Hands-on Practice

I completed and submitted Homework.

Self-Learning

I completed Agile, Jira & Confluence.

Started learing on SQL basics as from shared resources in the group.

Certification:

I started going through the pdf document of DP-900.

EOD Updates:

I have done homework as given and strated reading the DP-900 question for certificate preparation, also revised the topics which are explained in yesterday's session.

Homework | Cycle 29

- Benefits of Cloud Computing
- Role of a Data Engineer

❖ **Benefits of Cloud Computing**

With Cloud Pay as you go: Here you can pay how much you use only, whenever you are using the server, then you will pay only that use for end of the month. There is no up rent we are paying.

Scalability: You can increase from 100GB to 1000GB during required days, this increasing Scale Up and decreasing Scale down we call it as Scalability.
and (Configurations: RAM, Memory, Storage) will be down within seconds
In order to handle the traffic, the conf will be increased during the festival(required) days and after festival days the networking/ conf will be decreased.

Maintenance: In cloud everything (like providing Internet, power supply, patch works on every week, to check servers availability, if they have to install the OS or upgrade the OS) will be taken care by cloud people, it is the duty of the cloud vendors to do this things.

High Availability: SLA agreements will be provided by cloud people, so system availability is high.

❖ **Role of a Data Engineer**

Describe two main responsibilities of a data engineer (e.g., gathering data, transforming data) in your own words.

A data engineer gathers data from different places, like websites, apps, or company systems, and puts it all in one safe place, like a big storage system (called a data warehouse). Data engineers are necessary to ensure that data is collected, stored, and made accessible for analysis. Also responsible for building, maintaining, and organizing the infrastructure that enables organizations to leverage data effectively.

1. Extract (E): Getting the Data

A data engineer extracts data from different sources like databases, APIs, files, or external systems.

Example: Pulling customer data from a company website and sales data from a database.

2. Transform (T): Cleaning and Organizing the Data

- The data engineer transforms the raw data into a clean and usable format.
- This includes fixing errors, combining data from different sources, changing formats, and creating new columns or calculations.
- Example: Converting dates into the same format, removing duplicate entries, or calculating total sales

3. Load (L): Saving the Data

- Finally, the data engineer loads the clean data into a storage system like a data warehouse (e.g., Snowflake, BigQuery, or Amazon Redshift), where analysts and data scientists can use it.
- *Example:* Putting the final, cleaned data into a central system so it can be used for reports or dashboards.