1. Set Up the Database

- Create a new database instance through the Azure portal.

- Configure database setting (such as scalability options, throughput, and network connectivity settings).

- Set up data structures: required by the app, including tables, collections, or documents, depending on the database type.

1. Integrate Database with the Backend

- Try to configure the connection string in backend (C# application). The connection string is crucial for backend to communicate with the Azure database.

- Implement data access logic in backend side. This includes CRUD operations (create, read, update, delete) that interact with the database - write logic to parse SVG files and convert them to JSON for storage, or handling authentication data.

1. Authentication and Authorization

- Ensure secure access to database by implementing Azure Active Directory (AAD) authentication.

- Assign roles and permissions to control access to the database, ensuring only authorized users and services can perform specific actions.

1. Testing and Validation

- Conduct thorough testing to ensure database integration works as expected.

-> we do unit testing for individual database operations and integration testing to ensure that the database and application work together seamlessly.

- Validate the performance of database operations to ensure that our app remains responsive and scalable.

1. Continuous Integration and Deployment (CI/CD)

- Set up CI/CD pipelines for database changes along with application changes. Azure DevOps Services or GitHub Actions can be used for automating your build and deployment processes.

- Ensure that database schema changes are included in deployment processes.

(try Entity Framework Core - Azure SQL Database)

1. Monitor and Optimize

- Monitor database performance using Azure Monitor and Application Insights.

- Optimize database based on the insights gathered from monitoring to involve adjusting indexes, updating query patterns, or scaling the database resources according to demand.