Lebanese University
IUT - Saida
CCNE II

OOP - Lab 5

Exercise 1 :

1. Write a class **Square that has two attributes** :
   - L : number (length of a side)
   - C : character
2. Write the properties for each attribute.
3. Write the following methods:
- The **constructors**.
- **Area : give the area of the square**
- **Perimeter : give the area of the square**
- **Display : display the square**
- **Extend** : **extend the length of the square**
  Extend(2) => L*2
4. Write a program which displays the same output as the picture.

Output:

```
Length ? :
3
character ?:
o
This is the square :
ooo
ooo
ooo
Perimeter = 12
Area= 12
Extend the square=> 3 times more bigger
ooooooooo
ooooooooo
ooooooooo
ooooooooo
ooooooooo
ooooooooo
ooooooooo
ooooooooo
ooooooooo
```

Exercise 2 :

Write a class called **Point** which contains two attributes as following:

- x represents the x-axis (real number)
- y represents the y-axis (real number)

1. Write properties for all attributes.
2. Write two constructors (one of them should initialize values of a point)
3. Write the following methods:
   - **Input** which reads values from the user and modify the current point.
   - **Display** which display the coordinates of the current point.
   - **translate** which takes 2 values and translate the current point.
   - **Distance** which returns the distance^2 between the current point and a point.

4. Write a program which :
Asks to create two points **P1** and **P2**.
Displays them.
Displays the distance between them.
Asks to give 2 integers a and b and Translate the point **P1** by using a and b.