

DATA WAREHOUSE USING IBM CLOUD DB2 **WAREHOUSE**

TEAMLEADER

730321104025 : K.MOHAMED SHAFIQ
PHASE 2 SUBMISSION DOCUMENT

PROJECT:DATA WAREHOUSE USING IBM CLOUD DB2 WAREHOUSE



INTRODUCTION:

A data warehouse is a type of [data management](#) system that is designed to enable and support business intelligence (BI) activities, especially analytics. Data warehouses are solely intended to perform queries and analysis and often contain large amounts of historical data. The data within a data warehouse is usually derived from a wide range of sources such as application log files and transaction applications. The four characteristics of a data warehouse, also called features of a data warehouse are: subject-oriented, time-variant, integrated, and non-volatile.

- ❖ **SUBJECT ORIENTED** : Decision makers of a business can analyse data easily, by constricting to a particular subject area of the data warehouse. This makes understanding and analysis of the data concise and straightforward by excluding unwanted information on some subject that is not needed for decision-making.



- ❖ **INTEGRATED** : Data warehouses consist of data from different variable sources integrated under one platform. This data obtained is extracted and transformed maintaining uniformity without depending on the source it was obtained from. This is the integrated feature. Standards are established which are universally acceptable for the data present in the warehouse.
- ❖ **TIME VARIANT** : One of the important properties of the data warehouse is the historical perspective it holds. It keeps the huge volume of data from all databases stored in accordance with the elements of time. It consists of a temporal element and an extensive time horizon. The inability to change the element of time is an essential aspect of time variance. The record key is used to display time variance.
- ❖ **NON-VOLATILE** : Data is updated by uploading data in the data warehouse to protect data from momentary changes. This means that once data is fed,

there can be no alterations or changes. The inability to be erased is the non-volatile character of the data warehouse environment. Data is read-only and allows only two functions to be performed: Access and Loading.

Need for Data Warehouse :

Data Warehouse is needed for the following reasons

Business User: Business users require a data warehouse to view summarized data from the past. Since these people are non-technical, the data may be presented to them in an elementary form.



2) Store historical data: Data Warehouse is required to store the time variable data from the past. This input is made to be used for various purposes.



3) **Make strategic decisions:** Some strategies may be depending upon the data in the data warehouse. So, data warehouse contributes to making strategic decisions.



4) For data consistency and quality: Bringing the data from different sources at a commonplace, the user can effectively undertake to bring the uniformity and consistency in data.

5) High response time: Data warehouse has to be ready for somewhat unexpected loads and types of queries, which demands a significant degree of flexibility and quick response time.