DADA BI
Assignment 5 – SQL Queries

Name – Krisha Lakhani
NUID - 002334794

```
USE ROLE MEDIA_ROLE;

USE DATABASE MEDIA_DB;


CREATE OR REPLACE SCHEMA DW;

USE SCHEMA DW;


SELECT CURRENT_DATE(), CURRENT_TIMESTAMP();



CREATE OR REPLACE TABLE DW.DATE_DIM (

DATE_KEY NUMBER(10) PRIMARY KEY,

FULL_DATE DATE,

DAY_NUM NUMBER(3),

WEEKDAY_ABBR VARCHAR(3),

WEEKDAY_NUM NUMBER(1),

DAY_OF_YEAR_NUM NUMBER(3),

WEEK_OF_YEAR NUMBER(2),

MONTH_NUM NUMBER(2),

MONTH_ABBR VARCHAR(3),

QUARTER_NUM NUMBER(1),

QUARTER_NAME VARCHAR(3),

YEAR_NUM NUMBER(4),

FIRST_DAY_OF_MONTH DATE,

LAST_DAY_OF_MONTH DATE,

IS_WEEKEND VARCHAR(1)

);
```

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```
CREATE OR REPLACE TABLE DW.TIME_DIM (
TIME_KEY NUMBER(4) PRIMARY KEY,
HOUR_NUM INTEGER,
MINUTE_NUM INTEGER,
TIME_24_HR STRING
);
```

```
CREATE OR REPLACE TABLE DW.CUSTOMER_DIM(
CUSTOMER_KEY NUMBER(10) IDENTITY(1,1) PRIMARY KEY,
CUSTOMER_ID NUMBER(10),
FIRST_NAME VARCHAR(100),
LAST_NAME VARCHAR(100),
COMPANY_NAME VARCHAR(100),
CITY VARCHAR(100),
STATE VARCHAR(50),
COUNTRY VARCHAR(50),
ZIP_CODE VARCHAR(10),
EMPLOYEE_ID NUMBER(10),
IS_ACTIVE VARCHAR(1) DEFAULT 'Y',
SOURCE_ID VARCHAR(50),
DATE_TO_WAREHOUSE DATETIME DEFAULT CURRENT_TIMESTAMP()
);
CREATE OR REPLACE SEQUENCE CUSTOMER_DIM_SEQ START = 1 INCREMENT = 1;
```

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```
CREATE OR REPLACE TABLE DW.ARTIST_DIM(
ARTIST_KEY NUMBER(10) DEFAULT ARTIST_DIM_SEQ.NEXTVAL PRIMARY KEY,
ARTIST_ID NUMBER(10),
MEDIA_DB.DW.CUSTOMER_DIM
ARTIST_NAME VARCHAR(150),
SOURCE_ID VARCHAR(50),
DATE_TO_WAREHOUSE DATETIME DEFAULT CURRENT_TIMESTAMP()
);
CREATE OR REPLACE SEQUENCE ARTIST_DIM_SEQ START = 1 INCREMENT = 1;



CREATE TABLE DW.SALES_FACT(
SALES_KEY NUMBER(10) PRIMARY KEY,
CUSTOMER_KEY NUMBER(10),
INVOICE_ID NUMBER(10),

--SALE_DATE DATETIME,
DATE_DIM_KEY NUMBER(10),
TOTAL_SALE_AMT NUMBER(10,2),
SOURCE_ID NUMBER(10),
DATE_TO_WAREHOUSE DATETIME DEFAULT CURRENT_TIMESTAMP()
);
--CLUSTER BY (SALE_DATE);
CREATE OR REPLACE SEQUENCE SALES_FACT_SEQ START = 1 INCREMENT = 1;
```

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```
-- validation

SHOW TABLES IN SCHEMA DW;


--2

CREATE OR REPLACE SCHEMA DW;

CREATE OR REPLACE SCHEMA STAGE;


CREATE OR REPLACE TABLE STAGE.Artist


(


ArtistId INTEGER,

Name STRING(120),

Created_By STRING(100),

Created_Dt date

);



CREATE OR REPLACE TABLE STAGE.Genre


(


GenreId INTEGER,

Name STRING(120),

Created_By STRING(100),

Created_Dt date);
```

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```
CREATE OR REPLACE TABLE STAGE.Album(

AlbumId INTEGER,

Title STRING(160),

ArtistId INTEGER,

Created_By STRING(100),

Created_Dt DATE);
```

```
CREATE OR REPLACE TABLE STAGE.Customer(

CustomerId INTEGER,

FirstName STRING(40) ,

LastName STRING(20) ,

Company STRING(80),

Address STRING(70),

City STRING(40),

State STRING(40),

Country STRING(40),

PostalCode STRING(10),

Phone STRING(24),

Fax STRING(24),

Email STRING(60),

SupportRepId INTEGER,
```

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Created_By STRING(100),

Created_Dt DATE

);

CREATE OR REPLACE TABLE STAGE.Invoice(

InvoiceId INTEGER ,

CustomerId INTEGER ,

InvoiceDate DATETIME ,

BillingAddress STRING(70),

BillingCity STRING(40),

BillingState STRING(40),

BillingCountry STRING(40),

BillingPostalCode STRING(10),

Total NUMBER(10, 2) ,

Created_By STRING(100),

Created_Dt DATE

);

CREATE OR REPLACE TABLE STAGE.InvoiceLine(

InvoiceLineId INTEGER,

InvoiceId INTEGER ,

TrackId INTEGER ,

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UnitPrice NUMBER(10, 2) ,

Quantity INTEGER ,

Created_By STRING(100),

Created_Dt DATE

);

--Validation

SHOW TABLES IN SCHEMA STAGE;

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DATE_DIM

```
USE ROLE MEDIA_ROLE;

USE WAREHOUSE MEDIA_WH;

USE DATABASE MEDIA_DB;

USE SCHEMA DW;


INSERT INTO DATE_DIM

(

   DATE_KEY,

   FULL_DATE,

   DAY_NUM,

   WEEKDAY_ABBR,

   WEEKDAY_NUM,

   DAY_OF_YEAR_NUM,

   WEEK_OF_YEAR,

   MONTH_NUM,

   MONTH_ABBR,

   QUARTER_NUM,

   QUARTER_NAME,

   YEAR_NUM,

   FIRST_DAY_OF_MONTH,

   LAST_DAY_OF_MONTH,

   IS_WEEKEND

)

SELECT
```

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Name – Krisha Lakhani
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```
   ROW_NUMBER() OVER (ORDER BY SEQ4()) AS DATE_KEY,

   DATEADD(DAY, SEQ4(), '2010-01-01') AS FULL_DATE,

   EXTRACT(DAY FROM DATEADD(DAY, SEQ4(), '2010-01-01')) AS DAY_NUM,

   TO_VARCHAR(TO_CHAR(DATEADD(DAY, SEQ4(), '2010-01-01'), 'DY')) AS
WEEKDAY_ABBR,

   EXTRACT(DAYOFWEEK FROM DATEADD(DAY, SEQ4(), '2010-01-01')) AS
WEEKDAY_NUM,

   EXTRACT(DOY FROM DATEADD(DAY, SEQ4(), '2010-01-01')) AS
DAY_OF_YEAR_NUM,

   EXTRACT(WEEK FROM DATEADD(DAY, SEQ4(), '2010-01-01')) AS WEEK_OF_YEAR,

   EXTRACT(MONTH FROM DATEADD(DAY, SEQ4(), '2010-01-01')) AS MONTH_NUM,

   TO_VARCHAR(TO_CHAR(DATEADD(DAY, SEQ4(), '2010-01-01'), 'MON')) AS
MONTH_ABBR,

   EXTRACT(QUARTER FROM DATEADD(DAY, SEQ4(), '2010-01-01')) AS
QUARTER_NUM,

   CONCAT('Q', EXTRACT(QUARTER FROM DATEADD(DAY, SEQ4(), '2010-01-01'))) AS
QUARTER_NAME,

   EXTRACT(YEAR FROM DATEADD(DAY, SEQ4(), '2010-01-01')) AS YEAR_NUM,

   DATE_TRUNC('MONTH', DATEADD(DAY, SEQ4(), '2010-01-01')) AS
FIRST_DAY_OF_MONTH,

   LAST_DAY(DATEADD(DAY, SEQ4(), '2010-01-01')) AS LAST_DAY_OF_MONTH,

   CASE

      WHEN DAYOFWEEK(DATEADD(DAY, SEQ4(), '2010-01-01')) IN (6,7) THEN 'Y'

      ELSE 'N'

   END AS IS_WEEKEND

FROM TABLE(GENERATOR(ROWCOUNT => 7300)); -- ~20 years
```

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TIME_DIM

```
USE ROLE MEDIA_ROLE;

USE WAREHOUSE MEDIA_WH;

USE DATABASE MEDIA_DB;

USE SCHEMA DW;



-- Load hour + minute combinations

INSERT INTO TIME_DIM (TIME_KEY, HOUR_NUM, MINUTE_NUM, TIME_24_HR)

SELECT

   (HOUR_NUM * 100) + MINUTE_NUM AS TIME_KEY,

   HOUR_NUM,

   MINUTE_NUM,

   LPAD(HOUR_NUM, 2, '0') || ':' || LPAD(MINUTE_NUM, 2, '0') AS TIME_24_HR

FROM (

   SELECT HOUR_NUM, MINUTE_NUM

   FROM TABLE(GENERATOR(ROWCOUNT => 1440)) g,

      LATERAL (

         SELECT FLOOR(ROW_NUMBER() OVER (ORDER BY SEQ4()) / 60) AS
HOUR_NUM,

               MOD(ROW_NUMBER() OVER (ORDER BY SEQ4()), 60) AS MINUTE_NUM

      )

)

WHERE HOUR_NUM < 24;
```

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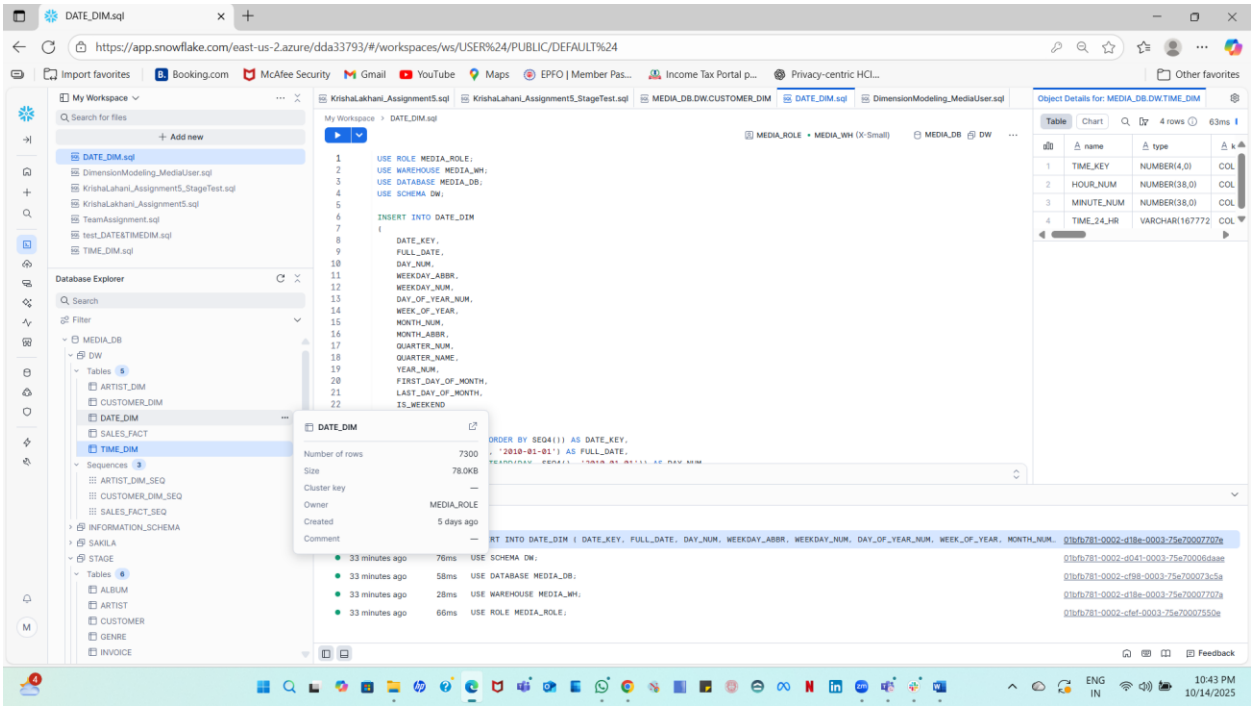

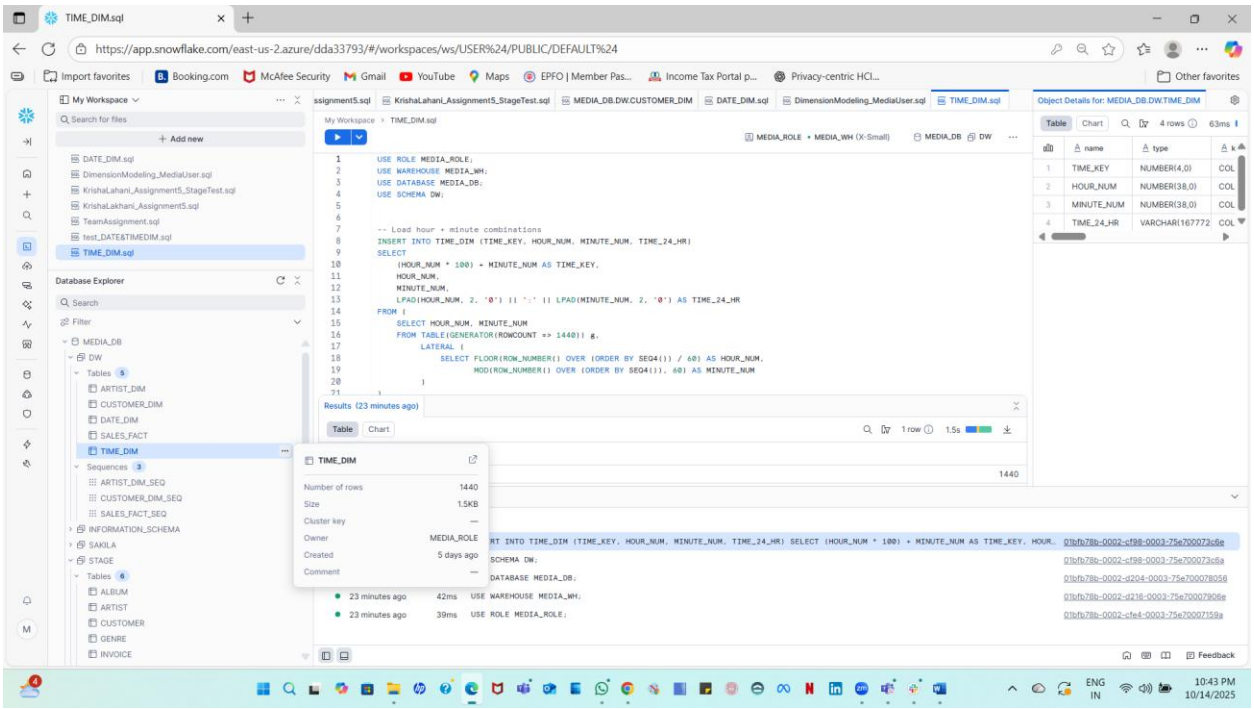

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```
ALTER TABLE DW.SALES_FACT
  ADD CONSTRAINT SALESFACT_DATE
  FOREIGN KEY (DATE_DIM_KEY) REFERENCES DW.DATE_DIM(DATE_KEY);


  CREATE OR REPLACE TABLE DW.SALES_FACT(
  SALES_KEY         NUMBER(10) PRIMARY KEY,          -- (optionally: DEFAULT
SALES_FACT_SEQ.NEXTVAL)
  CUSTOMER_KEY      NUMBER(10),
  INVOICE_ID        NUMBER(10),
  DATE_DIM_KEY      NUMBER(10) NOT NULL,             -- matches DATE_DIM.DATE_KEY
  TOTAL_SALE_AMT    NUMBER(10,2),
  SOURCE_ID         NUMBER(10),
  DATE_TO_WAREHOUSE DATETIME DEFAULT CURRENT_TIMESTAMP(),
  CONSTRAINT FK_SALESFACT_DATE
    FOREIGN KEY (DATE_DIM_KEY) REFERENCES DW.DATE_DIM(DATE_KEY)
);
```