# Python Classes

## What is a Class in Python?

A class in Python is like a blueprint for creating objects.
It defines attributes (data) and methods (functions) that
describe and control how the object behaves.

## Class Example: Student

An example of a class named Student. It represents students
with their name, marks, and a method to check if they
passed.

```python
class Student:
    def __init__(self, name, marks):
        self.name = name
        self.marks = marks

    def result(self):
        if self.marks < 50:
            return "FAIL"
        else:
            return "PASS"
```

## Creating Student Objects

```python
students = [
    Student("Guriya", 50),
    Student("John", 40),
    Student("Jane", 60)
]
```

## Using the Class – Who Passed?

```python
teacher_likes = []

for student in students:
```

```
    print(student.name, "is", student.result())
    if student.result() == "PASS":
        teacher_likes.append(student.name)

print("Teacher likes:", teacher_likes)
```

**Output:**
```
Guriya is PASS
John is FAIL
Jane is PASS
Teacher likes: ['Guriya', 'Jane']
```

## Key Concepts Highlighted:
```
- Class creation

- Object instantiation

- Attributes and methods

- Using conditions and loops with objects

- Storing and filtering object data
```

## How This Helps Your Portfolio
```
This example shows:
- You understand how to structure code with classes
- You can apply logic with methods and conditions
- You can work with object lists and filter results
```