**TEST DOCUMENT**

This Application is a Student Report Card Management System that allows students to view their academic data and calculate their GPA and CGPA. The program consists of several source code files, including "introd.cpp," "class.cpp," and "faculty.cpp."

The program’s main function displays a menu with four options: Faculty, Student, Calculate CGPA and GPA, and Exit. If the user selects the Faculty option, the main menu function is called, which allows the user to view and modify faculty data. If the user selects the Student option, the student function is called, which allows the user to view their academic data and receive help. If the user selects the Calculate CGPA and GPA option, the CGPA function is called to calculate the student's GPA and CGPA. If the user selects the Exit option, the program displays information about the group members and terminates.

The student function displays a submenu with two options: View Your Data and Help. If the user selects the View Your Data option, the View Specific function is called to display the student's academic data. If the user selects the Help option, the help function is called to provide information about the hostel and mess, institute fees and courses, and faculty information.

The help function displays a submenu with three options: Hostel and Mess, Institute Fee and Courses, and Faculty Information. Depending on the user's selection, the function displays relevant information.

**Testing the program with test cases and data:**

Test Case: Selecting the Faculty Option

Input: 1

Expected Output: The main menu for the Faculty options should appear.

Test Case: Selecting the Student Option

Input: 2

Expected Output: The student menu should appear, allowing viewing data or getting help.

Test Case: Viewing Student Data

Input: 1 (from student menu), followed by a valid roll number

Expected Output: The student's data should be displayed on the screen.

Test Case: Getting Help

Input: 2 (from student menu), followed by 1, 2, or 3 for the corresponding problem.

Expected Output: Information on the selected problem should be displayed on the screen.

Test Case: Calculating CGPA and GPA

Input: 3 (from the main menu)

Expected Output: The program should prompt the user for the necessary input and then calculate and display the CGPA and GPA.

Test Case: Exiting the Program

Input: 4 (from the main menu)

Expected Output: The program should display a message thanking the user and showing the group members, developers, and the submission date.

Test Case: Invalid Input

Input: Any input that is not 1, 2, 3, or 4.

Expected Output: The program should display an error message and prompt the user to enter a valid input.

**Data:**

Roll numbers and corresponding data for multiple students to test the student data viewing option.

CGPA and grades for multiple courses to test the CGPA and GPA calculation.

Hostel and mess information, institute fees and courses information, and faculty information to test the help option.