

Task 1

Write a Python program that prompts the user to input values for both the length and breadth of a shape, and then determines whether the shape formed is a square or a rectangle based on the provided dimensions

```
user_input_breadth = int(input("Please enter breadth of the shape"))
user_input_length = int(input("Please enter length of the shape"))

if user_input_breadth == user_input_length:
    print("The shape is Square")
else:
    print("The shape is Rectangle")

The shape is Square
```

Task 2

Also calculate the Perimeter and Area of the Shape.

```
user_input_breadth = int(input("Please enter breadth of the shape"))
user_input_length = int(input("Please enter length of the shape"))

if user_input_breadth == user_input_length:
    square_area = user_input_breadth ^ 2
    square_perim = 4 * user_input_breadth
    print("The shape Square has Perimeter:", square_perim, "and Area: ", square_area )
else:
    rectangle_area = user_input_breadth * user_input_length
    rectangle_perim = 2 * (user_input_breadth + user_input_length)
    print("The shape Rectangle has Perimeter: ", rectangle_perim, "and Area: ", rectangle_area)

The shape Rectangle has Perimeter:  22 and Area:  30
```

Task 3

The faculty list for Upcode Lab is as follows: faculty = ["Uzair", "Ali", "Samad", "Usman", "Saifullah"] .

The goal is to create a new list named "Cofounders" and move the names "Usman" and "Saifullah" into it from the "faculty" list. Simultaneously, remove these names from the "faculty" list.

```
faculty = ["Uzair", "Ali", "Samad", "Usman", "Saifullah"]

Cofounders = []
Cofounders.insert(0, faculty.pop(3))
Cofounders.insert(1, faculty.pop(3))
print(Cofounders)
print(faculty)

['Usman', 'Saifullah']
['Uzair', 'Ali', 'Samad']
```

Task 4

An error has been spotted in the faculty list. "Ali" should be corrected to "Umair."

```
faculty = ["Uzair", "Ali", "Samad", "Usman", "Saifullah"]

# Remove "Ali" from the list
faculty.remove("Ali")

# Insert "Umair" to the list
faculty.insert(1, "Umair")

print(faculty)

['Uzair', 'Umair', 'Samad', 'Usman', 'Saifullah']
```