CS203 Project Report

Homework #3

Student’s Full name, BlazerId

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**Introduction**

Explain the purpose of the project (1 Paragraph)

**Purpose of this Assignment is to create a java program that reads data from a CSV file and implement the methods to get the desired result or output**

**Code Explanation**

Briefly explain your code (how many classes you created, what OOP methods you implemented…)

We have created two classes and Student.java and main.java.

Student class contains all the attributes of a student and getters and setters and to string method that prints out all the required data about the student

Main class contains main class and the driver code it has five different methods that returns the desired output we have used array list to store all the objects and hash map to retrieve them.

Lohith: Student class and organizing main class; Siddesh: Main class code

**Result**

Put as many screenshots as you can (try to display the functionality of your code; display list, add/remove record…etc)

Text

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**### Project: Employee Management System in Java**

**\*\*Description:\*\***

**This project is a Java-based Employee Management System that manages hospital employee records. It allows users to add, delete, update, and list employee information from a text file. The system supports multiple types of employees, including doctors, nurses, administrators, IT professionals, and more. The project uses object-oriented programming principles and incorporates file handling to persist employee data.**

**\*\*Key Features:\*\***

**- \*\*Employee Types:\*\* Supports various employee types like doctors, nurses, administrators, IT professionals, and more, each with unique attributes.**

**- \*\*Data Persistence:\*\* Reads and writes employee data to a text file (`UabEmployee.txt`), allowing the system to persist employee records across sessions.**

**- \*\*CRUD Operations:\*\* Provides options to create, read, update, and delete employee records through a user-friendly console interface.**

**- \*\*Custom Attributes:\*\* Each employee type can have unique attributes such as specialty for doctors, patient count for nurses, and team designation for IT professionals.**

**- \*\*Dynamic Input Handling:\*\* The system dynamically handles input for different types of employees using the `EmployeeHelper` and `EmployeeService` classes.**

**\*\*Skills Demonstrated:\*\***

**- \*\*Java Programming:\*\* Strong understanding of object-oriented programming principles such as encapsulation, polymorphism, and inheritance.**

**- \*\*File I/O:\*\* Implemented file handling techniques for reading and writing data to a file, ensuring data persistence.**

**- \*\*Data Management:\*\* Designed methods for managing employee records efficiently, including adding, deleting, and updating employee information.**

**- \*\*Modular Design:\*\* Applied a layered architecture with a clear separation of concerns between the DAO, Helper, and Service classes.**

**- \*\*User Interaction:\*\* Developed a command-line interface that allows users to interact with the system by selecting options to perform various operations.**

**\*\*Impact:\*\***

**This project demonstrates the ability to build a real-world application using Java, showcasing skills in object-oriented programming, file handling, and data management. It highlights problem-solving capabilities and the ability to create robust software solutions, making it highly relevant for internship roles in software development.**

**References**

List all of the resources you have use

<https://www.javatpoint.com/how-to-read-csv-file-in-java\>

<https://www.geeksforgeeks.org/reading-csv-file-java-using-opencsv/>

https://www.baeldung.com/java-csv-file-array