

Data Warehouse

Experiment No.: 1

**Write detail problem statement and
identify source tables and populate
sample data.**

Experiment No. 1

1. **Aim:** Write detail problem statement and identify source tables and populate sample data.
2. **Objectives:** To create and understand the requirement of data warehouse in present digital and e business market for producing reports and making critical business decisions
3. **Course Outcomes:** The outcome is to establish and comprehend the need for a data warehouse in the current digital and e-business market, enabling the generation of reports and facilitating critical business decisions.
4. **Hardware / Software Required:** Any editor tool like excel or Power BI to create the tables and populate with relevant values.

Theory: The importance of a data warehouse lies in its ability to consolidate and organize large volumes of data from various sources into a single, unified repository. This provides several key benefits:

1. **Informed Decision-Making:** A data warehouse enables businesses to analyze historical data, identify trends, and gain insights that support strategic decision-making.
2. **Data Consistency and Accuracy:** By centralizing data from different sources, a data warehouse ensures that all departments work with the same, consistent information, reducing discrepancies and errors.
3. **Enhanced Business Intelligence:** Data warehouses support advanced analytics, allowing businesses to perform complex queries, generate detailed reports, and uncover deep insights that are not possible with traditional databases.
4. **Improved Performance:** With optimized data structures and indexing, data warehouses allow for faster query processing, enabling timely access to critical information.
5. **Scalability and Flexibility:** As businesses grow, data warehouses can scale to accommodate increasing volumes of data, making them a long-term solution for data management.
6. **Regulatory Compliance:** Data warehouses help businesses maintain data integrity and comply with industry regulations by providing a controlled environment for storing and managing data.

7. **Support for Data-Driven Culture:** By providing easy access to data and insights, data warehouses foster a data-driven culture within organizations, empowering employees to make decisions based on accurate information.

Consider any Business Situation to Design and implement a data warehouse and reporting structure to address this requirement for the client; a garment, Retail or any other e-business franchisees operating approximately in many locations. Write detail problem statement and identify source tables and populate sample data. Or Search and collect the transaction report of any real time business.

5. **Algorithm / Design / Procedure / Flowchart / Analysis:**

The Data Warehouse must provide strategic and tactical decision support to all levels of management. Below are the challenges to address

- The business hierarchies must be in synchronization with all stores and brands.
- A combined corporate view of actual, budgets and forecast scenarios must be supported.
- Reporting requirements are based on each sales, branch, categories and time.

6. **Results/Output Analysis:** Take a print of the table structure and sample values and explain the need for each identified field.

7. **Conclusions:** Discuss whether the experiment's aim was achieved and how the results relate to the theory.

8. **Viva Questions:** A list of potential questions related to the chosen business use case can be expected.

9. **References:**

<https://www.techshashank.com/data-warehousing/shipping-dimensional-modeling>