SQL QUERIES

Create Table OLAP\_CUBE

CREATE TABLE OLAP\_Cube (

DateID INT,

ProductID INT,

TotalQuantity INT,

TotalRevenue FLOAT,

PRIMARY KEY (DateID, ProductID),

FOREIGN KEY (DateID) REFERENCES Date\_Dimension(DateID),

FOREIGN KEY (ProductID) REFERENCES Product\_Dimension(ProductID)

);

Insert

INSERT INTO OLAP\_Cube (DateID, ProductID, TotalQuantity, TotalRevenue)

SELECT DateID, ProductID, SUM(Quantity) AS TotalQuantity, SUM(TotalRevenue) AS TotalRevenue

FROM Transformed\_Sales\_Data

GROUP BY DateID, ProductID;

Query

SELECT dd.Date, SUM(oc.TotalRevenue) AS TotalRevenue

FROM OLAP\_Cube oc

JOIN Date\_Dimension dd ON oc.DateID = dd.DateID

JOIN Product\_Dimension pd ON oc.ProductID = pd.ProductID

WHERE pd.ProductName = 'Product B'

GROUP BY dd.Date;

Create Table Transformed\_Sales\_Data

CREATE TABLE Transformed\_Sales\_Data (

Date DATE,

Product VARCHAR(255),

Quantity INT,

Revenue FLOAT,

TotalRevenue FLOAT

);

Loading the data

LOAD DATA INFILE 'path/to/transformed\_sales\_data.csv'

INTO TABLE Transformed\_Sales\_Data

FIELDS TERMINATED BY ',' ENCLOSED BY '"'

LINES TERMINATED BY '\r\n'

IGNORE 1 ROWS;

Create Table Date\_Dimension

CREATE TABLE Date\_Dimension (

DateID INT PRIMARY KEY,

Date DATE,

-- Other date-related attributes

);

Create Table Product\_Dimension

CREATE TABLE Product\_Dimension (

ProductID INT PRIMARY KEY,

ProductName VARCHAR(255),

-- Other product-related attributes

);

Create Table Sales\_Fact

CREATE TABLE Sales\_Fact (

DateID INT,

ProductID INT,

Quantity INT,

Revenue FLOAT,

PRIMARY KEY (DateID, ProductID),

FOREIGN KEY (DateID) REFERENCES Date\_Dimension(DateID),

FOREIGN KEY (ProductID) REFERENCES Product\_Dimension(ProductID)

);