

WBS Dictionary

Project Name: AI Task Breakdown

Course: ENSF 400

Section: L01

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Group #: 14

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1. Work Breakdown Structure

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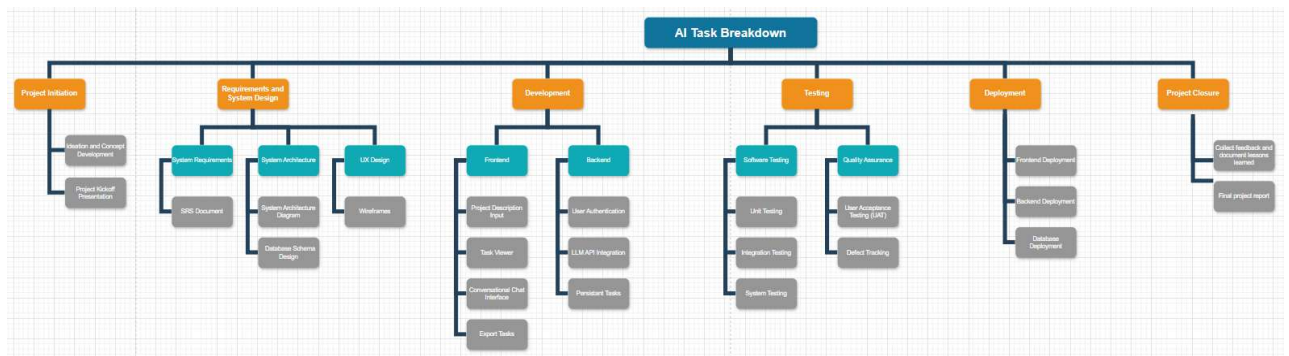
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See the below image for the WBS diagram and the appendix for clearer/larger diagram:



2. WBS Dictionary

WBS code	Work Package Name	Description	Deliverables	Assumptions	Constraints	Acceptance Criteria	Related SRS Section	Team Members
1.1.1	Ideation and Concept Development	This work package involves generating, evaluating, and refining project ideas to define the overall concept and direction of the system. The goal is to establish a clear, viable, and project that aligns with user needs.	General concept of idea and targeted audience (Brainstorming document)	-Must include some form of LLM	-Limited time -Limited financial backing	-Initial scope and objectives are clearly defined and documented	N/A	Sahil B, Ali A, Jibran S, Sean P, Ezana A.
1.1.2	Project Kickoff Presentation	Formally initiates the project execution phase, communicates project objectives, scope, timeline, roles, responsibilities, and success criteria	Kickoff presentation powerpoint	-Project general concept has been approved	-Time constraints	-Presentation clearly communicates project objectives, scope, and timeline	N/A	Sahil B, Ali A, Jibran S, Sean P, Ezana A.
2.1.1	SRS Document	Preparation and documentation of the Software Requirements Specification	Complete SRS document		-Limited time	-All functional and non-functional requirements are clearly documented	Entire Document	Sahil B, Ali A, Jibran S, Sean P, Ezana A.
2.2.1	System Architecture Diagram	Designing the technical blueprint, including cloud and interface layers.	Architecture Diagram	-Cloud infrastructure (Vercel/Supabase) is available.	-Must support LLM latency requirements.	-Diagram shows data flow between UI, Backend, and LLM API.	4.2, 4.3	Sahil B, Ali A, Jibran S, Sean P, Ezana A.
2.2.2	Database Schema Diagram	Mapping out entities for user accounts, projects, and persistent tasks.	DB Schema Map	Supabase will be used for persistence.	-Must encrypt sensitive user data.	-Schema supports user auth and task storage.	FR-1, FR-4	Sahil B, Ali A, Jibran S, Sean P, Ezana A.
2.3.1	Wireframes	Creating visual layouts for Login, Dashboard, and Task Viewer.	Low-fidelity Wireframes	-UI must be mobile and desktop compatible.	-Layout must be consistent and support keyboard navigation	-Mockups cover all screens defined in the UI flow.	4.1	Sahil B, Jibran S

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3.1.1	Project Description Input	Building the text area and submission logic for user project prompts.	Input Form Component	-Users provide clear descriptions .	-Validation required to ensure input is not empty.	-User can submit text and see a loading state.	FR-2	Sean P
3.1.2	Task Viewer	Implementing the UI to display tasks in structured lists or card formats.	To-Do & Kanban UI	-Users prefer visual workflow management.	-UI must adjust across mobile and desktop.	-Toggle between list and Kanban view works.	FR-4	Sahil B, Jibran S,
3.1.3	Conversational Chat Interface	Creating the input field for natural language task modifications.	Chat UI Component	-LLM can interpret add/drop commands.	-Must display error if conversational update fails.	-Chat input successfully sends commands to LLM.	FR-6	Jibran S. Sahil B
3.1.4	Export Tasks	Development of functionality to select and export task lists into external formats.	Exported File (PDF/CSV/JSON).	-Users have software to open standard file formats.	-Low priority compared to core breakdown features.	-Tasks include titles, descriptions, and status in the export.	FR-5	Jibran S. Sahil B.
3.2.1	User Authentication	Implementing login/signup logic and session management.	Auth Service	-Users will register via email/password.	-Sessions must be secure and restricted.	-Valid credentials grant access to saved projects.	FR-1	Ali A
3.2.2	LLM API Integration	Connecting the backend to the third-party LLM for task breakdown logic.	API Integration Layer	-API service remains active.	-Limited by LLM provider rate limits.	-System parses LLM responses into task titles/descriptions.	FR-3	Sahil B
3.2.3	Persistent Tasks	Logic to save and retrieve task changes from the database.	Data Persistence Layer	-Users want to access projects later.	-System must handle failed responses without crashing.	-Changes to tasks persist after page reload.	FR-4	Sahil B Ali A
4.1.1	Unit Testing	Testing individual components (Auth, LLM Parsing) for correctness.	Unit Test Reports	-Developers write tests during development.	-Must achieve 99% uptime reliability.	-All modular components pass individual tests.	5.0 (Reliability)	Ezana A, Sean P, Ali A
4.1.2	Integration Testing	Testing the end-to-end flow from input to LLM to DB storage.	Integration Test Logs	-LLM API is reachable during testing.	-Latency should not exceed performance goals.	-Data flows correctly from UI to Backend to DB.	5.0 (Performance)	Sean P
4.1.3	System Testing	End-to-end testing of the integrated	System Test Report.	-The LLM API is stable	-Must achieve	-Successful execution of	5.0 (Reliability)	Ezana A

		application to ensure all features work together.		during the testing window.	99% system uptime.	the full user flow from login to export.		
4.2.1	User Acceptance Testing	Validation of the system by representative users against their needs.	UAT Sign-off Document.	-Test participants are available and match target user classes.	-Limited time for final revisions before deadline.	-Users can complete a task breakdown with no prior training.	5.0 (Usability)	Sahil B, Ezana A Jibran S
4.2.2	Defect Tracking	The process of identifying, logging, and managing software bugs found during testing.	Defect Log / Bug Report	-Tools like GitHub Issues or Jira are used for tracking.	-Critical bugs must be resolved before deployment.	-All "High" priority bugs are closed or mitigated.	5.0 (Reliability)	Sahil B, Ali A, Jibran S, Sean P, Ezana A.
5.0.1	Frontend Deployment	Hosting the client-side code on a production web server	Live Web URL (Vercel).	-Vercel deployment pipeline is configured correctly.	-Initial page load must be under 5 seconds.	-Application is accessible via HTTPS on desktop and mobile.	2.2, 5.0	Jibran S. Sahil B. Sean P
5.0.2	Backend Deployment	Hosting the server-side logic and API routes in the cloud environment.	Live API Endpoint.	-Server handles at least 30 concurrent users.	-API keys for the LLM must be stored securely.	-Backend processes input and returns JSON without page reloads.	4.3, 5.0	Ali A Ezana A Sean P
5.0.3	Database Deployment	Finalizing and pushing the live production database instance.	Live Supabase Instance.	-Supabase service is active and accessible.	-Sensitive user data must be encrypted.	-Database persists task changes for logged-in users.	4.2, 5.0	Ezana A, Sean P
6.0.1	Collect Feedback and Document Lessons Learned	Documentation of project successes, failures, and stakeholder feedback	Post-Project Archive.	-All team members provide honest input for the report.	-Must be completed before the final submission deadline.	-Formal document capturing feedback and technical debt is complete.	6.0	Sahil B, Ali A, Jibran S, Sean P, Ezana A.
6.0.2	Final Project Report	A comprehensive document summarizing project execution, feature completion, and final outcomes.	Final PDF Project Report	-All work packages are completed or accounted for.	-Must be submitted by Mar 23, 2026.	-Report meets all Assignment 2 rubric requirements.	1.1, 1.3	Sahil B, Ali A, Jibran S, Sean P, Ezana A.

Appendix

