Topic 58 - Classes: Retrieving Information from Instances

**What**

* This section demonstrates how to retrieve data stored within an instance of a class. For a Patient instance, we can access attributes such as last\_name, first\_name, and age by using dot notation.
* Dot notation enables easy access to specific data within an instance, allowing us to view or manipulate individual attributes directly.

**Why**

* **Direct Access**: Dot notation provides a straightforward way to access and use instance-specific data, supporting efficient data retrieval in programs.
* **Readable Code**: By using clear attribute names, accessing data becomes self-explanatory, making code easier to read and maintain.
* **Flexibility**: With direct access to attributes, we can perform operations or display information as needed without modifying the original instance.

**How**

1. **Accessing an Attribute**  
   In this example, we retrieve the age attribute for the Patient instance pid4343, which represents a patient named Sue Taleb.

python

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age\_of\_patient = pid4343.age

* + **Syntax**: Access the attribute by typing the instance name (pid4343), followed by a dot (.), and the attribute name (age).
  + **Variable Assignment**: The value of pid4343.age (which is 61 for Sue Taleb) is assigned to age\_of\_patient.

1. **Displaying Attribute Values**  
   To print the value directly, use the attribute access within a print function.

python

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print(pid4343.age)

* + **Output**: This displays the age of the patient, which is 61.
  + **Direct Access**: By accessing the attribute directly, we avoid the need for additional data structures or methods to display this information.

**Things to Remember**

* **Dot Notation**: Use the instance name, followed by a dot (.), then the attribute name to access values.
* **Direct Display**: Accessing instance data with print(instance.attribute) is convenient for quick information display.
* **Readability**: Variable names should be descriptive (e.g., age\_of\_patient), as this enhances code readability and maintainability.