GR 5072 Activity

1. Create a new class called **Rocket**. Write and save your new class as a module (i.e., a file with a .py extension). This Rocket class is defined below.

   Let's suppose you are creating a rocket ship in a game, or in a physics simulation. This class should have the following properties:
   - The first thing you must track are the x and y coordinates of the rocket. These are just (x, y) coordinates that locate the rocket in 2D-space. When a new instance of a Rocket class is initialized, the user will input x and y parameters to locate the rocket in 2D space. If no coordinates are provided, then set the x and y coordinates to (0, 0) by default
   - The first behavior to define is moving the rocket. If the rocket moves in the y direction, we say that it moves up or down, and its y coordinate must be adjusted. If it moves left or right, we will adjust its x coordinate. Create a **move_rocket** method which moves the rocket in both the x and y direction (You should use a default movement of 0 if the x or y movement is not specified)
   - Add a method which can calculate the distance to another rocket. You can use the distance formula:
     ```
     sqrt((self.x-other_rocket.x)**2+(self.y-other_rocket.y)**2)
     ```

2. Once you've created the Rocket class above and saved it as a module, open another blank python script and import your rocket class. We will then be able to create some objects based on this new class. Do the following:
   - Initialize a new rocket, don't add any arguments. Check that the x and y attributes are correctly set to (0, 0).
   - Create a second rocket, and place it at the coordinates (10, 5). Check its attributes to confirm it is working.
   - Move the rocket located at (10, 5) by the increment (-7, -1). Look at the rocket's position. Is it located at the right place?
   - After moving the second rocket which you created as specified above, what is the distance between this rocket and the first rocket?