5. Create a table **SALES_DETAILS** with the columns SNO, MONTH, TARGET and QTY_SOLD to store the sales details of one year. Specify the composite primary key to the columns SNO and MONTH. TARGET and SALES must be positive numbers. Write the following SQL queries:

a) Display the total sales by each sales person considering only those months sales where target was reached.

b) If a commission of RS.50 provided for each item after reaching target, calculate and display the total commission for each sales person.

c) Display the SNO of those who never reached the target.

d) Display the SNO, MONTH and QTY_SOLD of the sales persons with SNO S0001 or S0003.

5.1 Creating the table and describing its structure

```
CREATE TABLE SALES_DETAILS
(
    SNO VARCHAR(5),
    MONTH VARCHAR(15),
    TARGET INTEGER NOT NULL,
    QTY_SOLD INTEGER NOT NULL,
    CHECK (TARGET > 0 AND QTY_SOLD > 0),
    PRIMARY KEY (SNO, MONTH)
);
```

Output

Table created.

Description of SALES_DETAILS table.

```
DESCRIBE SALES_DETAILS;          or      DESC SALES_DETAILS;
```

Name	Null?	Type
SNO	NOT NULL	VARCHAR2(5)
MONTH	NOT NULL	VARCHAR2(15)
TARGET	NOT NULL	NUMBER(38)
QTY_SOLD	NOT NULL	NUMBER(38)

5.2 Loading data into the table

```
INSERT INTO SALES_DETAILS VALUES ('S0001', 'JANUARY', 2000, 2100);
INSERT INTO SALES_DETAILS VALUES ('S0001', 'FEBRUARY', 2500, 2050);
INSERT INTO SALES_DETAILS VALUES ('S0001', 'MARCH', 2000, 2000);
INSERT INTO SALES_DETAILS VALUES ('S0002', 'JANUARY', 2500, 2700);
INSERT INTO SALES_DETAILS VALUES ('S0002', 'MARCH', 2000, 2600);
INSERT INTO SALES_DETAILS VALUES ('S0002', 'APRIL', 2000, 1900);
INSERT INTO SALES_DETAILS VALUES ('S0003', 'APRIL', 3000, 3000);
INSERT INTO SALES_DETAILS VALUES ('S0003', 'MAY', 2000, 2200);
INSERT INTO SALES_DETAILS VALUES ('S0003', 'JULY', 2500, 2500);
INSERT INTO SALES_DETAILS VALUES ('S0004', 'JANUARY', 2000, 1500);
INSERT INTO SALES_DETAILS VALUES ('S0004', 'MARCH', 2000, 1950);
INSERT INTO SALES_DETAILS VALUES ('S0004', 'DECEMBER', 2400, 2100);
```

Output

12 rows created.

Displaying the values inserted into the SALES_DETAILS table.

```
SELECT *
FROM SALES_DETAILS;
```

```
SNO   MONTH               TARGET   QTY_SOLD
----- --------------- ---------- ----------
S0001 JANUARY               2000       2100
S0001 FEBRUARY              2500       2050
S0001 MARCH                 2000       2000
S0002 JANUARY               2500       2700
S0002 MARCH                 2000       2600
S0002 APRIL                 2000       1900
S0003 APRIL                 3000       3000
S0003 MAY                   2000       2200
S0003 JULY                  2500       2500
S0004 JANUARY               2000       1500
S0004 MARCH                 2000       1950
S0004 DECEMBER              2400       2100

12 rows selected.
```

5.3 Queries

5.3.1 Display the total sales by each sales person considering only those months sales where target was reached.

```
SELECT SNO, MONTH, SUM(QTY_SOLD) AS TOTAL_SALES
FROM SALES_DETAILS
WHERE QTY_SOLD>=TARGET
GROUP BY SNO, MONTH
ORDER BY SNO;
```

Output

```
SNO   MONTH           TOTAL_SALES
----- --------------- -----------
S0001 JANUARY                2100
S0001 MARCH                  2000
S0002 JANUARY                2700
S0002 MARCH                  2600
S0003 APRIL                  3000
S0003 JULY                   2500
S0003 MAY                    2200

7 rows selected.
```

5.3.2 If a commission of Rs. 50 is provided for each item after reaching target, calculate and display the total commission for each salesperson.

```
SELECT SNO, SUM(QTY_SOLD-TARGET)*50 AS TOTAL_COMMISSION
FROM SALES_DETAILS
WHERE QTY_SOLD>=TARGET
GROUP BY SNO
ORDER BY SNO;
```

Output

```
SNO   TOTAL_COMMISSION
----- ----------------
S0001              5000
S0002             40000
S0003             10000
```

5.3.3 Display the SNO of those who never reached the target.

```
SELECT DISTINCT SNO
FROM SALES_DETAILS
WHERE QTY_SOLD<TARGET
ORDER BY SNO;
```

Output

```
SNO
--------
S0001
S0002
S0004
```

5.3.4 Display the SNO, MONTH and QTY_SOLD of the sales persons with SNO S0001 or S0003.

```
SELECT SNO, MONTH, QTY_SOLD
FROM SALES_DETAILS
WHERE SNO='S0001' OR SNO='S0003';
```

OR

```
SELECT SNO, MONTH, QTY_SOLD
FROM SALES_DETAILS
WHERE SNO IN ('S0001','S0003');
```

(Any one of the above)

Output

```
SNO   MONTH              QTY_SOLD
----- --------------- ----------
S0001 JANUARY                2100
S0001 FEBRUARY               2050
S0001 MARCH                  2000
S0003 APRIL                  3000
S0003 MAY                    2200
S0003 JULY                   2500

6 rows selected.
```

Date of Submission	Remarks
Signature of the Lecturer	