***Advanced Database System Lab***

**Assignment no. 6**

**PRN:** 2020BTECS00005

**Name:** Sanket Jadhav.

* **Title:** To design and implement a data warehouse for a customer order processing system in a company.

* **Aim:** To understand & design data warehouse.

* **Queries:**These are enclosed in the attached zip file in “OLAP Queries.”

* **Report:**

**Introduction:**

The objective of this project is to design and implement a data warehouse system for a customer order processing system in a company that consists of multiple stores located in different cities and states. The data warehouse system will extract data from the existing operational databases and provide online analytical processing with roll up, drill down, slice, and dice features to meet user requirements.

**Business Requirements:**

The data warehouse system will answer queries related to finding stores that hold a particular item of stock, fulfilling orders, items ordered by customers, stock levels of items in stores, and other related queries.

**Functional Specification:**

The input to the data warehouse system will be data from the existing operational databases, including customer data, store data, item data, order data, and other relevant information. The output will be OLAP reports that provide insights into the data stored in the data warehouse system.

**Data Warehousing Design:**

The data warehouse system will be designed using the star schema methodology, which consists of a fact table and dimension tables. The fact table will store data related to orders, and the dimension tables will store data related to customers, stores, items, and time.

**Data Cube Implementation:**

The data warehouse system will be loaded into data cubes using computer automation, which will provide fast and efficient processing of OLAP queries. The data cubes will be designed to support roll up, drill down, slice, and dice operations.

**Observations:**

The OLAP reports generated by the data warehouse system will provide users with insights into customer orders, store performance, and item availability. Data verification will be conducted to ensure the accuracy and completeness of the data stored in the data warehouse system.

**Conclusion:**

The implementation of a data warehouse system for a customer order processing system in a company provides users with a powerful tool for analyzing and understanding the data stored in the operational databases. The data warehouse system provides fast and efficient processing of OLAP queries, allowing users to quickly and easily access the data they need to make informed business decisions.