

## Annexure – IV

### Project Diary – Daily Report

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<b>Date</b>	<b>Discussion Topics/Activity Details</b>	<b>Work Allotted Till Next Session/Corrections Suggested/Faculty Remarks</b>	<b>Dated Signature of Faculty</b>
07/01/2025	<ul style="list-style-type: none"> <li>Discussed project ideas – the domain, and topics which could be considered and implemented</li> </ul>	<ul style="list-style-type: none"> <li>Select 3 topics, create an abstract for them and present them to the mentor</li> </ul>	
08/01/2025	<ul style="list-style-type: none"> <li>Selected 3 topics namely – SQLify, EEG to Text, Women safety device</li> <li>Presented these topics to mentor</li> </ul>	<ul style="list-style-type: none"> <li>Create a detailed 3 page abstract including the modules included for the selected topic - SQLify</li> </ul>	
08/01/2025	<ul style="list-style-type: none"> <li>Created a 3 page abstract which included the modules/features, sample design, Real-life use case</li> <li>Finalized the topic</li> </ul>	<ul style="list-style-type: none"> <li>Prepare the system desing and sample workflow diagram of the project</li> </ul>	
13/01/2025	<ul style="list-style-type: none"> <li>Created System design and workflow diagrams</li> <li>Set up Git repo, Python virtual environments, and base React frontend.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a report stating all the requirements – software, hardware, external APIs, dependencies</li> <li>Establish a project development schedule and work distribution table</li> </ul>	

15/01/2025	<ul style="list-style-type: none"> <li>Initialized Flask backend with basic routing.</li> <li>Installed dependencies: Flask, CORS, dotenv, SQLAlchemy. Set up MySQL for testing.</li> </ul>	<ul style="list-style-type: none"> <li>Create user-friendly API endpoints for schema and query generation.</li> <li>Show initial progress</li> </ul>	
20/01/2025	<ul style="list-style-type: none"> <li>Implemented schema generation module using Code Llama (LLM).</li> <li>Developed dynamic prompt templates for LLM interaction.</li> </ul>	<ul style="list-style-type: none"> <li>Optimize schema prompt strategy and test across multiple sample databases.</li> </ul>	
21/01/2025	<ul style="list-style-type: none"> <li>Developed natural language to SQL conversion (query generation) using SQLCoder-7B. Enabled Trino/MySQL/Postgres selection.</li> </ul>	<ul style="list-style-type: none"> <li>Create fallback logic and test with ambiguous queries.</li> <li>Make the Result generation faster</li> </ul>	
22/01/2025	<ul style="list-style-type: none"> <li>Made the Result generation time faster by enhancing the LLM and quantization it.</li> </ul>	<ul style="list-style-type: none"> <li>Develop a feature to connect to local database and allow query execution on the database</li> <li>Improve the result generation</li> </ul>	
27/01/2025	<ul style="list-style-type: none"> <li>Worked on the schema generation and query generation module – decided to go with Meta Llama 3 instead of LLMs</li> </ul>	<ul style="list-style-type: none"> <li>Develop sample Frontend / Figma design</li> </ul>	
28/01/2025	<ul style="list-style-type: none"> <li>Changed the approach from LLM to API call – Response generation time improved from 1.5 min to 10 seconds</li> </ul>	<ul style="list-style-type: none"> <li>Integrate the 2 developed modules with the frontend</li> <li>Show the demo of project developed this now and provide the general idea of modules left to implement.</li> </ul>	

	<ul style="list-style-type: none"> <li>Designed React frontend : dashboard, SQL editor, schema viewer.</li> <li>Implemented API integration.</li> </ul>		
29/01/2025	<ul style="list-style-type: none"> <li>Developed the Unit tests and Integration tests for Schema and Query Module</li> <li>Integrated the functionality to connect local database</li> </ul>	<ul style="list-style-type: none"> <li>Extend the functionality to multiple databases .</li> <li>It should support multiple databases connectivity, dialect specific responses</li> </ul>	
03/02/2025	<ul style="list-style-type: none"> <li>Extended the connectivity to Trino, MySql, Postgres .</li> <li>Developed unit tests for testing the module with various databases</li> </ul>	<ul style="list-style-type: none"> <li>Finalize the Schema and Query Module, along with their integration</li> <li>Develop a SQL Learning module</li> </ul>	
04/02/2025	<ul style="list-style-type: none"> <li>Started working on gamified learning module – A way to learn SQL</li> </ul>	<ul style="list-style-type: none"> <li>Develop the storyline and basic design</li> <li>Design levels according to difficulty levels</li> </ul>	
05/02/2025	<ul style="list-style-type: none"> <li>Created 3 difficulty levels – basic, intermediate, advanced</li> <li>Developed Storyline for each level</li> </ul>	<ul style="list-style-type: none"> <li>Test the learning platform with mentor</li> <li>Make it more interactive</li> </ul>	
10/02/2025	<ul style="list-style-type: none"> <li>Worked on developing the Gamified Learning module</li> <li>Developed the questions, answer evaluation system and result execution system</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate the working of the module and integrate it in the project</li> </ul>	
11/02/2025	<ul style="list-style-type: none"> <li>Work on Generate Synthetic Data Module.</li> <li>Establishing the connectivity the database – the data will automatically inserted into the database</li> </ul>	<ul style="list-style-type: none"> <li>Specify the need and working on as to how would it be generated</li> <li>Minor changes in the UI</li> </ul>	

12/02/2025	<ul style="list-style-type: none"> <li>Established the core logic of developing the synthetic data based on user's requirements</li> <li>Adjusted minor UI issues</li> </ul>	<ul style="list-style-type: none"> <li>Integrate the module in project</li> <li>Demonstrate the working of the module</li> </ul>	
17/02/2025	<ul style="list-style-type: none"> <li>Developed unit tests to test the working and functionality of Synthetic Data Generation</li> <li>Identified the issues and corrected them</li> </ul>	<ul style="list-style-type: none"> <li>Develop login and authentication system</li> <li>Maintain user session and results</li> </ul>	
18/02/2025	<ul style="list-style-type: none"> <li>Implemented Authentication system using Supabase</li> <li>Developed registration/login functionality</li> </ul>	<ul style="list-style-type: none"> <li>Fix UI issues arising while navigating the site from one page to other.</li> </ul>	
24/02/2025	<ul style="list-style-type: none"> <li>Fixed the UI issues</li> <li>Implemented session management of user</li> </ul>	<ul style="list-style-type: none"> <li>Complete responsive design implementation.</li> <li>Enhance the UI/UX Experience</li> </ul>	
25/02/2025	<ul style="list-style-type: none"> <li>Finalized responsive design across the application.</li> <li>Re-designed the software to make it more user friendly and flexible</li> </ul>	<ul style="list-style-type: none"> <li>Test the software as a whole and find out its limitations and boundary</li> <li>Collect feedback on the new functionalities.</li> </ul>	

03/03/2025	<ul style="list-style-type: none"> <li>Conducted unit testing for all major modules: Schema Generator, Query Generator, Synthetic Data Generator.</li> <li>Documented test cases and outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>Begin integration testing of all modules in a combined environment.</li> </ul>	
04/03/2025	<ul style="list-style-type: none"> <li>Performed integration testing across backend and frontend modules.</li> <li>Identified bugs in module communication and fixed API payload inconsistencies.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a checklist to ensure all module interactions are stable and error-free.</li> </ul>	
05/03/2025	<ul style="list-style-type: none"> <li>Completed end-to-end testing with real datasets and multiple user accounts.</li> <li>Logged and resolved UI/UX and backend compatibility issues.</li> </ul>	<ul style="list-style-type: none"> <li>Begin polishing and optimization of existing modules.</li> </ul>	
10/03/2025	<ul style="list-style-type: none"> <li>Improved UI for Schema Viewer and SQL Editor based on user feedback.</li> <li>Optimized frontend responsiveness and fixed overflow/scroll bugs.</li> </ul>	<ul style="list-style-type: none"> <li>Enhance performance of query execution and error feedback display.</li> </ul>	
11/03/2025	<ul style="list-style-type: none"> <li>Optimized query generation module with fallback logic for ambiguous input.</li> <li>Improved loading states and added retry for API failures.</li> </ul>	<ul style="list-style-type: none"> <li>Add inline explanations for queries and schema results to improve usability.</li> </ul>	

12/03/2025	<ul style="list-style-type: none"> <li>Refined the gamified learning module UI, added visual score indicators.</li> <li>Improved SQL evaluation logic with better error prompts.</li> </ul>	<ul style="list-style-type: none"> <li>Finalize all modules and begin preparing demonstration materials.</li> </ul>	
17/03/2025	<ul style="list-style-type: none"> <li>Created final presentation slides for mentor demonstration.</li> <li>Prepared demo scripts and walkthrough of all modules with sample inputs.</li> </ul>	<ul style="list-style-type: none"> <li>Conduct internal demo and rehearsal for mentor session.</li> </ul>	
18/03/2025	<ul style="list-style-type: none"> <li>Demonstrated SQLify project to mentor successfully.</li> <li>Incorporated minor feedback: button alignment, form validation on inputs.</li> </ul>	<ul style="list-style-type: none"> <li>Start drafting final project report including diagrams, screenshots, and code structure.</li> </ul>	
19/03/2025	<ul style="list-style-type: none"> <li>Worked on final report: Introduction, Problem Statement, System Architecture, Module Description.</li> <li>Inserted diagrams and UI snapshots.</li> </ul>	<ul style="list-style-type: none"> <li>Complete remaining sections: Testing, Results, Future Scope.</li> </ul>	
24/03/2025	<ul style="list-style-type: none"> <li>Completed documentation of testing results, tools used, and limitations.</li> <li>Finalized Future Enhancements and Conclusion sections.</li> </ul>	<ul style="list-style-type: none"> <li>Proofread entire report and prepare for print and submission.</li> </ul>	

25/03/2025	<ul style="list-style-type: none"> <li>Reviewed and corrected formatting, index, and citation in report.</li> <li>Mentored peers in preparing theirs.</li> </ul>	<ul style="list-style-type: none"> <li>Submit final project report softcopy to mentor</li> </ul>	
26/03/2025	<ul style="list-style-type: none"> <li>Submitted final project report.</li> <li>Uploaded codebase to GitHub with documentation and installation guide.</li> </ul>	<ul style="list-style-type: none"> <li>Include the details mentioned by mentor in the presentation and reflect on the feedback</li> </ul>	
01/04/2025	<ul style="list-style-type: none"> <li>Rehearsed individual and team explanation of modules.</li> <li>Minor adjustments in the ppt and presentation</li> </ul>	<ul style="list-style-type: none"> <li>Perform a final round of checks and dry run for presentation.</li> </ul>	
02/04/2025	<ul style="list-style-type: none"> <li>Conducted a mock presentation with all team members in the presence of mentor</li> <li>Reflected on the feedback of mentor</li> </ul>	<ul style="list-style-type: none"> <li>Await final feedback and prepare a brief for submission to external panel.</li> </ul>	
15/04/2025	<ul style="list-style-type: none"> <li>Final wrap-up: Archived project assets, finalized GitHub documentation.</li> <li>Wrote individual reflections, daily and weekly report and submitted to mentor.</li> </ul>	<ul style="list-style-type: none"> <li>Stay prepared for viva and future presentations.</li> <li>Final remarks and report submission</li> </ul>	

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**Signature of Faculty  
(Mrs. B.R.Amrutkar)**

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**Signature of HOD  
(Mrs. J.R.Hange)**