

SAMBO SICELO LUCKY

MONTHLY ACTIVITY REPORT 01 - 30 September 2025

WEEK	STUDENT'S DUTIES/TASKS
1	<p>Connecting Backend to the Database</p> <p>In the first week I learned how to connect backend with database , the way to connect is through using sqlalchemy models ,which are python classes that are directly mapped to sql classes using ORM engine called sqlalchemy.Once all models are defined and inherited from base we define a declarative base models which automatically convert all the classes to tables and creates the tables to the database</p>
2	<p>Creating Three-Tier Application</p> <p>In the second week, I worked on creating architecture diagrams for three tier applications and how to set up the blueprint for scalable and maintainable applications. I implemented the idea of three tier application using fastApi for backend, React for frontend and Postgres for database</p>
3	<p>Security on three tier application</p> <p>In the third week, I learned how to implement security on a three tier application using json web tokens, when a user logs in to the application the backend will create a json token which will be sent to the user to be used for all subsequent request and if the user uses the wrong token the application should deny access to ensure security</p>

4	<p>Integration of react and next js</p> <p>In week four i learned how to integrate react and next js to make scalable and maintainable frontend applications, i implemented the idea using material ui for building reusable application components and maintaining the same application typography and theme</p>

HOURS COMPLETED : 207

NAME OF MENTOR: Zanele Kukuma

SIGNATURE OF MENTOR: 

DATE OF SIGNING: 27/08/2025