



Assessment Title

Warehouse Management System **(WMS)**

Professor: Paul Laird

university name: Dublin Business School

Module Title: Programming for Information Systems

Module Code: B9IS123

Individual Report Submitted By:

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Individual Report –

Backend

Introduction:

In our Warehouse Management System (WMS) project, I assumed the pivotal role of developing the backend functionality using Python and Flask. The backend serves as the backbone of the system, responsible for implementing core business logic and facilitating seamless communication with the frontend interface.

Challenges Faced:

While spearheading the backend development, I encountered several challenges that demanded meticulous problem-solving and strategic implementation. Managing concurrent database access while ensuring data integrity emerged as one of the primary challenges. Integrating Flask's multi-threading capability to handle simultaneous requests required careful consideration to prevent data conflicts and maintain system stability.

Moreover, implementing robust data validation mechanisms was crucial to ensure the reliability of backend operations. This involved validating user input, enforcing data constraints, and safeguarding against potential security vulnerabilities. Addressing these challenges required a deep understanding of backend technologies and best practices.

Learning Outcomes:

Through my extensive involvement in backend development and API integration, I acquired invaluable experience and honed my skills in this domain. Working closely with Python and Flask empowered me to build modular and scalable backend services that align with the project requirements. Leveraging Flask's flexible architecture, I implemented robust APIs that facilitated seamless communication between the frontend and backend components.

Furthermore, collaborating with team members during the integration phase provided me with insights into system architecture and data flow. Understanding the intricate interactions between different components enhanced my knowledge of full-stack development practices and bolstered my problem-solving abilities.

Overall, this immersive experience has equipped me with the essential skills and expertise required to develop robust backend systems in future projects. I have cultivated a profound understanding of backend technologies and a keen eye for optimizing system performance and reliability.

GitHub Link:-

<https://github.com/Arbazkhanmokashi/Programming-Project-B9IS123-.git>