Name:- Atish Kumar

Roll No:- 120CS0173

Date:- 06 April, 2022

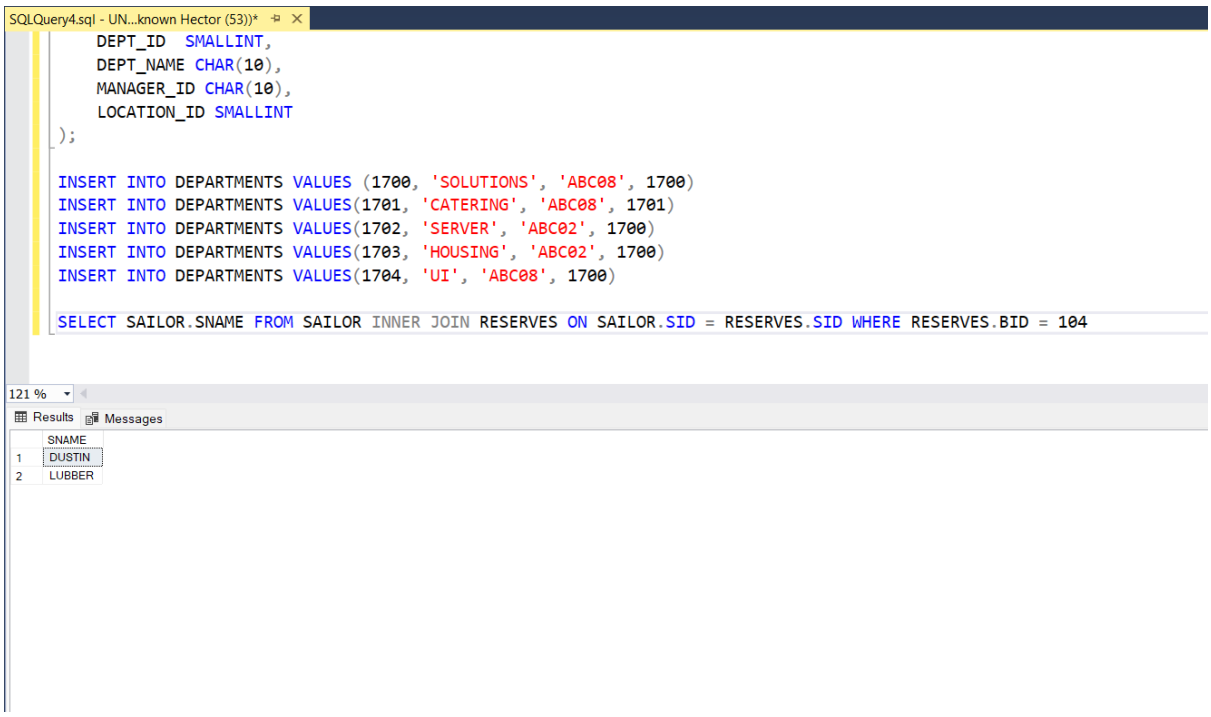
DE Lab Assignment 07

1. Find the names of the sailor who have reserved boat number 104.

Program:-

```
SELECT SAILOR.SNAME FROM SAILOR INNER JOIN RESERVES ON SAILOR.SID = RESERVES.SID WHERE
RESERVES.BID = 104
```

Output:-

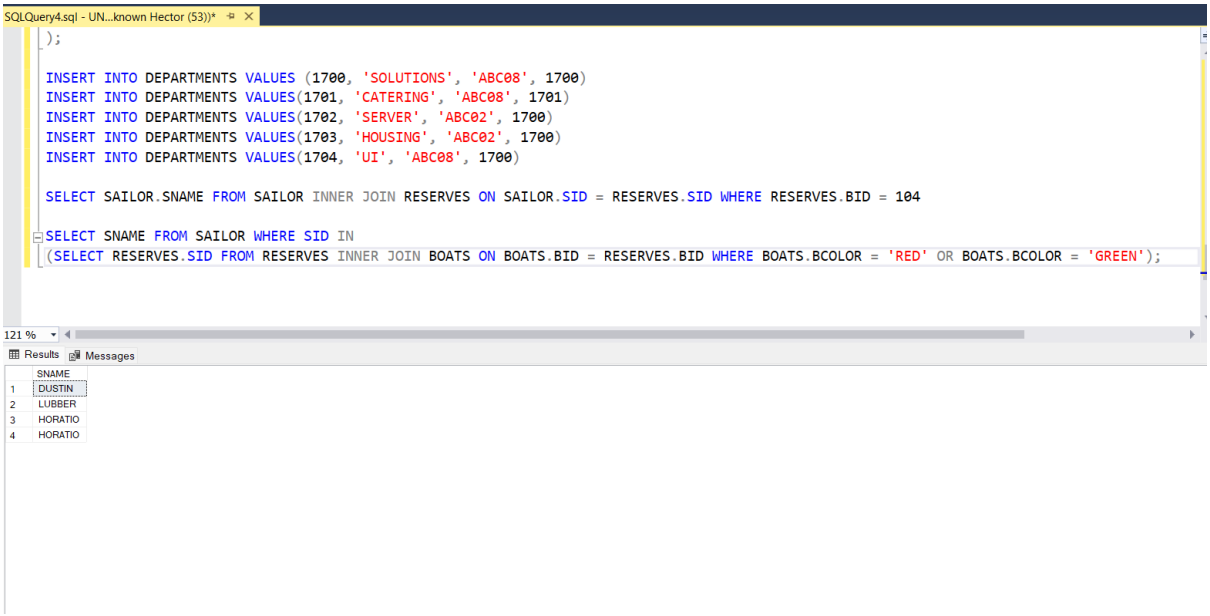


2. Find the names of the sailor who have reserved both green and red boat.

Program:-

```
SELECT SNAME FROM SAILOR WHERE SID IN
(SELECT RESERVES.SID FROM RESERVES INNER JOIN BOATS ON BOATS.BID = RESERVES.BID WHERE
BOATS.BCOLOR = 'RED' OR BOATS.BCOLOR = 'GREEN');
```

Output:-

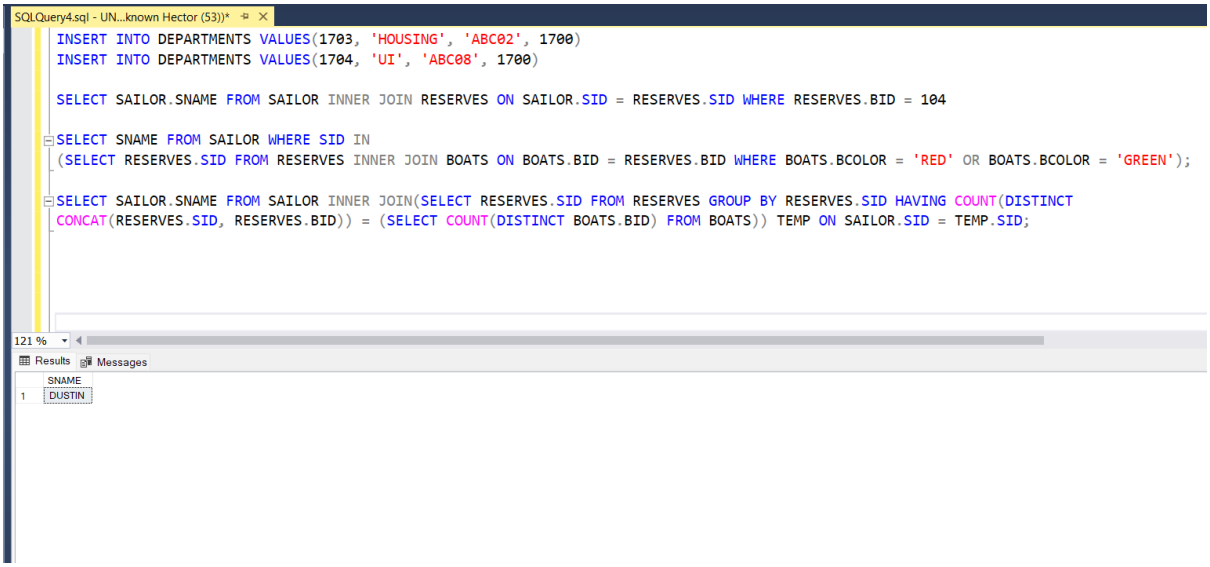


3. Find the names of the sailors who have reserved all boats.

Program:-

```
SELECT SAILOR.SNAME FROM SAILOR INNER JOIN(SELECT RESERVES.SID FROM RESERVES GROUP BY
RESERVES.SID HAVING COUNT(DISTINCT
CONCAT(RESERVES.SID, RESERVES.BID)) = (SELECT COUNT(DISTINCT BOATS.BID) FROM BOATS))
TEMP ON SAILOR.SID = TEMP.SID;
```

Output:-

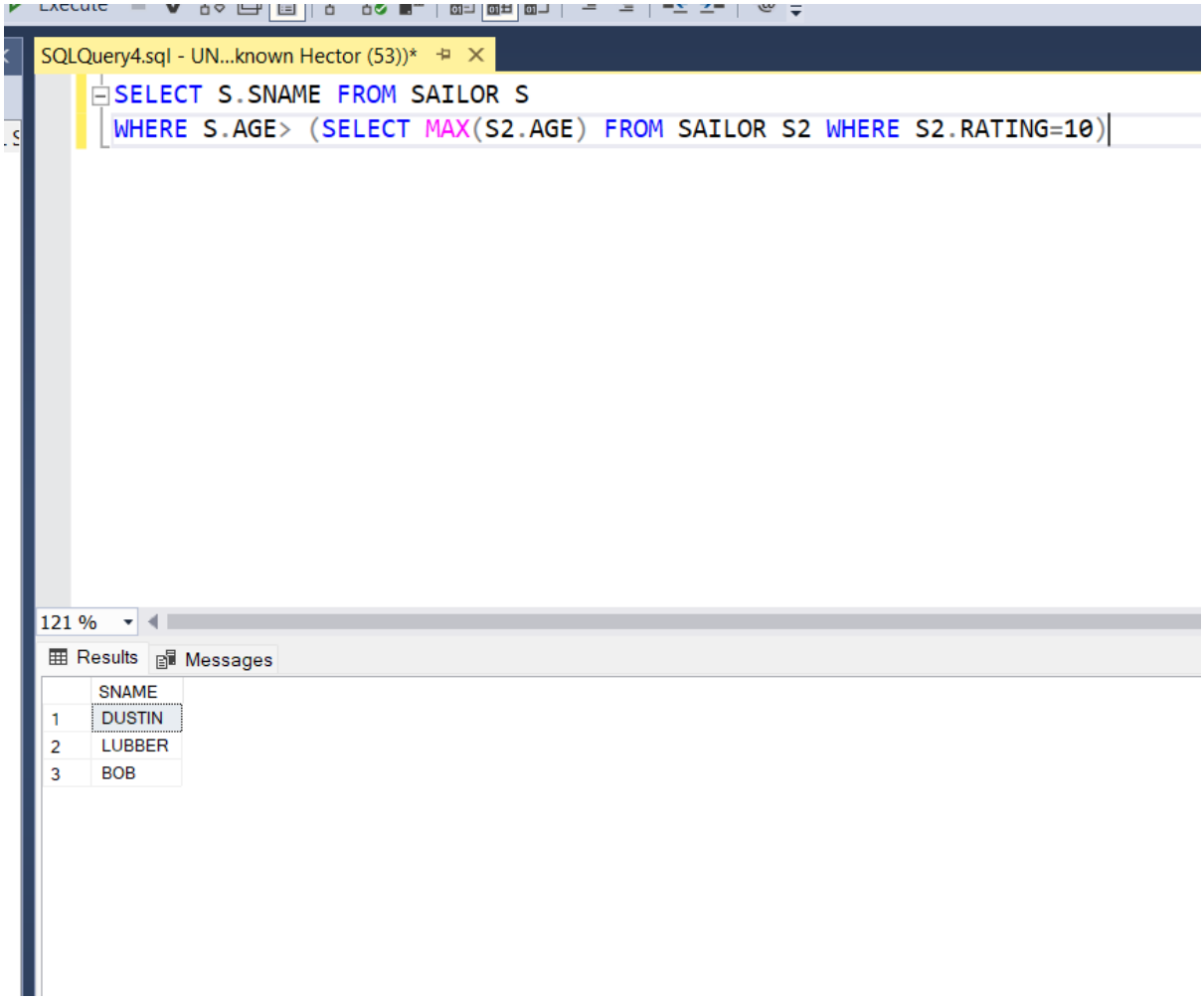


4. Find the names of the sailors who are older than the oldest sailor with a rating of 10.

Program:-

```
SELECT S.SNAME FROM SAILOR S
WHERE S.AGE> (SELECT MAX(S2.AGE) FROM SAILOR S2 WHERE S2.RATING=10)
```

Output:-

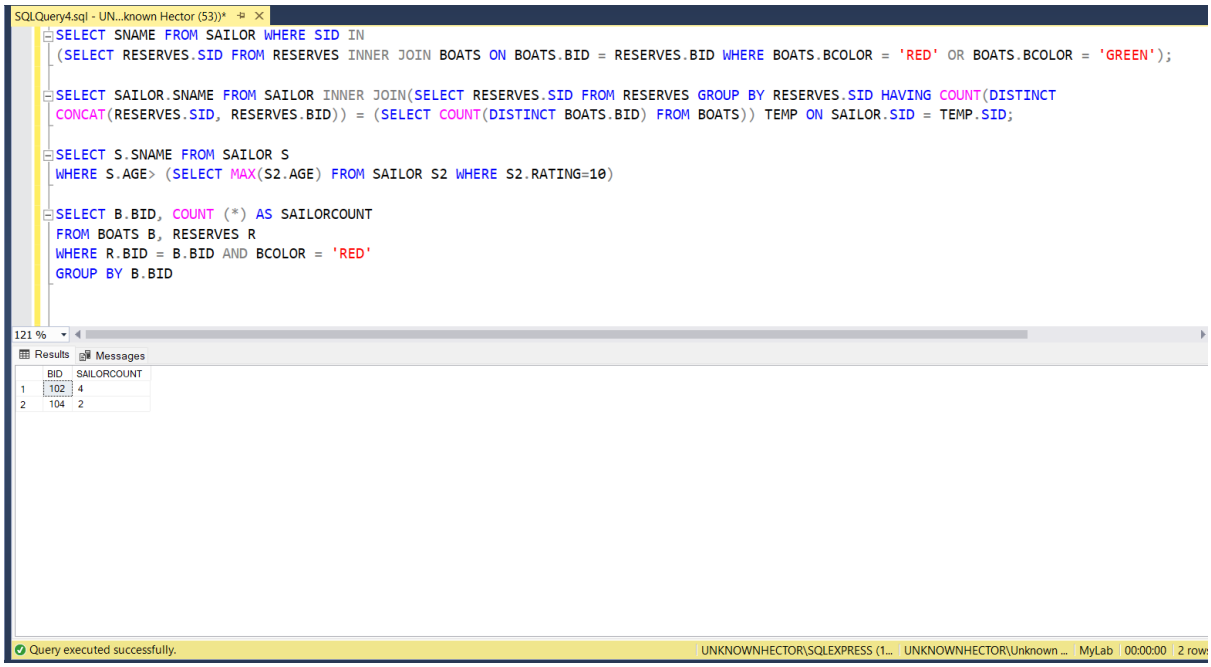


5. For each red boat find the number of reservation for this boat.

Program:-

```
SELECT B.BID, COUNT (*) AS SAILORCOUNT
FROM BOATS B, RESERVES R
WHERE R.BID = B.BID AND BCOLOR = 'RED'
GROUP BY B.BID
```

Output:-



6. Find the average age of the sailors who are of voting age for each rating level that has at least two such sailors.

Program:-

```
SELECT S.RATING, AVG(S.AGE) AS AVGAGE
FROM SAILOR S
WHERE S.AGE>18
GROUP BY S.RATING
HAVING COUNT(*) > 1
```

Output:-

```
SELECT S.SNAME FROM SAILOR S
WHERE S.AGE> (SELECT MAX(S2.AGE) FROM SAILOR S2 WHERE S2.RATING=10)

SELECT S.RATING, AVG(S.AGE) AS AVGAGE
FROM SAILOR S
WHERE S.AGE>18
GROUP BY S.RATING
HAVING COUNT(*) > 1
```

121 %

Results | Messages

	RATING	AVGAGE
1	3	44
2	7	40
3	8	40

7. Show the employees having same first name .

Program:-

```
SELECT E1.FIRST_NAME FROM EMPLOYES E1, EMPLOYES E2 WHERE E1.FIRST_NAME = E2.FIRST_NAME
AND E1.EMP_ID<>E2.EMP_ID
```

Output:-

```
SELECT S.RATING, AVG(S.AGE) AS AVGAGE
FROM SAILOR S
WHERE S.AGE>18
GROUP BY S.RATING
HAVING COUNT(*) > 1

SELECT E1.FIRST_NAME FROM EMPLOYES E1, EMPLOYES E2 WHERE E1.FIRST_NAME = E2.FIRST_NAME AND E1.EMP_ID<>E2.EMP_ID
```

121 %

Results | Messages

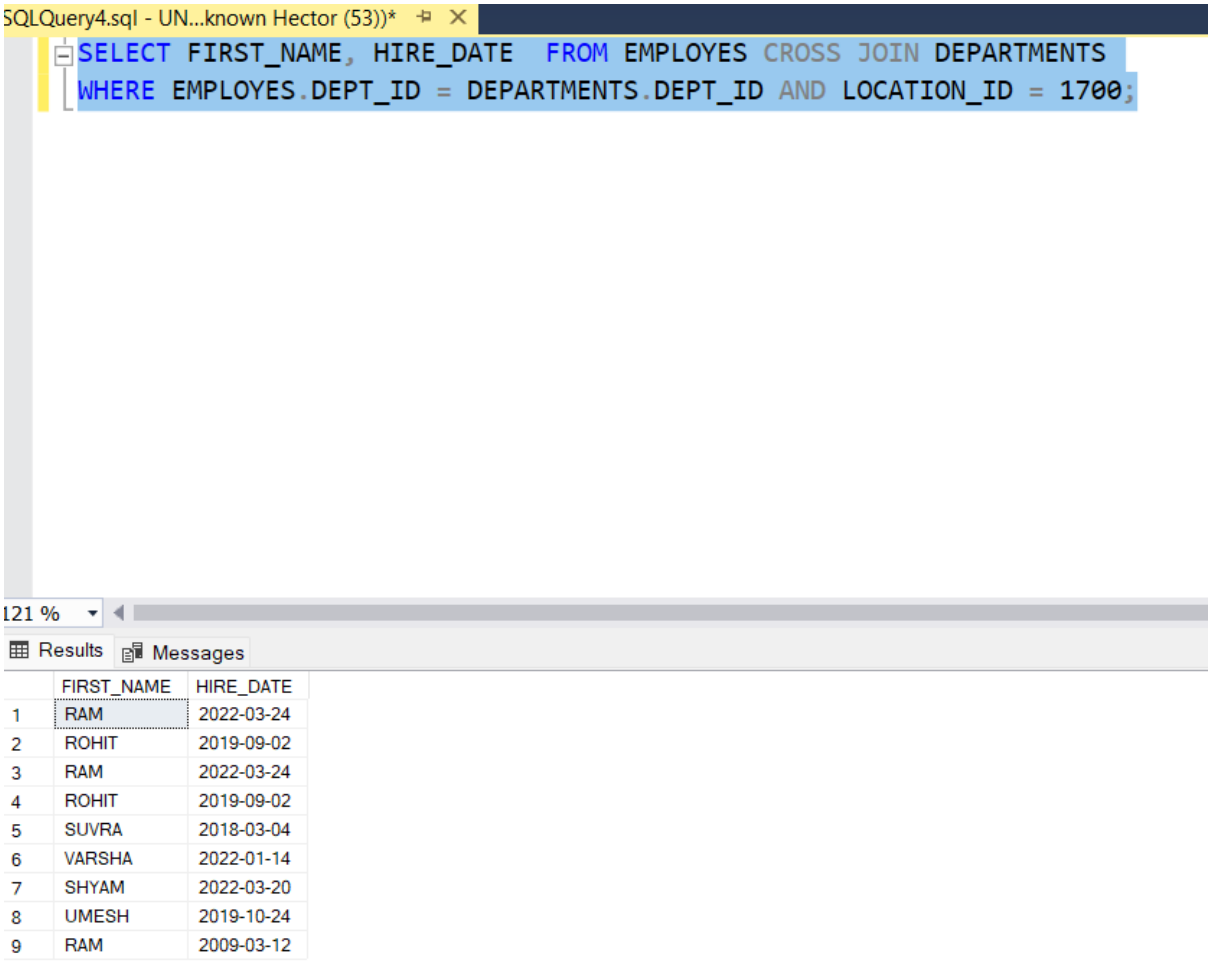
	FIRST_NAME
1	RAM
2	RAM

8. Write a query to output the names and hire dates of all latest hires in their respective departments in the location ID 1700.

Program:-

```
SELECT FIRST_NAME, HIRE_DATE  FROM EMPLOYES CROSS JOIN DEPARTMENTS
WHERE EMPLOYES.DEPT_ID = DEPARTMENTS.DEPT_ID AND LOCATION_ID = 1700;
```

Output:-



	FIRST_NAME	HIRE_DATE
1	RAM	2022-03-24
2	ROHIT	2019-09-02
3	RAM	2022-03-24
4	ROHIT	2019-09-02
5	SUVRA	2018-03-04
6	VARSHA	2022-01-14
7	SHYAM	2022-03-20
8	UMESH	2019-10-24
9	RAM	2009-03-12

9. Create a column create_date in department and set it to earliest hire_date for each department.

Program:-

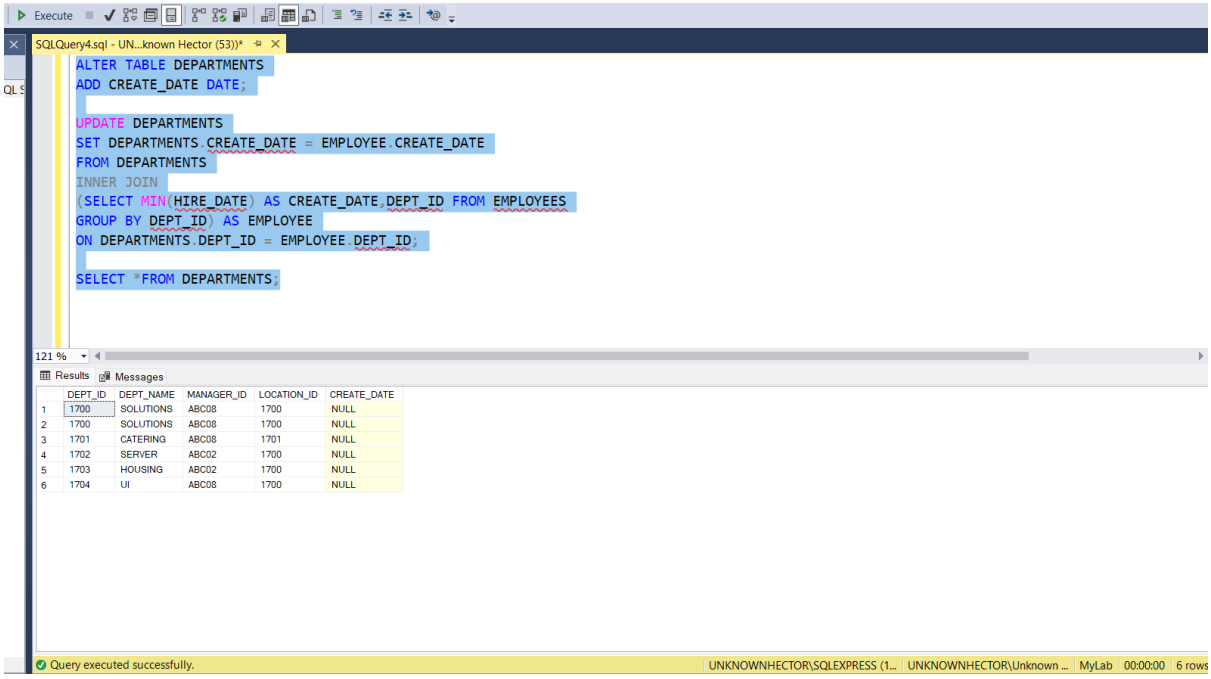
```
ALTER TABLE DEPARTMENTS
ADD CREATE_DATE DATE;

UPDATE DEPARTMENTS
SET DEPARTMENTS.CREATE_DATE = EMPLOYEE.CREATE_DATE
FROM DEPARTMENTS
INNER JOIN
```

```
(SELECT MIN(HIRE_DATE) AS CREATE_DATE,DEPT_ID FROM EMPLOYEES
GROUP BY DEPT_ID) AS EMPLOYEE
ON DEPARTMENTS.DEPT_ID = EMPLOYEE.DEPT_ID;

SELECT *FROM DEPARTMENTS;
```

Output:-

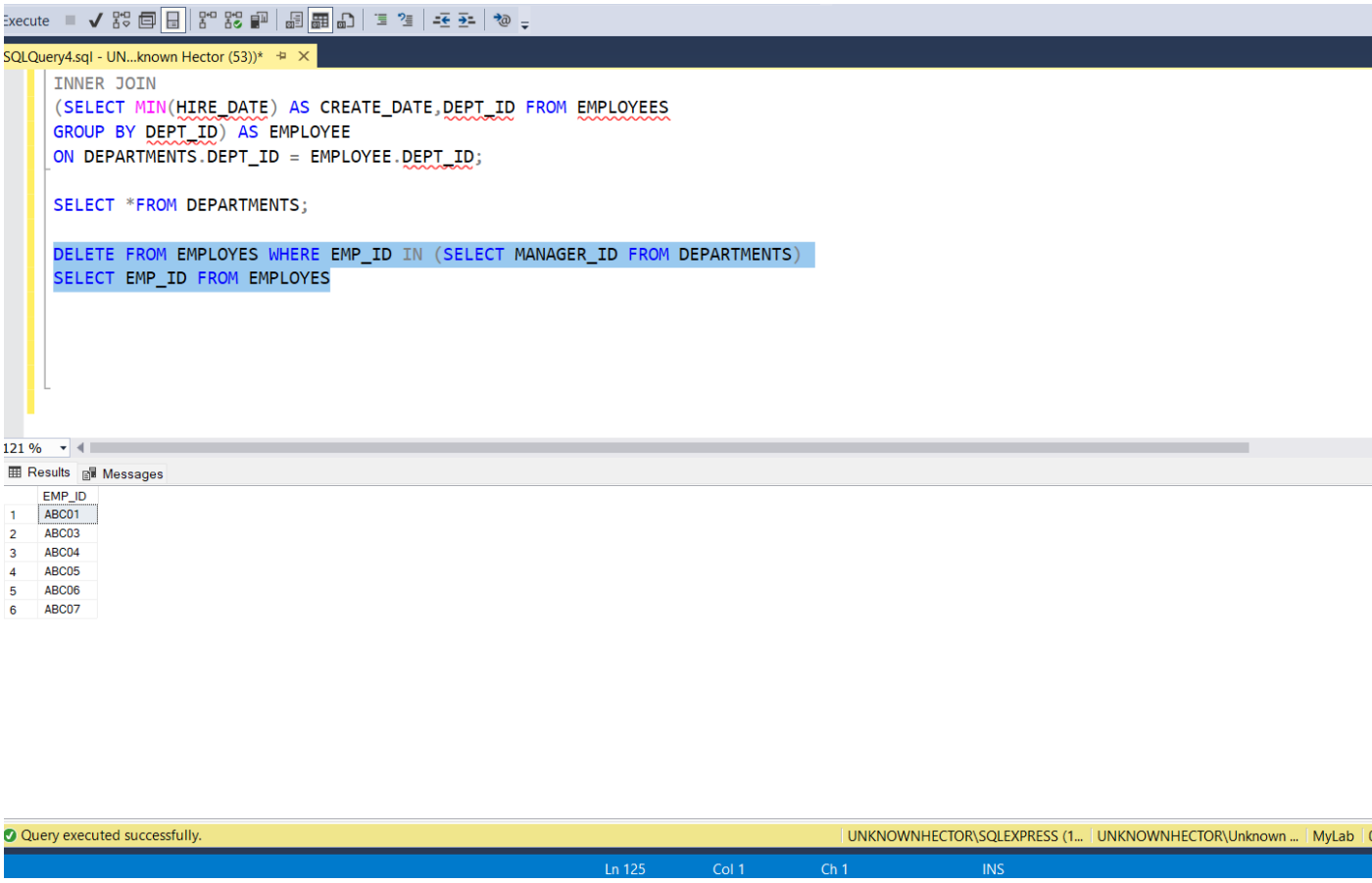


10. Delete entry from employee who is his own manager

Program:-

```
DELETE FROM EMPLOYES WHERE EMP_ID IN (SELECT MANAGER_ID FROM DEPARTMENTS)
SELECT EMP_ID FROM EMPLOYES
```

Output:-



All Program

```
CREATE TABLE SAILOR
(
	SID  TINYINT,
	SNAME CHAR(10),
	RATING TINYINT,
	AGE TINYINT
);

INSERT INTO SAILOR VALUES(22,'DUSTIN',7, 45);
INSERT INTO SAILOR VALUES(29,'BRUTUS',1, 33);
INSERT INTO SAILOR VALUES(31,'LUBBER',8, 55);
INSERT INTO SAILOR VALUES(32,'ANDY',8, 25);
INSERT INTO SAILOR VALUES(58,'RUSTY',10, 35);
INSERT INTO SAILOR VALUES(64,'HORATIO',7, 35);
INSERT INTO SAILOR VALUES(71,'ZORBA',10, 16);
INSERT INTO SAILOR VALUES(74,'HORATIO',9, 35);
INSERT INTO SAILOR VALUES(85,'ART',3, 25);
INSERT INTO SAILOR VALUES(95,'BOB',3, 63);

CREATE TABLE BOATS
(
	BID  TINYINT,
	BNAME CHAR(10),
	BCOLOR CHAR(10)
);

INSERT INTO BOATS VALUES(101,'INTERLAKE','BLUE');
INSERT INTO BOATS VALUES(102,'INTERLAKE','RED');
INSERT INTO BOATS VALUES(103,'CLIPPER','GREEN');
INSERT INTO BOATS VALUES(104,'MARINE','RED');

CREATE TABLE RESERVES
(
	SID  TINYINT,
	BID TINYINT,
	DATE DATE
);

INSERT INTO RESERVES VALUES(22,101,'1998-10-10')
INSERT INTO RESERVES VALUES(22,102,'1998-10-10')
INSERT INTO RESERVES VALUES(22,103,'1998-08-10')
INSERT INTO RESERVES VALUES(22,104,'1998-07-10')
INSERT INTO RESERVES VALUES(31,102,'1998-10-11')
INSERT INTO RESERVES VALUES(31,103,'1998-06-11')
INSERT INTO RESERVES VALUES(31,104,'1998-12-11')
INSERT INTO RESERVES VALUES(64,101,'1998-05-09')
INSERT INTO RESERVES VALUES(64,102,'1998-08-09')
INSERT INTO RESERVES VALUES(74,103,'1998-08-09')

CREATE TABLE EMPLOYES
(
	EMP_ID  CHAR(10),
	FIRST_NAME CHAR(10),
	LAST_NAME CHAR(10),
	HIRE_DATE DATE,
	DEPT_ID SMALLINT,
	SALARY INT
);
```

```sql
INSERT INTO EMPLOYES VALUES('ABC01', 'RAM', 'KUMAR', '2022-03-24', 1700, 60000)
INSERT INTO EMPLOYES VALUES('ABC02', 'RAMAN', 'SHARMA', '2021-08-08', 1701, 70000)
INSERT INTO EMPLOYES VALUES('ABC03', 'SUVRA', 'SARKAR', '2018-03-04', 1702, 65000)
INSERT INTO EMPLOYES VALUES('ABC04', 'SHYAM', 'KUMAR', '2022-03-20', 1703, 60000)
INSERT INTO EMPLOYES VALUES('ABC05', 'ROHIT', 'VERMA', '2019-09-02', 1700, 80000)
INSERT INTO EMPLOYES VALUES('ABC06', 'VARSHA', 'KUMARI', '2022-01-14', 1702, 60000)
INSERT INTO EMPLOYES VALUES('ABC07', 'UMESH', 'SINHA', '2019-10-24', 1703, 70000)
INSERT INTO EMPLOYES VALUES('ABC08', 'RAM', 'SAHOO', '2009-03-12', 1704, 50000)


CREATE TABLE DEPARTMENTS
(
	DEPT_ID  SMALLINT,
	DEPT_NAME CHAR(10),
	MANAGER_ID CHAR(10),
	LOCATION_ID SMALLINT
);

INSERT INTO DEPARTMENTS VALUES (1700, 'SOLUTIONS', 'ABC08', 1700)
INSERT INTO DEPARTMENTS VALUES(1701, 'CATERING', 'ABC08', 1701)
INSERT INTO DEPARTMENTS VALUES(1702, 'SERVER', 'ABC02', 1700)
INSERT INTO DEPARTMENTS VALUES(1703, 'HOUSING', 'ABC02', 1700)
INSERT INTO DEPARTMENTS VALUES(1704, 'UI', 'ABC08', 1700)

SELECT SAILOR.SNAME FROM SAILOR INNER JOIN RESERVES ON SAILOR.SID = RESERVES.SID WHERE
RESERVES.BID = 104

SELECT SNAME FROM SAILOR WHERE SID IN
(SELECT RESERVES.SID FROM RESERVES INNER JOIN BOATS ON BOATS.BID = RESERVES.BID WHERE
BOATS.BCOLOR = 'RED' OR BOATS.BCOLOR = 'GREEN');

SELECT SAILOR.SNAME FROM SAILOR INNER JOIN(SELECT RESERVES.SID FROM RESERVES GROUP BY
RESERVES.SID HAVING COUNT(DISTINCT
CONCAT(RESERVES.SID, RESERVES.BID)) = (SELECT COUNT(DISTINCT BOATS.BID) FROM BOATS))
TEMP ON SAILOR.SID = TEMP.SID;

SELECT S.SNAME FROM SAILOR S
WHERE S.AGE> (SELECT MAX(S2.AGE) FROM SAILOR S2 WHERE S2.RATING=10)

SELECT B.BID, COUNT (*) AS SAILORCOUNT
FROM BOATS B, RESERVES R
WHERE R.BID = B.BID AND BCOLOR = 'RED'
GROUP BY B.BID

SELECT S.RATING, AVG(S.AGE) AS AVGAGE
FROM SAILOR S
WHERE S.AGE>18
GROUP BY S.RATING
HAVING COUNT(*) > 1

SELECT E1.FIRST_NAME FROM EMPLOYES E1, EMPLOYES E2 WHERE E1.FIRST_NAME = E2.FIRST_NAME
AND E1.EMP_ID<>E2.EMP_ID

SELECT FIRST_NAME, HIRE_DATE  FROM EMPLOYES CROSS JOIN DEPARTMENTS
WHERE EMPLOYES.DEPT_ID = DEPARTMENTS.DEPT_ID AND LOCATION_ID = 1700;

ALTER TABLE DEPARTMENTS
ADD CREATE_DATE DATE;

UPDATE DEPARTMENTS
SET DEPARTMENTS.CREATE_DATE = EMPLOYEE.CREATE_DATE
FROM DEPARTMENTS
```

```
INNER JOIN
(SELECT MIN(HIRE_DATE) AS CREATE_DATE,DEPT_ID FROM EMPLOYEES
GROUP BY DEPT_ID) AS EMPLOYEE
ON DEPARTMENTS.DEPT_ID = EMPLOYEE.DEPT_ID;

SELECT *FROM DEPARTMENTS;

DELETE FROM EMPLOYES WHERE EMP_ID IN (SELECT MANAGER_ID FROM DEPARTMENTS)
SELECT EMP_ID FROM EMPLOYES
```