

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.

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

University Information

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

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.

Screens

Menu



A screenshot of a Windows application window titled "E:\pf mini project\final project.exe". The window displays a menu for "HOSTEL MESS MANAGEMENT". The menu options are: 1. Add Student, 2. Display All Students, 3. Update Student Meals, 4. Delete Student Record, 5. Calculate Mess Bill, and 6. Save & Exit. The prompt "Enter your choice:" is at the bottom.

```
===== HOSTEL MESS MANAGEMENT =====
1. Add Student
2. Display All Students
3. Update Student Meals
4. Delete Student Record
5. Calculate Mess Bill
6. Save & Exit
Enter your choice:
```

Add student



A screenshot of the "Add Student" screen. It shows the user entering choice 1, followed by roll number 52, name "umar", and meals taken 25. The message "Student added successfully!" is displayed at the end.

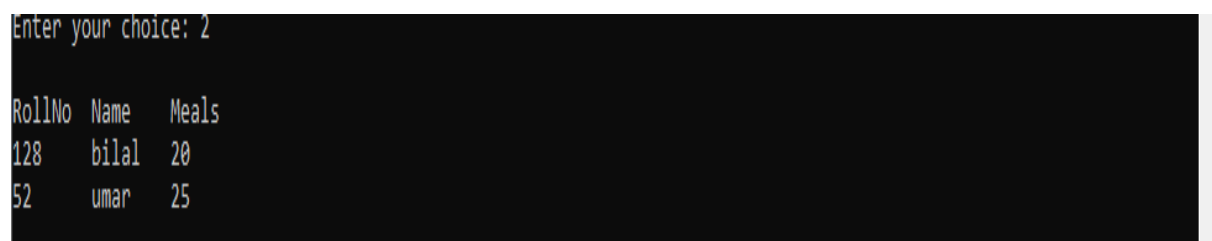
```
Enter your choice: 1
Enter Roll No: 52
Enter Name: umar
Enter Meals Taken: 25
Student added successfully!
```



A screenshot of the "Add Student" screen with different input values: choice 1, roll number 128, name "bilal", and meals taken 20. The message "Student added successfully!" is displayed at the end.

```
Enter your choice: 1
Enter Roll No: 128
Enter Name: bilal
Enter Meals Taken: 20
Student added successfully!
```

Display all student



A screenshot of the "Display All Students" screen. It shows the user entering choice 2, followed by a table of students. The table has three columns: RollNo, Name, and Meals. The data rows are: 128, bilal, 20 and 52, umar, 25.

```
Enter your choice: 2
```

RollNo	Name	Meals
128	bilal	20
52	umar	25

Update student meals

```
Enter your choice: 3
Enter Roll No to update meals: 128
Enter new meal count: 30
Meals updated successfully!
```

Delete student record

```
Enter your choice: 4
Enter Roll No to delete record: 52
Student record deleted successfully!
```

Calculate Mess Bill

```
--- Mess Bill Details ---
Roll No: 128 | Name: bilal | Bill: Rs 4500
Total Mess Income: Rs 4500
```

Save and Exit