LAB 3
EX_3_Work Break-down Structure

Project Title: NoCode Chatbot Builder Platform

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1. Process-Based WBS

WBS ID	Task	Subtask	Estimated Duration
1.0	Initiation & Planning	Requirement gathering, feasibility analysis, defining scope	1 week
2.0	Design	UI/UX design (animated, drag & drop), database schema, API architecture	2 weeks
3.0	Development	Backend (Supabase, API), frontend (Vite, Tailwind), AI integration (Gemini, embeddings)	5 weeks
4.0	Testing	Unit testing, integration testing, user acceptance testing	2 weeks
5.0	Deployment	Hosting setup, widget script deployment	1 week
6.0	Maintenance	Bug fixes, updates, embedding improvements, scaling	Ongoing

2. Product-Based WBS

Deliverable Components	Subcomponents	Estimated Duration
UI/UX Interface	Dashboard, chatbot role form, chatbot preview (drag & drop)	2 weeks
AI Integration	Gemini LLM API, embedding generator, query handler	3 weeks
Database	User accounts, chatbot configs, embeddings	1.5 weeks
APIs	Chat API, embedding API, widget loader	1 week
Documentation	User manual, developer docs, SRS	1 week

3. Geographic-Based WBS

Location	Tasks	Duration
On-site (India)	Requirement gathering, UI/UX design, user feedback testing	2 weeks
Remote (Cloud Services)	Supabase setup, AI integration, embeddings	3 weeks
Cloud Hosting Provider	Deployment of chatbot widget, scaling, maintenance	Ongoing

4. Role-Based WBS

Role	Responsibility	Duration
Project Manager	Planning, coordination, monitoring	Throughout
AI Developer	Gemini integration, embeddings generation, RAG pipeline	3 weeks
Backend Developer	API development, Supabase integration	3 weeks
Frontend Developer	Vite-based UI, drag-and-drop chatbot builder	2 weeks
QA Tester	Testing, bug tracking, performance validation	2 weeks

5. Effort & Time Estimation Summary

Phase	Duration
Planning & Design	3 weeks
Development	5 weeks
Testing	2 weeks
Deployment	1 week
Total	**11 weeks (~3 months)**