of the rectangle object in the format "Rectangle: [width] x [height]".

3. area(self): Method to calculate and return the area of the rectangle (width \* height).

4. perimeter(self): Method to calculate and return the perimeter of the rectangle (2 \* (width + height)).

**Create an instance of the Rectangle class, initialize its attributes with user input for width and height, and perform the following operations**

1. Display the rectangle details using the \_\_str\_\_ method.

2. Calculate and display the area of the rectangle using the area method.

3. Calculate and display the perimeter of the rectangle using the perimeter method

**Solution**

class Rectangle:

  def \_\_init\_\_(self, width, height):

*self*.width = width

*self*.height = height

  def \_\_str\_\_(self):

    return f"Rectangle: {*self*.width} x {*self*.height}"

  def area(self):

    return *self*.width \* *self*.height

  def perimeter(self):

    return 2 \* (*self*.width + *self*.height)

width = float(input("Enter the width of the rectangle: "))

height = float(input("Enter the height of the rectangle: "))

rectangle = Rectangle(width, height)

print(rectangle)

area = rectangle.area()

print("Area:", area)

perimeter = rectangle.perimeter()

print("Perimeter:", perimeter)