

ENSE 375 EduTrack Project – Solution / Brainstorming

Brainstorming

Factor	Description	Solution 1 (Basic Command-Line)	Solution 2 (Structured Command-Line)	Selected Solution (Refined Structured Command-Line)
User Interface	Type and complexity of user interaction	Simple CLI	Enhanced CLI with structured data	Refined CLI with focus on usability
Data Management	Method of storing and managing data	In-memory lists and maps	In-memory with Java objects and classes	In-memory with secure handling and structured entities
Data Persistence	Ability to save data between sessions	None	None	None
Security	Measures to protect user data	None	Basic encryption	Basic encryption and secure handling

Scalability	Ability to handle increasing amounts of data and users	Limited	Improved	Improved
Testing	Ease of writing and running tests	Basic unit tests	Comprehensive unit tests	Comprehensive unit tests
Performance	Speed and efficiency of the application	Basic performance	Improved performance with better data handling	Optimized performance
Usability	Ease of use for the end-user	Limited usability	Improved usability	Detailed documentation and user guides
Integration	Ability to integrate with other systems (e.g., calendars)	None	Foundation for future integration	Foundation for future integration
Compliance	Adherence to relevant regulations and standards	Limited	Improved	Full compliance with educational and data protection standards

Accessibility	Usability by students with disabilities	Limited	Improved	Efforts made to ensure accessibility
Project Scope	Alignment with course goals and project requirements	Limited focus on software testing	Better alignment with course goals	Best alignment with course goals focusing on testing and validation
Development Complexity	Complexity and effort required for implementation	Simple	Moderate	Moderate, with focus on testing
Maintenance	Ease of updating and maintaining the software	Basic	Structured for easier maintenance	Structured for easier maintenance
Cost	Resources required (time, effort, tools)	Low	Moderate	Moderate