① ETL:-

It stands for extract, transform and load. The process involve collecting data from various sources, transforming it into a format suitable for analysis or storage. and loading it into a DWH

i) Extract:-

The first step in ETL is to extract data from various sources such as database, API's and other system.

ii) Transform:-

The next step is to transform the extracted data into a format suitable for analysis or storage.

iii) Load:-

The final step is ETL is to load the transformed data into the target data warehouse or storage system.

~~① ETL~~

~~[illegible]~~

② 3 Tier Architecture in DE:-

The 3 tier architecture is a common design pattern in data engineering that separate the application into 3 main logical layer.

i) Presentation layer:-

The presentation layer is the top most layer, which is responsible for presenting data to the end-user in a human readable format.

ii) Application layer:-

It is middle layer, which contain business logic and controls the flow of data between the presentation layer and the data storage layer.

iii) Data storage layer:-

It is bottom layer which stores the data required by the application layer. It include data base, data warehouse and data lake

iii) Historical load:-

Historical load refers to the amount of electrical energy that was consumed in a particular location during a specific time period in the past. It is a term commonly used in the field of electrical engineering and power system analysis to understand and predict the energy consumption patterns of a particular region.

iv) Incremental load is a process of updating a data ware house or database with new or modified data. Instead of performing a full data refresh, which can be time-consuming and resource-intensive incremental loading only update the data that has changed since the last load.

v) Full load, also known as full data refresh, is a process of loading all the data from the source system into a target system such as data warehouse or database

vi) In data engineering ELT stand for Extract, Load and transform. It is data integration process where data is first extracted from various sources then loaded into a target data store ore warehouse.