Student Placement Tracker

Project Overview

Student Placement Tracker is a **Java console-based mini project** developed to **track and manage placement details** of students in a structured way. It uses **Object-Oriented Programming (OOP)** concepts, **file handling**, and **data structures** like ArrayList to simulate a real-world use case for students appearing in placement drives.

Project Objective

The goal is to help students or colleges:

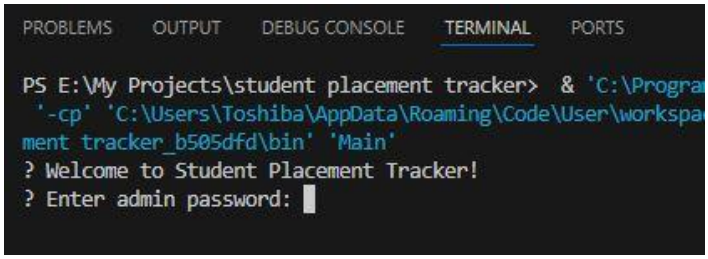
- Maintain a list of placement opportunities
- Track application statuses
- Get statistics and performance insight
- Export data for reporting and analysis

Tech Stack Used

- Programming Language: **Java**
- Concepts: **OOP, File I/O, Data Structures**
- Tools: Java Compiler (javac), Command Line (cmd)
- Optional Future Scope: Can be upgraded to Java Swing or Spring Boot Web App

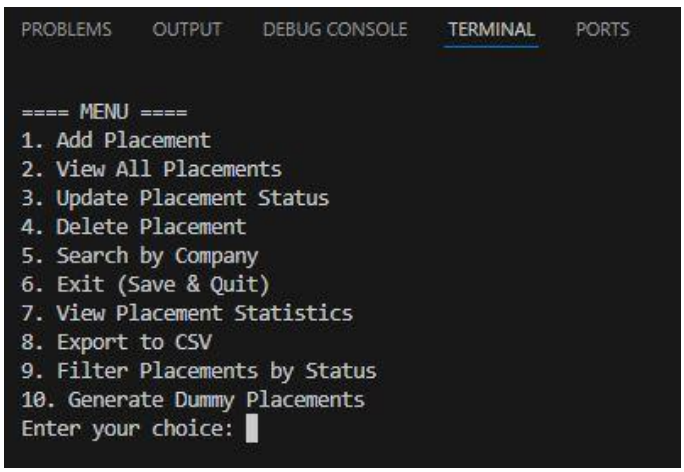
Password Protection

- When the program starts, it asks for a **password**.
- Only after entering the correct password (admin123), the menu is shown.
- Maximum **3 attempts allowed**.
- ✓ **Why**: Prevents unauthorized access to placement data.



Main Menu Options

- The program shows this interactive menu:



Add Placement

- details:
- Company Name
- Job Role
- Package (in LPA)
- Interview Date (dd-mm-yyyy)
- Status (Applied, Selected, Rejected)
- Stored in an ArrayList<Placement>, and saved to a file on exit.

```
--- Add Placement ---
Enter company name: TCS
Enter job role: front end developer
Enter package offered (in LPA): 4.5
Enter interview date (dd-mm-yyyy): 26-06-2025
Enter status (Applied/Selected/Rejected): Applied
? Placement added successfully!
```

View All Placements

- Prints all placement records in a tabular format like:

```
--- All Placements ---
Company             Role            Package    Interview Date  Status
-------------------------------------------------------------------------
TCS                 front end developer 4.50       26-06-2025      Applied
Google              SDE             8.65       20-06-2025      Selected
```

Update Placement Status

- Update the interview status for any company.
- 📌 Useful when you're selected/rejected or still waiting.

Delete Placement

- Removes a placement entry by company name.
- Helps you clean up old or incorrect data.

Search by Company

Searches placements by **company name (partial or full)**.

✓ Case-insensitive

✓ Displays all matching records

View Placement Statistics

Gives a performance dashboard:

- Total placements
- How many **Selected**
- How many **Rejected**
- How many still **Applied**
- Average package of selected offers

📊 Helps in understanding placement journey progress.

```
? --- Statistics ---
Total Placements: 2
? Selected: 1
? Rejected: 0
? Applied: 1
? Avg. Package (Selected): 8.65 LPA
```

Export to CSV

Writes all placements to placements.csv in this format:

Company	Role	Package	Interview I	Status
TCS	front end d	4.5	########	Applied
Google	SDE	8.65	########	Selected

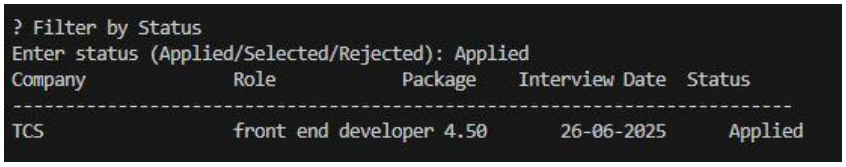
Can be opened in Excel**,** Google Sheets**, or submitted as a report.**

Filter by Status

Lets you view placements by:

- Only **Selected**
- Only **Rejected**
- Only **Applied**

Makes it easier to focus on specific goals.



Generate Dummy Data

Auto-generates 10 realistic sample entries to test the app.

Useful for demo, practice, or debugging without manual input.

Concepts Used

Topic	How it's used
Java OOP	Classes (Placement, FileManager)
Encapsulation	Getters/Setters in Placement.java
ArrayList	Storing dynamic list of placements
File Handling	Save and read placement data
Scanner	Input from user
Loops/Conditions	Menu navigation & input validation
Exception Handling	File errors, input errors

Additional Scope (Future Add-ons)

Idea	Description
🖼 GUI	Build Java Swing interface
🌐 Web	Use Spring Boot or MERN for full-stack
📱 Android	Convert this to a mobile app
📥 Import	Import CSV to load data
🔒 Encrypted save	Save data with password encryption

Conclusions

*"My project is called the **Student Placement Tracker**, built entirely in Java using object-oriented programming. It helps students track their placement progress across companies by storing details like job roles, interview dates, packages, and statuses. I added practical features like password protection, CSV export, status-based filtering, and a statistics dashboard that shows selected, rejected, and applied counts along with average package. It also includes a dummy data generator for testing. The code follows a professional structure with modular classes and file handling, making it ready to scale into a GUI or web app. I built this to solve my own problem during campus placement prep — so it's a real-world, useful tool, not just a typical academic project."*