



देव संस्कृति विश्वविद्यालय

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परीक्षार्थी अनुक्रमांक (अंकों में) 1824014  
Student's Roll No. ( in numbers)

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परीक्षार्थी अनुक्रमांक (शब्दों में) Pranav Mishra  
Student's Roll No. ( in words)

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1		
कुल योग अंकों में / TOTAL IN DIGITS		
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Ans:- 1:- Data mart:-

→ A data mart is a subset of a data warehouse oriented to a specific business line. Data marts contain repositories of summarized data collected for analysis on a specific section or unit within an organization.

→ Data mart usually draws data from only a few sources compared to a Data warehouse.

→ Data marts are small in size and are more flexible compared to a Data warehouse.

Types of Data mart:-

1. Dependent Data mart
2. Independent Data mart
3. Hybrid Data mart.

Example:- Marketing, Sales, HR or Finance. It is often controlled by a single department in an organization.

## Ans:- 2:- OLAP (Online Analytical Processing):-

- Online Analytical Processing (OLAP) is based on the multidimensional data model.
- OLAP is a computing method that enables users to easily and selectively extract and query data in order to analyze it from different point of view.
- OLAP business intelligence queries often aid in trends analysis, financial reporting, sales forecasting budgeting and other planning purpose.
- The magic behind OLAP derives from its ability to pre calculate and pre aggregate data; otherwise, end users would be spending most of their time waiting for query results to be returned by the database.

Analysts can then perform five types of OLAP analytical operations against these multidimensional databases:-

- Roll-up
- Drill-down
- Slice.
- Dice.
- Pivot

## Ans:- 1 Role of Datawarehouse in Business Intelligence

- Data warehousing and business intelligence are terms used to describe the process of storing all the company's data in internal or external databases from various sources with the focus on analysis, and generating actionable insights through online Business Intelligence tools.
- One without the other wouldn't function, and we will now explain premises that surround their framework by using a Business Intelligence architecture diagram to fully understand how data warehouse enhances the Business Intelligence Processes.
- A solid Business Intelligence Architecture framework consists of:
  - 1:- Collection of Data
  - 2:- Data integration
  - 3:- Storage of data
  - 4:- Data analysis
  - 5:- Distribution of data
  - 6:- Reaction based on insights.



→ Characteristics of Data warehouse:-

4:-

- 1:- Subject oriented
- 2:- Integrated
- 3:- Time variant
- 4:- Non volatile

Components of Data Warehouse:-

Architecture is the proper arrangement of the elements. We build a data warehouse with software and hardware components.

To suit the requirements of our organizations, we arrange these building we may want to boost up another part with extra tools and services. All of these depends on our circumstances.

Source Data Component:-

Source data coming into the data warehouse may be grouped into 4 broad categories:-

- 1:- Production Data:- This type of data comes from the different US of the enter<sup>prises</sup>.
- 2:- Internal Data:- This is internal data, part of which could be useful in a data W.
- 3:- Archived Data:- Operational System are mainly intended to run the current business.
- 4:- External Data:-

5.1

→ Data Staging Component: We have been extracted data from various sources.

1- Data Extraction

2- Data Transformation

3- Data Loading

→ Data Storage Components:-

• Data storage for the data warehousing is a split repository.

• These data repositories include the data structured in highly normalized for fast and efficient processing.

→ Information Delivery Components:-

The information delivery Element is used to enable the processes of subscribing for data warehouse files and having it transferred to one or more destinations according to some customer specified scheduling algorithms.

→ Metadata Components:- Metadata in a data warehouse is equal to the data dictionary or the data catalog in a DBMS.

→ Data Mart:- It includes a subset of corporate-wide data that is of value to a specific group of users.

→ Management and Control Components:- The management and control element coordinate the services and functions within the data warehouse.