🕐 Hour 3 – Sets & Dictionaries (Python)

Sets = Unordered, no duplicates

```python
unique_numbers = {1, 2, 3, 3, 4}
print(unique_numbers)  # {1, 2, 3, 4} (no duplicates!)

# Set operations
A = {1, 2, 3}
B = {3, 4, 5}
print(A.union(B))      # {1, 2, 3, 4, 5}
print(A.intersection(B)) # {3}
```

Output

```
{1, 2, 3, 4}
{1, 2, 3, 4, 5}
{3}

=== Code Execution Successful ===
```

Dictionaries = Key-Value pairs

```python
# Creating dictionary
student = {
    "name": "Alice",
    "age": 22,
    "courses": ["Math", "Physics"]
}

# Accessing values
print(student["name"])          # Alice
print(student.get("age"))       # 22

# Adding/Modifying
student["grade"] = "A"          # Add new key
student["age"] = 23             # Modify value

# Looping through dictionary
for key, value in student.items():
    print(f"{key}: {value}")
```

Output

```
Alice
22
name: Alice
age: 23
courses: ['Math', 'Physics']
grade: A

=== Code Execution Successful ===
```