Assignment: Student Grade Calculator (Python)

Objective:
Create a Python program using classes, loops, and conditional statements to calculate a student's final grade based on marks entered for multiple subjects.

Detailed Requirements:
1. Create a class named **Student** that stores:
   • Student name
   • List of subject marks

2. Program should:
   • Ask user how many subjects they have
   • Use a loop to input marks
   • Calculate total and average percentage
   • Assign grade using conditional logic (A, B, C, D, Fail)

Grade Logic:
   • Above 90 → A
   • 75–89 → B
   • 60–74 → C
   • 40–59 → D
   • Below 40 → Fail

Python Program:

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

    def input_marks(self):
        num = int(input("How many subjects do you have? "))
        for i in range(num):
            mark = float(input(f"Enter marks for subject {i+1}: "))
            self.marks.append(mark)

    def calculate_percentage(self):
        total = sum(self.marks)
        percentage = total / len(self.marks)
        return total, percentage

    def assign_grade(self, percentage):
        if percentage > 90:
            return "A"
        elif percentage >= 75:
            return "B"
        elif percentage >= 60:
            return "C"
        elif percentage >= 40:
            return "D"
        else:
            return "Fail"

    def display_result(self):
        print("\n----- Student Result -----")
        print("Name:", self.name)
        print("Marks:", self.marks)

        total, percentage = self.calculate_percentage()
        grade = self.assign_grade(percentage)
```

```
        print("Total Marks:", total)
        print("Percentage:", percentage)
        print("Final Grade:", grade)


# main program
name = input("Enter student name: ")
student = Student(name)
student.input_marks()
student.display_result()
```