



ELL783-CLOUD COMPUTING

Assignment 2 Report

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1 Architecture Diagram

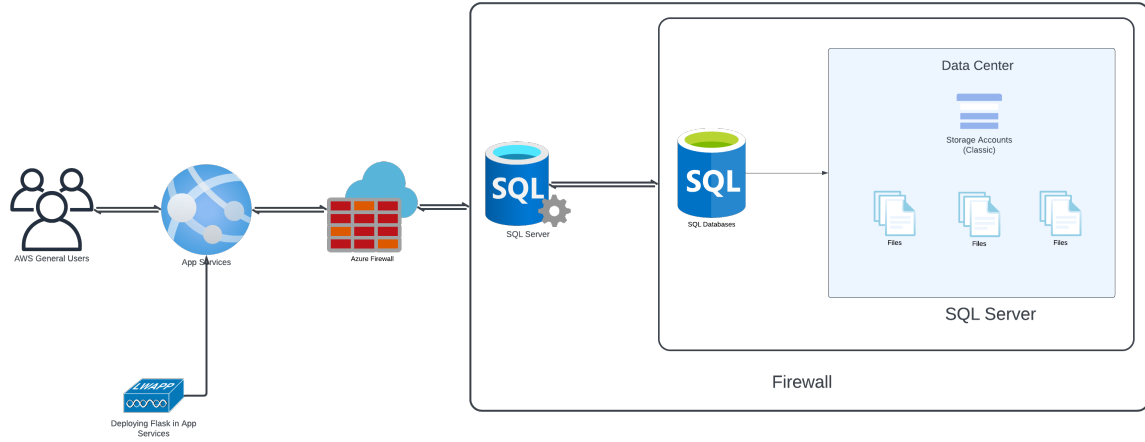


Figure 1: Azure Architecture

2 Architecture Decisions

2.1 Flask Framework

- Chose Flask due to its lightweight nature and simplicity for building web applications.
- Flask allows rapid development and easy integration with other tools and libraries, making it suitable for prototyping and building scalable applications.

2.2 Azure App Services

- Utilized Azure App Services for hosting the Flask web application.
- Azure App Services provides a fully managed platform for building, deploying, and scaling web apps, allowing us to focus on application development without managing infrastructure.
- With Azure App Services, we benefit from automatic scaling, built-in monitoring, and continuous deployment, ensuring high availability and performance of the application.

2.3 Azure SQL Database

- Selected Azure SQL Database for storing application data.
- Azure SQL Database offers a fully managed relational database service with built-in high availability, automatic backups, and advanced security features.
- By using Azure SQL Database, we ensure data integrity, scalability, and compliance with industry regulations, while reducing the operational overhead of managing database infrastructure.

2.4 Azure Firewall

- Implemented Azure Firewall to secure the application and control traffic flow to and from Azure resources.
- Azure Firewall provides network-level protection, application-level filtering, and threat intelligence integration to safeguard the application environment.
- With Azure Firewall, we can enforce security policies, monitor network traffic, and mitigate threats, ensuring the confidentiality, integrity, and availability of the application and its data.

2.5 Bootstrap and DataTables

- Used Bootstrap for frontend styling and layout to create a visually appealing user interface.
- Bootstrap offers a responsive grid system, pre-designed components, and CSS utilities for building modern and mobile-friendly web applications.
- Implemented DataTables for tabular data presentation with features like sorting, searching, and pagination, enhancing the usability and functionality of the application.

3 URL to Access Application

The application can be accessed at: <https://prodmanagement.azurewebsites.net/>