**CLDV6211 Part 2 of the POE**

**ST10435318**

**Byron Grove**

**URL GitHub Repository:**

https://github.com/IIEMSA/part-1-poe-GroveByron.git

**URL Web App:**

https://eventeasevenuebookingapp-b8dydwfxh5cjcggy.southafricanorth-01.azurewebsites.net

**Var ConnectionString and Var ContainerName:**

var connectionString = "DefaultEndpointsProtocol=https;AccountName=venuebookingstorageimage;AccountKey=Ytcx7CbkGd3qZOC+LbQRqegQK5aDHFj3XjmAk1mpkAbkoklHMszPc513Escvec8lNk4ja3eLbSZE+ASteVGMWg==;EndpointSuffix=core.windows.net";

var containerName = "venuebookingimage";

**Admin Login:**

**Username-**Byron

**Password** EventEase1

**Video link for demonstration**: [https://youtu.be/98oHdS3eA5U?si=xKglOHBbawMuie4B](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fyoutu.be%2F98oHdS3eA5U%3Fsi%3DxKglOHBbawMuie4B&data=05%7C02%7CST10435318%40imconnect.edu.za%7C30aa3019f8f14a9a446308dd92510eb7%7Ce10c8f44f469448fbc0dd781288ff01b%7C0%7C0%7C638827599036779223%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIsIlAiOiJXaW4zMiIsIkFOIjoiTWFpbCIsIldUIjoyfQ%3D%3D%7C0%7C%7C%7C&sdata=y8jdYGVKcAAtLGlbq2Y9XiL%2F8xxe24RkNb%2Bh1JwVcJQ%3D&reserved=0)

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# E. Database Design, Cognitive search

## 1. How Azure Cognitive search differs from Traditional search engines

**When it comes to User experience:**

Azure Cognitive search allows the developer to customize and create an appearance and specific search build that improves user experience.

Traditional Search Engines are usuallly designed fixed and have no pleasing visual representatiion as they are minimal in design and just does the job of searching.

**When it comes to Customization:**

Azure Cognitive search allows a wide variety of customization which the search can be capable of either searching specific fields and data types to just words. This allows it to be felxible.

Traditional Search Engines don’t allow for much customization keeping users and developers to a minimal access and freedom on what they can do with the search.

**When it comes to Purpose:**

Azure Cognitive search purpose has a variety of actions allowing developers ti create a search specificed to either databases, documents and other types of storages. Its purpose is to give developers the ability to customize and personalize their search engines.

Traditional Search Engines purpose allows users to make use o a wide search engine this allows you to make use of the entire web, it depends on popularity with the user activity and the searches made on it. The search engine just covers the basics and needs of a average daily user.

## Potential Use cases advantages of Azure Cognitive search

The types of use cases are:

**Collection of Knowledge** – the advantage of this it allows for quick collection of data and summarizes specific points requested or quick response time for all data relevant to the search is returned in a matter of seconds.

**Support** – the advantage allows for quick responses with the correct information for users that need help on a specific question or problem they have, this allows for multiple searches to occur and reutrn the most relevant data to the question and display it back to the user.

**Documentation of different Varieties of Data** – the advantage of this having a huge vareity of data that can be quickly sorted, viewed and read finding the correct information requested. Having a vareity of types of data that are easily accessed without restrictions.

## The limitations of Azure Cognitive search and how they can be mitigated

Example of a Limitations are:

**Real Time Updates** – The Azure Cognitive search doesn’t allow for real time updates.

**Cost** – With the increase of documents, data and other factors the price begins to increase and become overwhelming.

The Mitigation for the Limitations are:

**Real Time Updates** – Make use of Event driven architecture such as (Blob sotrage) these are built in tools.

**Cost** – Ensure you’re tracking whats added, changed this ensures you’re observing that everything is relevant and space isn’t wasted causing cost. Using Indexing will help reduce unnecessary wasted.

## 2. Why Database Normalization is important in cloud-based database design

Why Normalization is important is due to the fact of improving factors like:

**Performance -** Normalization ensure there are no duplicate values that are taking up space, this can slow down the speed of which the system runs as values are duplicated wasting space and oveer filling.

**Cost –** Normalization ensures there are no duplicate values which are redundant taking up space and increasing the cloud sotrage which increase the cost of management which increases the more sotrage that is used.

**Data Consistency** **–** Normalization ensures that data is in the correct format and following a specific format keeping everything in order.

## What are the impacts of both Normalization and Denormalization structures on performance and scalability in a cloud environment like Azure.

The impacts that Normalization has on performance and scalability:

**Elimination of Redundant Storage –** Eliminates all duplicate values that are stored to have a cleaner structure that’s organised.

**Effective Data Structure –** Allows easy maintenance of data structure since everything is structured and ordered.

**The ability to scale across Regions –** Allows for easy sharing across regions with AzureSQL which supports horizontal scaling.

The impacts that Denormalization has on performance and scalability:

**Redundant Storage –** Creates more storage and slows down the system due to duplicate values.

**Data Structure –** Data is unstructured and nothing is formated which causes complexity for maintenance.

**The ability to scale across Regions –** Allows easy sharing and horizontal scaling in the cloud.

# Creating the Blob Storage

# A screenshot of a chat AI-generated content may be incorrect.

# A screenshot of a computer AI-generated content may be incorrect.

# A screenshot of a computer AI-generated content may be incorrect.

# A screenshot of a computer AI-generated content may be incorrect.

# References

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