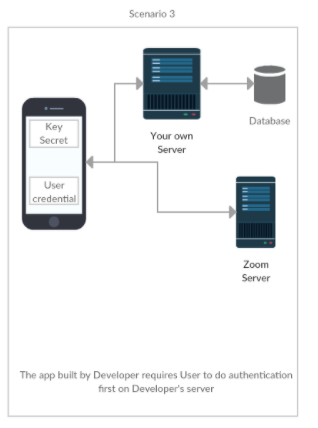
**Virtual Classroom Dashboard 🡪 Research Documentation:**

**01/03/2021 – 01/09/2021 🡪 Week 1 (6 hours): 4 hour(s) down**

**Zoom API SDK Client:** [**https://marketplace.zoom.us/docs/sdk/custom/introduction**](https://marketplace.zoom.us/docs/sdk/custom/introduction)

* Zoom API uses Zoom access tokens: investigate Access Credentials for zoom.
* Can build modules to enable meetings within a web browser.
* Access Credentials: SDK key & Secret.
* Registering and activating any Basic Zoom account will automatically provide free-trial Developer access to the Zoom API and SDKs.
* Use free trial to test the services and SDK functionality
* User Tokens and Zoom Access Tokens are required to start a meeting on behalf of a [Non-login user](https://marketplace.zoom.us/docs/sdk/native-sdks/user-login). These dual tokens are required for additional layers of security.
* Web SDK is authenticated using an API key and Secret instead of SDK.
* For Web SDK: [*Create a JWT App*](https://marketplace.zoom.us/docs/guides/getting-started/app-types/create-jwt-app)*on the Marketplace.*
* User Tokens: used to start meetings for users.
* Requesting user tokens need to send GET requests with a userID to /users/{userId}/token
* UserID is either User API or user email.
* More on Access Credentials: <https://marketplace.zoom.us/docs/sdk/native-sdks/credentials>
* Login User/SSO User – Each person needs school credentials if university or personal credentials.
* Login SSO is more beneficial User Type
* Connection type:



* How to Integrate with web App: <https://marketplace.zoom.us/docs/sdk/native-sdks/web>
* Chrome, Firefox, Edge all work with all the features within Zoom. Safari and Internet Explorer have limitations.

**AWS vs Azure hosting:** [**https://stackify.com/azure-vs-aws-comparison/**](https://stackify.com/azure-vs-aws-comparison/) **&** [**https://insanelab.com/blog/web-development/microsoft-azure-vs-amazon-web-services/**](https://insanelab.com/blog/web-development/microsoft-azure-vs-amazon-web-services/)

* AWS categorizations: content delivery and storage, compute, networking, and database.
* Azure categorizations: data management and databases, compute, networking, and performance.
* Amazon includes identity and security services such as key storage and active directory.
* Amazon also includes AWS Config, Cloudtrail, and Cloudwatch.
* Azure includes security and management tools such as Active Directory, Azure Active Directory, Multi-Factor Auth, and Azure monitoring and performance tweaks.
* Azure offers an easy-to-use Hybrid clouds and substantial support.
* Azure: Windows Server, SQL Server, Exchange, etc..
* Azure makes simple deployment for .Net apps.
* AWS is great for .Net as well but only if a certain AWS feature is needed.
* Since .NET is easier to integrate with Azure prob best to use Azure.

**Implementing large scale databases: LinkedIn Learning video 🡪 Database Foundations Core Concepts & Elmasri, Ramez, and Shamkant Navathe. *Fundamentals of Database Systems*. 7th ed., Pearson, 2015**

* Databases are highly structured data files that allow data input, organization, and retrieval.
* We use tables for the storing, sorting, and filtering of the data.
* A database is just a structured data storage system
* DBMS 🡪 structural rules, data entry, and data protection
* Retrieving data 🡪 creates one or more indexes, queries data
* Managing Databases 🡪 DBMS supports highly structed and efficient data
* Flat File DB 🡪 2-D tables, rows, and columns, stored as delimited text files
* Flat File Structure 🡪 rows store records(individual items), columns store attributes.
* A simple data structure that follows basic organizational principles.
* Hierarchical Databases 🡪 consists of tables that are related by some piece of data.
* Limitations are when they need to display more complicated relationships.
* Relational Databases 🡪 No restrictions and is a combination of flat file and hierarchical databases.
* Uses unique identifiers keys: Primary, foreign, candidate, and super keys
* Foreign keys reference primary keys in another table.
* Database Fundamentals🡪 data types (Consistent data is entered): an attribute must only have a single data type, Constraints(no dup values, rules, default values, NULL values, etc) What are the rules of the data, Referential Integrity 🡪 Ensures the validity and completeness of the data, SQL 🡪 language that is used to create structures, update, modify, delete data
* Microsoft uses T-SQL which is just their version of SQL
* Database Server 🡪 dedicated or virtual machine
* Users log in over a network and commands are used remotely, processed, and the results are returned by the DBMS
* Server Hardware 🡪 extremely fast r & w disk speeds, large amounts of memory, and fast network connections
* Multiple server machines tired together in clusters and physical proximity not needed.
* SQL Server Management Studios(SSMS) – connect to the instance of SQL server
* Views 🡪 Multiple tables data no actual data storage.