

TP 2: CLASSES AND OBJECTS

Exercise1

Create the **Rectangle** class then implement:

1. A method that calculates the perimeter.
2. A method that calculates area.
3. A default constructor
4. A constructor to initialize the length and width.
5. Give the instruction which creates and initializes a rectangle whose length = 12 m and width = 3.4 m

Exercise2

Define the **Circle** class then :

- a. Determine two constructors:
 - 1) A default constructor that displays "default creation".
 - 2) A constructor which allows the **radius** to be initialized and displays "creation and initialization"
- b. A method that calculates the perimeter vs. A method that calculates area.
- d. In the **main** () method do the following:
 - 1) Create a **C1** object of the **Circle** class by the first constructor
 - 2) Create another object **C2** by the second constructor giving **radius=5**
 - 3) **C1** is created but without specifying the **radius** so assign a number.
 - 4) Calculate the perimeter and area of the two objects.
 - 5) Using the **Min** and **Max** functions of the **Math** class display the minimum area and maximum perimeter of the two objects.
 - 6) Can we calculate the perimeter and area without passing arguments?
Justify your answer.

Exercise2

Create an **Employee** class which contains the attributes: Last Name, First Name, Position, and Salary then implement: has. 04 Constructors:

1. A default constructor.
 2. A constructor that allows you to directly initialize the full name
 3. A constructor that allows you to directly initialize the full name and the function
 4. A constructor which directly allows you to create an object with all the information;
- b. A method that displays the full name;
vs. A method that displays full name and salary
- d. Modify the program so that we can calculate the number of instances created.
- e. In a separate class **TreatmentEmployee.class** try to create objects with the 04 different constructors then display the full name and salary adding all the necessary information.