

## Team Contribution Summary

Our team collaborated effectively to design and complete a comprehensive cloud-based architecture document that meets all technical, security, and scalability requirements outlined in the assignment. Each team member was assigned clear responsibilities aligned with their strengths, ensuring balanced contributions and timely completion of all components.

### **Individual Contributions**

Leonard – Testing, Security, and Infrastructure

- Designed the Testing and Quality Assurance process, including unit testing, integration testing, and end-to-end testing strategies to ensure application reliability during development and future sprints.
- Defined the Authentication and Authorization approach, clarifying system accessibility and role assumptions per assignment scope.
- Selected and justified the Operating System and Virtual Server configuration, ensuring compatibility with the application runtime and cloud environment while supporting scalability and maintainability.

Javad – Cloud and Application Architecture

- Led the Cloud Service Provider selection, choosing AWS and identifying core services required to support the application architecture.
- Designed the Application Architecture, including runtime environment, API structure, middleware, and framework choices, ensuring alignment with modern web application best practices.

Saleh – Network Architecture and Data Visualization

- Designed the Network Architecture, including VPC structure, public and private subnets, security groups, and port configurations to support resiliency, security, and high availability.
- Selected and justified the Data Visualization Tool, evaluating functionality, integration capabilities, cost, scalability, and ease of use to support stakeholder decision-making.

Youseff – Database and Team Coordination

- Designed the Database Schema, ensuring adherence to third-normal form and alignment with application data requirements.
- Defined and documented Team Responsibilities, helping clarify roles and ensure accountability across the project.

## **Collaboration and Challenges**

Throughout the project, the team coordinated through shared documentation and version control to ensure consistency across architectural components. One challenge encountered was maintaining alignment between application design, network configuration, and database requirements as the architecture evolved. This was resolved through regular check-ins and collaborative reviews, allowing adjustments to be made early without impacting project timelines.

Overall, the team demonstrated strong collaboration, technical understanding, and effective division of responsibilities, resulting in a cohesive and well-integrated architecture document that serves as a solid foundation for future development phases.