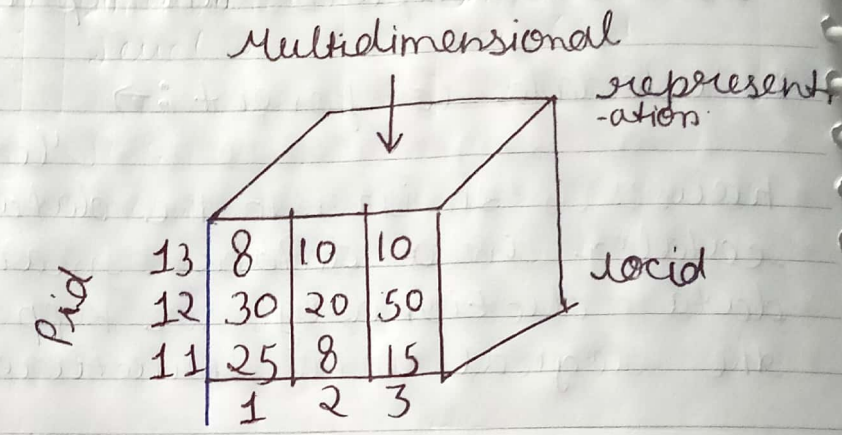
| | Database. | Data Warehouse. |
|---|---|---|
| 1. | Used for Online Transactional Processing (OTP) but can be used for other purposes such as Data warehousing This records the data from the user for history | Used for Online Analytical Processing (OAP). This reads the historical data for the Users for business decisions |
| 2. | The tables and joins are complex since they are normalized (for RDMS) This is done to reduce redundant data and to save storage space | The Tables and joins are simple since they are denormalized. This is done to reduce the response time for analy-tical queries |
| 3. | Entity-Relational modeling techniques are used for RDMS database design | Data-Modeling techniques are used for the Data warehouse design. |
| 4. | Optimized for write operation. | Optimized for read operations |
| 5. | Performance is low for analysis queries | High performance for analytical queries. |

- Multi Dimensional Data Model :→

During the 1990s a new type of data model, the multidimensional data model, emerged that has taken over from the relational model when the objective is to analyze data, rather than to perform on-line transections. Multidimensional data models are designed expressly to support data analyses. Data warehouses and OLAP tools are based on a multidimensional data model. This model views data in the form of a data cube. A data cube allow data to be modeled and viewed in multiple dimensions. It is defined by dimensions and facts. Dimensions are the perspectives or entities with respect to which an organization wants to keep records.

| Pid | Timeid | Locid | Sales |
|---|---|---|---|
| 11 | 1 | 1 | 25 |
| 11 | 2 | 1 | 8 |
| 11 | 3 | 1 | 15 |
| 12 | 1 | 1 | 30 |
| 12 | 2 | 1 | 20 |
| 12 | 3 | 1 | 50 |
| 13 | 1 | 1 | 8 |
| 13 | 2 | 1 | 10 |
| 13 | 3 | 1 | 10 |
| 11 | 1 | 2 | 35 |

Tabular representation.




## Goals of Multidimensional Data Models :→

The goals of multidimensional data models are to support analysis in a simple and faster way by executives, managers and business professional. These people are not interested in the overall architecture. They are interested in the analysis of data.