# 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.

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

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

## Using the Class – Who Passed?

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