

# OBJECT ORIENTED PROGRAMMING WITH PYTHON

Second Class

1<sup>st</sup> Semester

# EXAMPLES ON CLASSES AND OBJECTS

- ▶ Make a class called **User**.
- ▶ Create two attributes called **first\_name** and **last\_name**, and then create several other attributes that are typically stored in a user profile.
- ▶ Make a method called **describe\_user()** that prints a summary of the user's information. Make another method called **greet\_user()** that prints a personalized greeting to the user.
- ▶ Create several instances representing different users, and call both methods
- ▶ for each user.

# CREATE USER CLASS

## Example 1 : Create User Class

**class** : User

**attributes** : **first\_name** and **last\_name**,

**methods** : **describe\_user()** and **greet\_user()**

**objects** : Ali, Samir, Sara

First\_name

Last\_name

Age

Address

**Attributes**

describe\_user()

greet\_user ()

**Methods**

# IMPROVED USER EXAMPLE

## ▶ Login Attempts:

- ▶ Add an attribute called **login\_attempts** to your User class from the previous class
- ▶ Write a method called **increment\_login\_attempts()** that increments the value of **login\_attempts** by 1.
- ▶ Write another method called **reset\_login\_attempts()** that resets the value of **login\_attempts** to 0.
- ▶ Make an instance of the User class and call **increment\_login\_attempts()** several times.
- ▶ Print the value of **login\_attempts** to make sure it was incremented properly, and then call **reset\_login\_attempts()**.
- ▶ Print **login\_attempts** again to make sure it was reset to 0

# ADMIN CLASS

- ▶ Admin: An administrator is a special kind of user.
- ▶ Write a class called **Admin** that inherits from the User class you wrote previously
- ▶ Add an attribute, **privileges**, that stores a list of strings like "**can add post**", "**can delete post**", "**can ban user**", and so on.
- ▶ Write a method called **show\_privileges()** that lists the administrator's set of privileges.
- ▶ Create an instance of Admin, and call your method.