

LAB 1

Definition of Class and Polymorphism

In this lab, we are going to define a class with data members, overloaded constructors, and functions.

The class will be for maintaining student's CGPA information. The class will have data members for a student's name, the final term (e.g., Fall_2025, Winter_2025), and the final CGPA.

The class should provide a constructor for initializing the term information and the CGPA. There should be another constructor for initializing the term to Fall_2025 and CGPA to 0.

There should be a function for taking input of the student's name, the final term, and the CGPA. There should be another function for taking input of only the student's name. You should use function overloading to achieve this.

There should be a function for displaying all the information.

In the main function, declare three objects for the class. Information for the first object will be taken from the user. For the second and third object, take input of only the student's name from the user. The other information for those objects should be initialized using the constructor.

Display all the information for the three objects to the user.

One sample run can look like the following:

```
Input for the first object:
Enter student name:Mina
Enter term:Winter_2025
Enter CGPA:3.99
Input for the second object:
Enter student name:Raj
Input for the third object:
Enter student name:Dave
Display for the first object:
Student name:Mina
Term:Winter_2025
CGPA:3.99
Display for the second object:
Student name:Raj
Term:Winter_2025
CGPA:3.5
Display for the third object:
Student name:Dave
Term:Fall_2024
CGPA:4
```

To get full marks for this lab, you must upload:

- a properly named .cpp file