

PRACTICAL 3

Title: To understand and use SQL Sub-Query

Objective: To understand the use of sql subquery.

1. Create the following table.

Supplier-(scode, sname, scity, turnover)

Part-(pcode,weigh, color, cost, sellingprice)

Supplier_Part-(scode, pcode, qty)

1.(solution)

```
CREATE TABLE SUPPLIER (  
    SCODE varchar(10),  
    SNAME varchar(20),  
    SCITY varchar(20),  
    TURNOVER decimal(8, 2),  
    PRIMARY KEY (SCODE)  
);
```

The screenshot displays the Oracle Live SQL web interface. On the left is a dark sidebar with navigation options: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains a text editor with the following SQL code:

```
1 CREATE TABLE SUPPLIER (  
2     SCODE varchar(10),  
3     SNAME varchar(20),  
4     SCITY varchar(20),  
5     TURNOVER decimal(8, 2),  
6     PRIMARY KEY (SCODE)  
7 );  
8
```

Below the editor, a status message reads 'Table created.' The top of the interface includes a 'Live SQL' header, a user profile 'thelazycrazywizard@gmail.com', and buttons for Feedback, Help, Clear, Find, Actions, Save, and Run. The footer contains Oracle branding, copyright information for 2020, and links to the Oracle Learning Library and other resources.

```
CREATE TABLE PART (  
    PCODE varchar(5),  
    WEIGH decimal(8, 2),  
    COLOR varchar(10),  
    COST decimal(8, 2),  
    SELLINGPRICE decimal(8, 2),  
    PRIMARY KEY (PCODE)  
);
```

The screenshot shows the Oracle Live SQL interface. On the left is a navigation menu with options: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains the following SQL code:

```
1 CREATE TABLE PART (  
2     PCODE varchar(5),  
3     WEIGH decimal(8, 2),  
4     COLOR varchar(10),  
5     COST decimal(8, 2),  
6     SELLINGPRICE decimal(8, 2),  
7     PRIMARY KEY (PCODE)  
8 );  
9
```

Below the code editor, a message states 'Table created.' The footer of the interface includes the Oracle logo, 'Integrated Cloud Applications & Platform Services', copyright information for 2020, and links to the Oracle Learning Library and Twitter.

```
CREATE TABLE SUPPLIER_PART (  
    SCODE varchar(10),  
    PCODE varchar(5),  
    QTY integer,  
    PRIMARY KEY (SCODE, PCODE),  
    FOREIGN KEY (SCODE) REFERENCES SUPPLIER(SCODE),  
    FOREIGN KEY (PCODE) REFERENCES PART(PCODE)  
);
```

The screenshot shows the Oracle Live SQL interface with the 'SQL Worksheet' tab selected. The SQL code entered is:

```
1 CREATE TABLE SUPPLIER_PART (  
2     SCODE varchar(10),  
3     PCODE varchar(5),  
4     QTY integer,  
5     PRIMARY KEY (SCODE, PCODE),  
6     FOREIGN KEY (SCODE) REFERENCES SUPPLIER(SCODE),  
7     FOREIGN KEY (PCODE) REFERENCES PART(PCODE)  
8 );
```

The message 'Table created.' is displayed below the code. The footer of the interface is identical to the previous screenshot, showing the Oracle logo, 'Integrated Cloud Applications & Platform Services', and copyright information.

2. Populate the table

2.(solution)

```
INSERT INTO SUPPLIER (SCODE, SNAME, SCITY, TURNOVER)
VALUES ('D0005', 'Raghu Ram', 'Bombay', 45000);
```

```
INSERT INTO SUPPLIER (SCODE, SNAME, SCITY, TURNOVER)
VALUES ('E0005', 'Suresh Kapoor', 'Bombay', 4000);
```

```
INSERT INTO SUPPLIER (SCODE, SNAME, SCITY)
VALUES ('A0003', 'Nimesh Mehta', 'Bangalore');
```

```
INSERT INTO SUPPLIER (SCODE, SNAME, SCITY, TURNOVER)
VALUES ('P0002', 'Ravi Kumar', 'Surat', 24900);
```

The screenshot displays the Oracle Live SQL web interface. On the left is a dark sidebar with navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains a text editor with four SQL statements, each on a new line. Below the editor, the execution results are shown as four separate lines, each stating '1 row(s) inserted.' The footer of the interface includes the Oracle logo, 'Integrated Cloud Applications & Platform Services', copyright information for 2020, and links to Oracle Learning Library, Ask Tom, Dev Gym, and Database Doc. It also specifies the version as 'Live SQL 20.3.1, running Oracle Database 19c Enterprise Edition - 19.5.0.0.0' and mentions it is 'Built with ♥ using Oracle APEX'.

Live SQL

SQL Worksheet

```
1 INSERT INTO SUPPLIER (SCODE, SNAME, SCITY, TURNOVER)
2 VALUES ('D0005', 'Raghu Ram', 'Bombay', 45000);
3
4 INSERT INTO SUPPLIER (SCODE, SNAME, SCITY, TURNOVER)
5 VALUES ('E0005', 'Suresh Kapoor', 'Bombay', 4000);
6
7 INSERT INTO SUPPLIER (SCODE, SNAME, SCITY)
8 VALUES ('A0003', 'Nimesh Mehta', 'Bangalore');
9
10 INSERT INTO SUPPLIER (SCODE, SNAME, SCITY, TURNOVER)
11 VALUES ('P0002', 'Ravi Kumar', 'Surat', 24900);
```

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

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INSERT INTO PART (PCODE, WEIGH, COLOR, COST, SELLINGPRICE)
VALUES ('PX405', 23, 'RED', 3400, 3500);

INSERT INTO PART (PCODE, WEIGH, COLOR, COST, SELLINGPRICE)
VALUES ('PX402', 1, 'RED', 30, 35);

INSERT INTO PART (PCODE, WEIGH, COLOR, COST, SELLINGPRICE)
VALUES ('PX401', 12, 'BLACK', 45, 70);

INSERT INTO PART (PCODE, WEIGH, COLOR, COST, SELLINGPRICE)
VALUES ('PX404', 45, 'BLACK', 650, 900);

INSERT INTO PART (PCODE, WEIGH, COLOR, COST, SELLINGPRICE)
VALUES ('PX406', 28, 'RED', 30, 35);

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Home

SQL Worksheet

My Session

Schema

Quick SQL

My Scripts

My Tutorials

Code Library

SQL Worksheet

Clear Find Actions Save Run

```
1 INSERT INTO PART (PCODE, WEIGH, COLOR, COST, SELLINGPRICE)
2 VALUES ('PX405', 23, 'RED', 3400, 3500);
3
4 INSERT INTO PART (PCODE, WEIGH, COLOR, COST, SELLINGPRICE)
5 VALUES ('PX402', 1, 'RED', 30, 35);
6
7 INSERT INTO PART (PCODE, WEIGH, COLOR, COST, SELLINGPRICE)
8 VALUES ('PX401', 12, 'BLACK', 45, 70);
9
10 INSERT INTO PART (PCODE, WEIGH, COLOR, COST, SELLINGPRICE)
11 VALUES ('PX404', 45, 'BLACK', 650, 900);
```

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

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```
INSERT INTO SUPPLIER_PART (SCODE, PCODE, QTY)
VALUES ('D0005', 'PX405', 32);
```

```
INSERT INTO SUPPLIER_PART (SCODE, PCODE, QTY)
VALUES ('E0005', 'PX402', 32);
```

```
INSERT INTO SUPPLIER_PART (SCODE, PCODE, QTY)
VALUES ('A0003', 'PX401', 32);
```

```
INSERT INTO SUPPLIER_PART (SCODE, PCODE, QTY)
VALUES ('P0002', 'PX404', 32);
```

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Home

SQL Worksheet

My Session

Schema

Quick SQL

My Scripts

My Tutorials

Code Library

SQL Worksheet

Clear Find Actions Save Run

```
1 INSERT INTO SUPPLIER_PART (SCODE, PCODE, QTY)
2 VALUES ('D0005', 'PX405', 32);
3
4 INSERT INTO SUPPLIER_PART (SCODE, PCODE, QTY)
5 VALUES ('E0005', 'PX402', 32);
6
7 INSERT INTO SUPPLIER_PART (SCODE, PCODE, QTY)
8 VALUES ('A0003', 'PX401', 32);
9
10 INSERT INTO SUPPLIER_PART (SCODE, PCODE, QTY)
11 VALUES ('P0002', 'PX404', 32);
12
```

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

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3. Write appropriate SQL Statement for the following:

3.1. Get the supplier number and part number in ascending order of supplier number.

3.1.(solution)

```
SELECT SCODE, PCODE FROM SUPPLIER_PART  
ORDER BY SCODE ASC;
```

The screenshot shows the Live SQL interface. The SQL Worksheet contains the following query:

```
1 SELECT SCODE, PCODE FROM SUPPLIER_PART  
2 ORDER BY SCODE ASC;
```

The result is displayed as a table with 4 rows selected:

SCODE	PCODE
A0003	PX401
D0005	PX405
E0005	PX402
P0002	PX404

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4 rows selected.

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3.2. Get the details of supplier who operate from Bombay with turnover 50.

3.2.(solution)

```
SELECT * FROM SUPPLIER  
WHERE SCITY = 'Bombay' AND TURNOVER=50;
```

The screenshot shows the Live SQL interface. The SQL Worksheet contains the following query:

```
1 SELECT * FROM SUPPLIER  
2 WHERE SCITY = 'Bombay' AND TURNOVER=50;
```

The result is displayed as "no data found".

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Home

SQL Worksheet

My Session

Schema

Quick SQL

My Scripts

My Tutorials

Code Library

SQL Worksheet

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```
1 SELECT * FROM SUPPLIER
2 WHERE SCITY = 'Bombay' AND TURNOVER=4000;
```

SCODE	SNAME	SCITY	TURNOVER
E0005	Suresh Kapoor	Bombay	4000

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3.3. Get the total number of supplier.

3.3.(solution)

```
SELECT COUNT(SCODE)
FROM SUPPLIER_PART;
```

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Home

SQL Worksheet

My Session

Schema

Quick SQL

My Scripts

My Tutorials

Code Library

SQL Worksheet

Clear

Find

Actions

Save

Run

```
1 SELECT COUNT(SCODE)
2 FROM SUPPLIER_PART;
```

COUNT(SCODE)
4

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3.4. Get the part number weighing between 25 and 35.

3.4.(solution)

SELECT * FROM PART
WHERE WEIGH>=25 AND WEIGH<=35;

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Home

SQL Worksheet

My Session

Schema

Quick SQL

My Scripts

My Tutorials

Code Library

SQL Worksheet

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1 SELECT * FROM PART

2 WHERE WEIGH>=25 AND WEIGH<=35;

3

PCODE	WEIGH	COLOR	COST	SELLINGPRICE
PX406	28	RED	30	35

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3.5. Get the supplier number whose turnover is null.

3.5.(solution)

SELECT SNAME FROM SUPPLIER
WHERE TURNOVER IS NULL;

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Home

SQL Worksheet

My Session

Schema

Quick SQL

My Scripts

My Tutorials

Code Library

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1 SELECT SNAME FROM SUPPLIER

2 WHERE TURNOVER IS NULL;

SNAME

Nimesh Mehta

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3.6. Get the part number that cost 20, 30 or 40 rupees.

3.6.(solution)

SELECT PCODE FROM PART
WHERE COST IN (20, 30, 40);

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SQL Worksheet

My Session

Schema

Quick SQL

My Scripts

My Tutorials

Code Library

SQL Worksheet

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1 SELECT PCODE FROM PART

2 WHERE COST IN (20, 30, 40);

3

PCODE
PX402
PX406

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2 rows selected.

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3.7. Get the total quantity of part 2 that is supplied.

3.7.(solution)

SELECT QTY FROM SUPPLIER_PART
WHERE PCODE='PX402';

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Home

SQL Worksheet

My Session

Schema

Quick SQL

My Scripts

My Tutorials

Code Library

SQL Worksheet

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1 SELECT QTY FROM SUPPLIER_PART

2 WHERE PCODE='PX402';

3

QTY
32

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3.8. Get the name of supplier who supply part 2.

3.8.(solution)

```
SELECT SNAME
FROM SUPPLIER S, SUPPLIER_PART SP
WHERE
    SP.PCODE='PX402' AND
    S.SCODE = SP.SCODE
;
```

The screenshot shows the Oracle Live SQL interface. The left sidebar contains navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled "SQL Worksheet" and contains a SQL query:

```
1 SELECT SNAME
2 FROM SUPPLIER S, SUPPLIER_PART SP
3 WHERE
4     SP.PCODE='PX402' AND
5     S.SCODE = SP.SCODE
6 ;
7
```

Below the query editor, the results are displayed in a table with one column, "SNAME", and one row containing the value "Suresh Kapoor". A "Download CSV" link is visible below the table. The footer of the interface includes the Oracle logo, "Integrated Cloud Applications & Platform Services", copyright information for 2020, and links to Oracle Learning Library, Ask Tom, Dev Gym, and Database Doc.

3.9. Get the part number whose cost is greater than the average cost.

3.9.(solution)

```
SELECT PCODE
FROM PART
WHERE COST > (SELECT AVG(COST) FROM PART);
```

The screenshot shows the Oracle Live SQL interface. The left sidebar contains navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled "SQL Worksheet" and contains a SQL query:

```
1 SELECT PCODE
2 FROM PART
3 WHERE COST > (SELECT AVG(COST) FROM PART);
4
```

Below the query editor, the results are displayed in a table with one column, "PCODE", and one row containing the value "PX405". A "Download CSV" link is visible below the table. The footer of the interface includes the Oracle logo, "Integrated Cloud Applications & Platform Services", copyright information for 2020, and links to Oracle Learning Library, Ask Tom, Dev Gym, and Database Doc.

3.10. Get the supplier number and turnover in descending order of turnover.
3.10.(solution)

SELECT SCODE, TURNOVER
FROM SUPPLIER
ORDER BY TURNOVER DESC;

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Home

SQL Worksheet

My Session

Schema

Quick SQL

My Scripts

My Tutorials

Code Library

SQL Worksheet

Clear Find Actions Save Run

1 SELECT SCODE, TURNOVER

2 FROM SUPPLIER

3 ORDER BY TURNOVER DESC;

4

SCODE	TURNOVER
A0003	-
D0005	45000
P0002	24900
E0005	4000

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4 rows selected.

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