PRACTICAL 1

SQL QUERIES OF STAR SCHEMA AND SNOWFLAKE SCHEMA.

STAR SCHEMA :

CREATE TABLE PROMOTION (

PROMOTION_KEY NUMERIC NOT NULL, PROMOTION_CODE INTEGER, PROMOTION_TYPE VARCHAR(30) NOT NULL, PROMOTION_MEDIUM VARCHAR(30) NOT NULL, DISCOUNT_RATE DECIMAL(2,2),CONSTRAINT PROMOTION_KEY PRIMARY KEY (PROMOTION_KEY));

CREATE TABLE TIME (

TIME_KEY NUMERIC NOT NULL, DATE DATE NOT NULL, DAY_NUMBER INTEGER,

DAY_OF_WEEK VARCHAR(9) NOT NULL, WEEK_NUMBER INTEGER NOT NULL,

MONTH_NUMBER INTEGER, FISCAL_PERIOD VARCHAR NOT NULL, MONTH INTEGER NOT NULL,

QUARTER VARCHAR,YEAR VARCHAR NOT NULL,

CONSTRAINT TIME_KEY PRIMARY KEY (TIME_KEY));

CREATE TABLE STORE (

STORE_KEY NUMERIC NOT NULL, STORE_NAME VARCHAR(50) NOT NULL, MANAGER_NAME VARCHAR(50) NOT NULL, STORE_CODE NUMERIC NOT NULL, ADDRESS VARCHAR(100) NOT NULL, STATE VARCHAR(20) NOT NULL,

ZIP NUMERIC(6) NOT NULL,

CONSTRAINT STORE_KEY PRIMARY KEY (STORE_KEY)

);

CREATE TABLE PRODUCT (

PRODUCT_KEY NUMERIC NOT NULL, PRODUCT_NAME VARCHAR(50) NOT NULL, PRODUCT_CODE NUMERIC NOT NULL, PRODUCT_LINE LONGVARCHAR,

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BRAND VARCHAR(30) NOT NULL, DEPARTMENT VARCHAR(10) NOT NULL,

CONSTRAINT PRODUCT_KEY PRIMARY KEY (PRODUCT_KEY)

);


CREATE TABLE SALES_FACT (


PRODUCT_KEY NUMERIC NOT NULL, TIME_KEY NUMERIC NOT NULL, PROMOTION_KEY NUMERIC
NOT NULL,


STORE_KEY NUMERIC NOT NULL, SOLD_QUANTITY INTEGER NOT NULL, GROSS_SALES FLOAT NOT
NULL, NET_SALES FLOAT NOT NULL,

COST NUMERIC(10,2) NOT NULL, STORE_COUPON_AMT DECIMAL NOT NULL,
MFR_COUPON_AMOUNT DECIMAL NOT NULL

);


ALTER TABLE SALES_FACT ADD CONSTRAINT PROMOTION_SALES_FACT_fk FOREIGN KEY
(PROMOTION_KEY)

REFERENCES PROMOTION (PROMOTION_KEY) ON DELETE NO ACTION

ON UPDATE NO ACTION NOT DEFERRABLE;


ALTER TABLE SALES_FACT ADD CONSTRAINT TIME_SALES_FACT_fk FOREIGN KEY (TIME_KEY)

REFERENCES TIME (TIME_KEY) ON DELETE NO ACTION

ON UPDATE NO ACTION NOT DEFERRABLE;
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ALTER TABLE SALES_FACT ADD CONSTRAINT STORE_SALES_FACT_fk FOREIGN KEY (STORE_KEY)

REFERENCES STORE (STORE_KEY) ON DELETE NO ACTION

ON UPDATE NO ACTION NOT DEFERRABLE;

ALTER TABLE SALES_FACT ADD CONSTRAINT PRODUCT_SALES_FACT_fk FOREIGN KEY (PRODUCT_KEY)

REFERENCES PRODUCT (PRODUCT_KEY) ON DELETE NO ACTION

ON UPDATE NO ACTION NOT DEFERRABLE;

- **SQL QUERY OF SNOWFLAKE SCHEMA:**

CREATE TABLE QUARTER (

QUART_ID NUMERIC NOT NULL, QUARTER VARCHAR,

FISCAL_PERIOD VARCHAR NOT NULL,

CONSTRAINT QUART_ID PRIMARY KEY (QUART_ID)

);

CREATE TABLE ADDRESS (

ADDRESS_KEY NUMERIC NOT NULL, ZIP NUMERIC(6) NOT NULL, ADDRESS VARCHAR(100) NOT NULL, STATE VARCHAR(20) NOT NULL,

CONSTRAINT ADDRESS_KEY PRIMARY KEY (ADDRESS_KEY)

);

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CREATE TABLE PROMOTION (

PROMOTION_KEY NUMERIC NOT NULL, PROMOTION_CODE INTEGER, PROMOTION_TYPE VARCHAR(30) NOT NULL, PROMOTION_MEDIUM VARCHAR(30) NOT NULL, DISCOUNT_RATE DECIMAL(2,2),

CONSTRAINT PROMOTION_KEY PRIMARY KEY (PROMOTION_KEY)

);

CREATE TABLE TIME (

TIME_KEY NUMERIC NOT NULL, QUART_ID NUMERIC NOT NULL, DATE DATE NOT NULL, DAY_NUMBER INTEGER,

DAY_OF_WEEK VARCHAR(9) NOT NULL, WEEK_NUMBER INTEGER NOT NULL, MONTH_NUMBER INTEGER,

MONTH INTEGER NOT NULL, YEAR VARCHAR NOT NULL,

CONSTRAINT TIME_KEY PRIMARY KEY (TIME_KEY)

);

CREATE TABLE STORE (

STORE_KEY NUMERIC NOT NULL, ADDRESS_KEY NUMERIC NOT NULL, STORE_NAME VARCHAR(50) NOT NULL, MANAGER_NAME VARCHAR(50) NOT NULL, STORE_CODE NUMERIC NOT NULL,

CONSTRAINT STORE_KEY PRIMARY KEY (STORE_KEY)

);

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CREATE TABLE PRODUCT (

PRODUCT_KEY NUMERIC NOT NULL,

PRODUCT_NAME VARCHAR(50) NOT NULL, PRODUCT_CODE NUMERIC NOT NULL, PRODUCT_LINE LONGVARCHAR,

BRAND VARCHAR(30) NOT NULL, DEPARTMENT VARCHAR(10) NOT NULL,

CONSTRAINT PRODUCT_KEY PRIMARY KEY (PRODUCT_KEY)

);

CREATE TABLE SALES_FACT (

PRODUCT_KEY NUMERIC NOT NULL, TIME_KEY NUMERIC NOT NULL, PROMOTION_KEY NUMERIC NOT NULL, STORE_KEY NUMERIC NOT NULL, SOLD_QUANTITY INTEGER NOT NULL, GROSS_SALES FLOAT NOT NULL, NET_SALES FLOAT NOT NULL,

COST NUMERIC(10,2) NOT NULL, STORE_COUPON_AMT DECIMAL NOT NULL, MFR_COUPON_AMOUNT DECIMAL NOT NULL

);

ALTER TABLE TIME ADD CONSTRAINT QUARTER_TIME_fk FOREIGN KEY (QUART_ID)

REFERENCES QUARTER (QUART_ID) ON DELETE NO ACTION

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ON UPDATE NO ACTION NOT DEFERRABLE;

ALTER TABLE STORE ADD CONSTRAINT ADDRESS_STORE_fk FOREIGN KEY (ADDRESS_KEY)

REFERENCES ADDRESS (ADDRESS_KEY) ON DELETE NO ACTION

ON UPDATE NO ACTION NOT DEFERRABLE;

ALTER TABLE SALES_FACT ADD CONSTRAINT PROMOTION_SALES_FACT_fk FOREIGN KEY (PROMOTION_KEY)

REFERENCES PROMOTION (PROMOTION_KEY) ON DELETE NO ACTION

ON UPDATE NO ACTION NOT DEFERRABLE;

ALTER TABLE SALES_FACT ADD CONSTRAINT TIME_SALES_FACT_fk FOREIGN KEY (TIME_KEY)

REFERENCES TIME (TIME_KEY) ON DELETE NO ACTION

ON UPDATE NO ACTION NOT DEFERRABLE;

ALTER TABLE SALES_FACT ADD CONSTRAINT STORE_SALES_FACT_fk FOREIGN KEY (STORE_KEY)

REFERENCES STORE (STORE_KEY) ON DELETE NO ACTION

ON UPDATE NO ACTION NOT DEFERRABLE;

ALTER TABLE SALES_FACT ADD CONSTRAINT PRODUCT_SALES_FACT_fk FOREIGN KEY (PRODUCT_KEY)

REFERENCES PRODUCT (PRODUCT_KEY) ON DELETE NO ACTION

ON UPDATE NO ACTION NOT DEFERRABLE;