

Hostel Mess Management System (C++)

Project Overview

This project is a **Hostel Mess Management System** developed in **C++**.

It is a **semester project** for the course **Fundamentals of Programming with C++** at **University of Gujrat**.

The main purpose of this project is to manage hostel mess records in a simple and efficient way.

It helps to store student data, update meals, calculate mess bills, and save records in a file.

Objectives of the Project

- To understand **basic concepts of C++**
 - To practice **arrays, functions, loops, and conditions**
 - To learn **file handling (reading and writing files)**
 - To create a **menu-driven program**
 - To build logical thinking for real-life problems
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Features of the System

- Add new student record
- Display all students
- Update meals of a student
- Delete a student record
- Calculate individual mess bill
- Calculate total mess income

- Save data in a file
 - Load data from file automatically on program start
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Technologies Used

- Programming Language: **C++**
 - Compiler: **Any C++ Compiler (Dev-C++, Code::Blocks, Visual Studio, etc.)**
 - File Handling: **fstream**
 - Concepts Used:
 - Arrays
 - Functions
 - Loops
 - If-else statements
 - File handling
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File Description

- `main.cpp` → Contains the complete source code of the project
 - `mess.txt` → Stores student records (auto created after saving data)
 - `README.md` → Project explanation and details
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How to Run the Project

1. Open the project in a C++ compiler

2. Compile the program
 3. Run the executable file
 4. Choose options from the menu:
 - Add Student
 - Display Students
 - Update Meals
 - Delete Record
 - Calculate Bill
 - Save & Exit
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Menu Options Explained

1. **Add Student**
Enter roll number, name, and meals taken.
 2. **Display All Students**
Shows all stored student records.
 3. **Update Student Meals**
Change the number of meals for a student using roll number.
 4. **Delete Student Record**
Remove a student record from the system.
 5. **Calculate Mess Bill**
Shows bill for each student and total mess income.
 6. **Save & Exit**
Saves all data into a file and exits the program.
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Group Members

This project is developed by a **group of three students**:

- **Leader:** M Umar **Roll No.** 052
 - **Leader:** Bisma Amjad **Roll No.** 006
 - **Leader:** Bilal Adnan **Roll No.** 128
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University Information

- **University:** University of Gujrat
 - **Course:** Fundamentals of Programming with C++
 - **Semester Project**
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Conclusion

This project helped us understand the **basic fundamentals of C++ programming**.

It improved our skills in **problem solving, logic building, and file handling**.

The Hostel Mess Management System is a simple but useful program for managing student mess records.