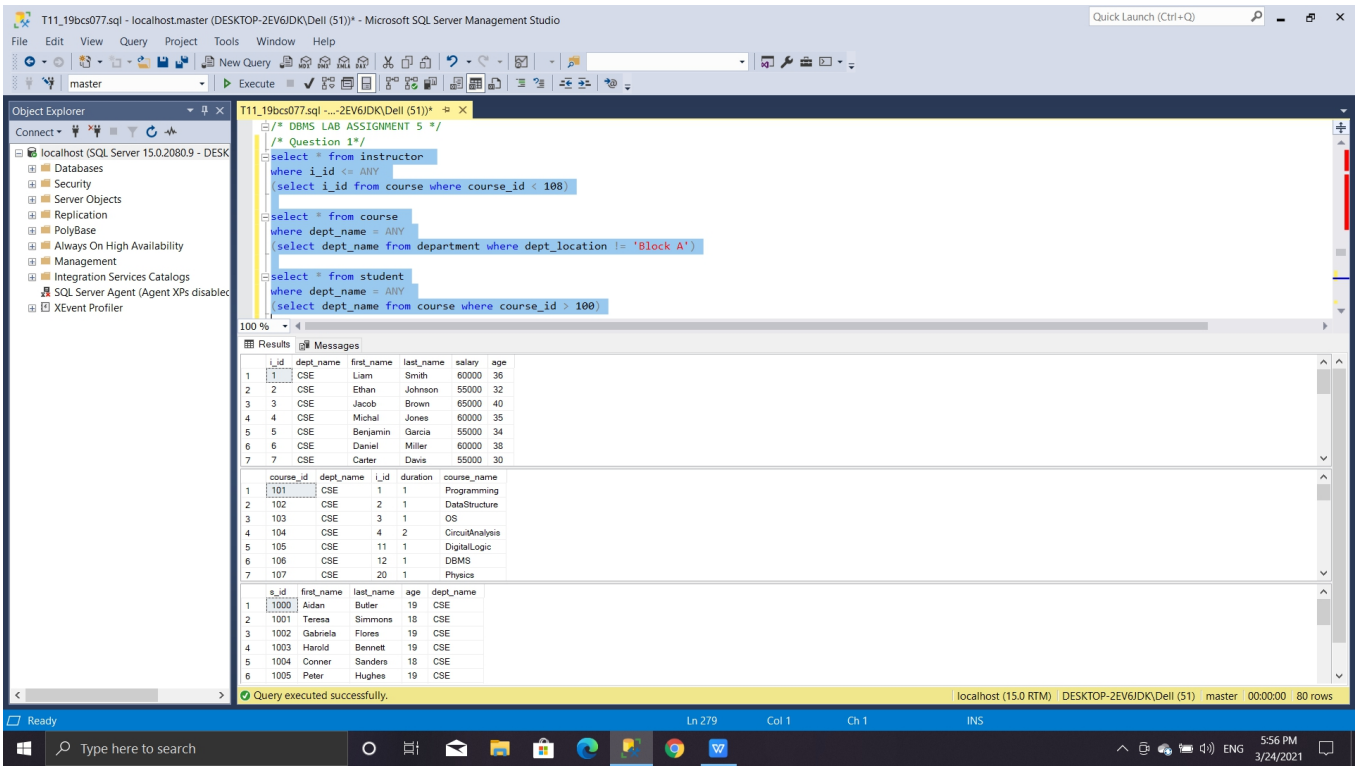
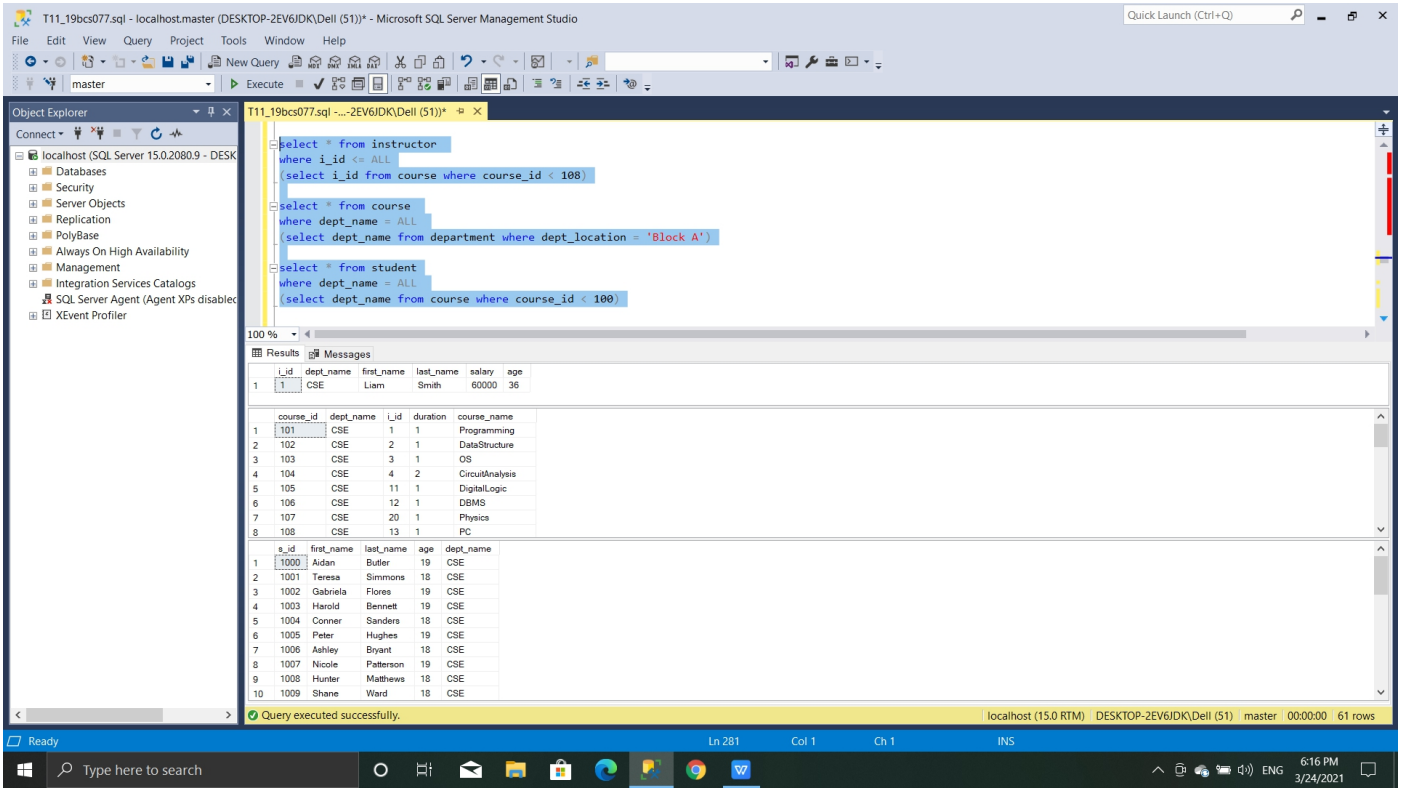
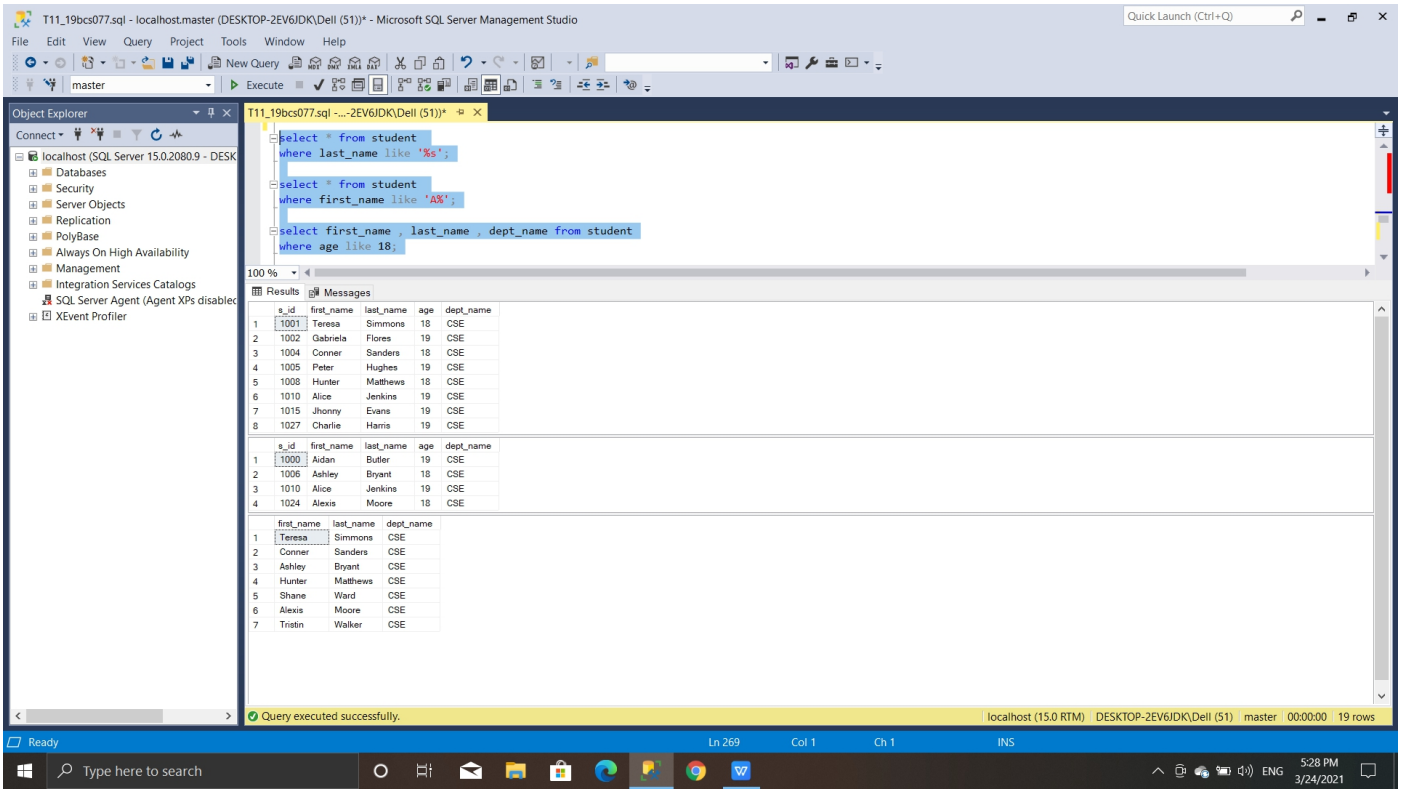
DATABASE MANAGEMENT SYSTEM
LAB ASSIGNMENT - 05

NAME : NIKHITA B KARADI
ROLL NO. : 19BCS077

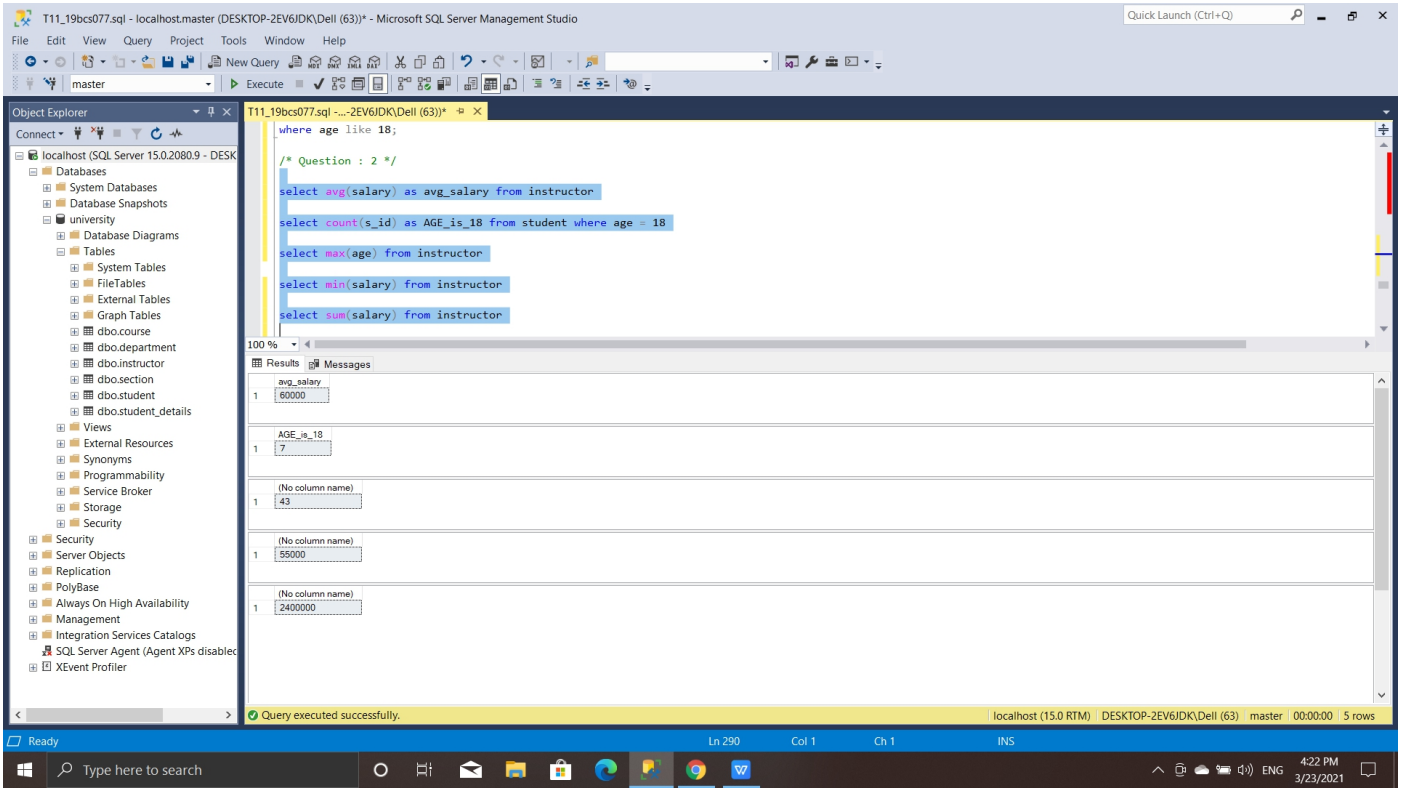
Q1).Illustrate logical ANY, ALL and LIKE operator- the queries should be relevant to your respective databases 3 queries for each operator. One query explaining the difference between ANY and ALL







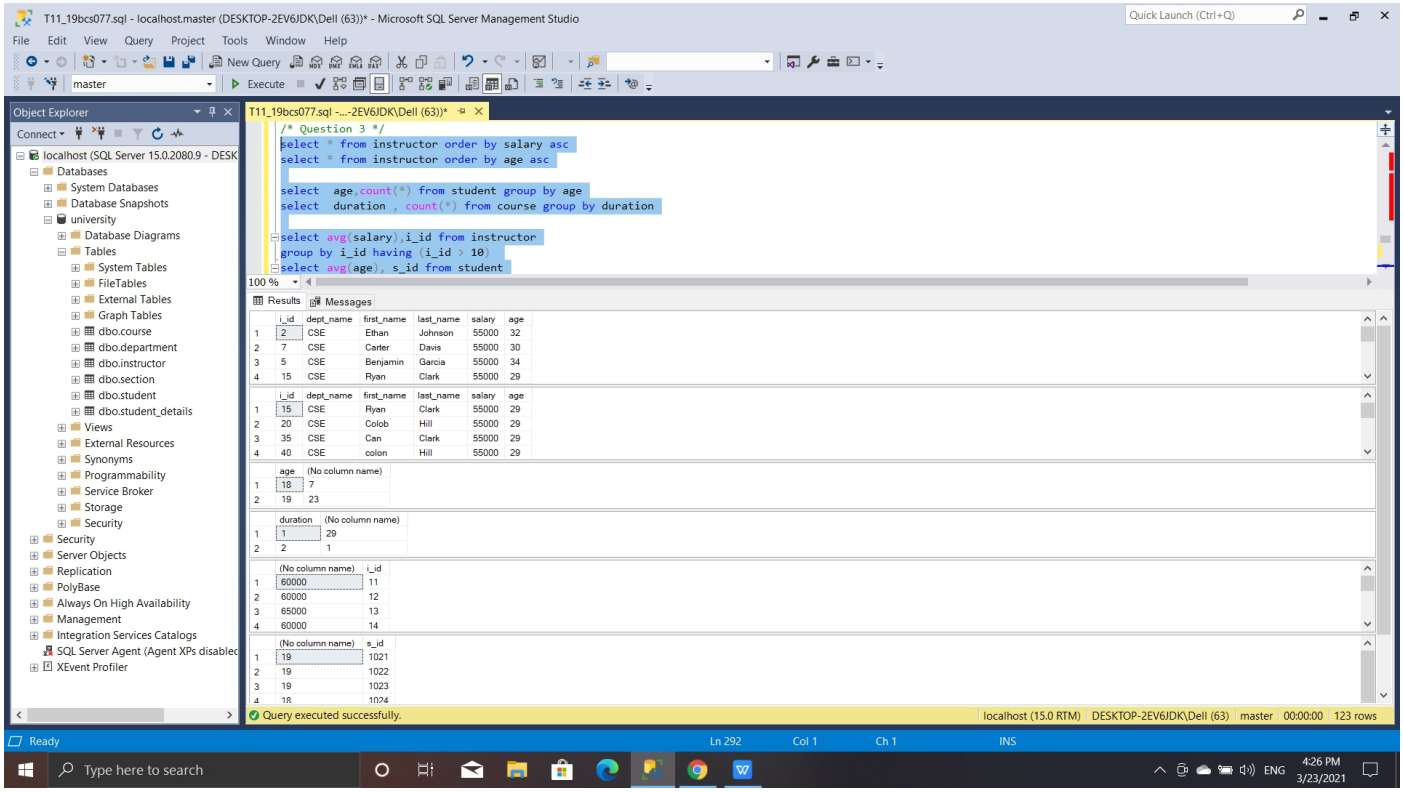
Q2). One query for each Aggregate function



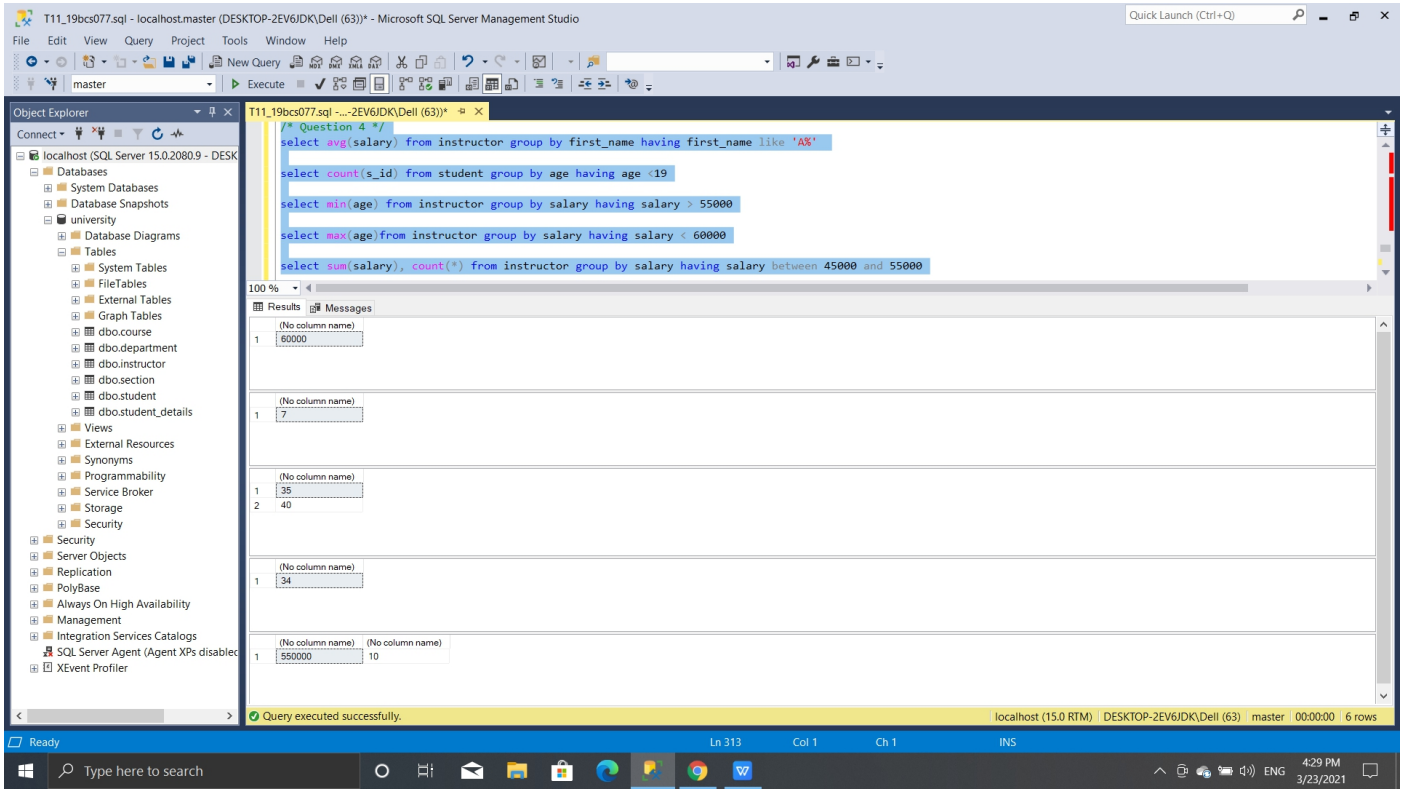
Q3).Illustrate the usage of order by, group by and having clause (2 queries for each case)

```
select avg(salary),i_id from instructor
group by i_id having (i_id > 10)
```

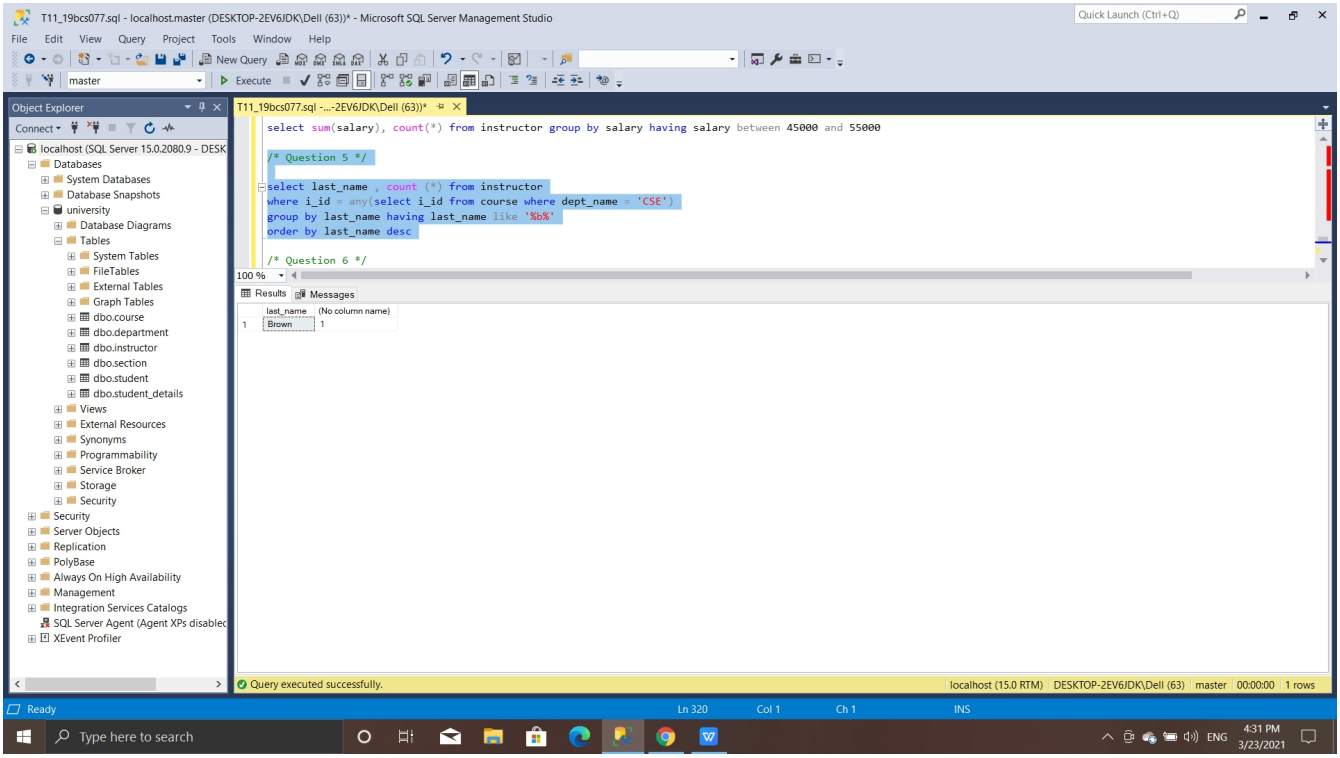
```
select avg(age), s_id from student
group by s_id having (s_id >1020)
```



Q4).Use Aggregate function with group by and having

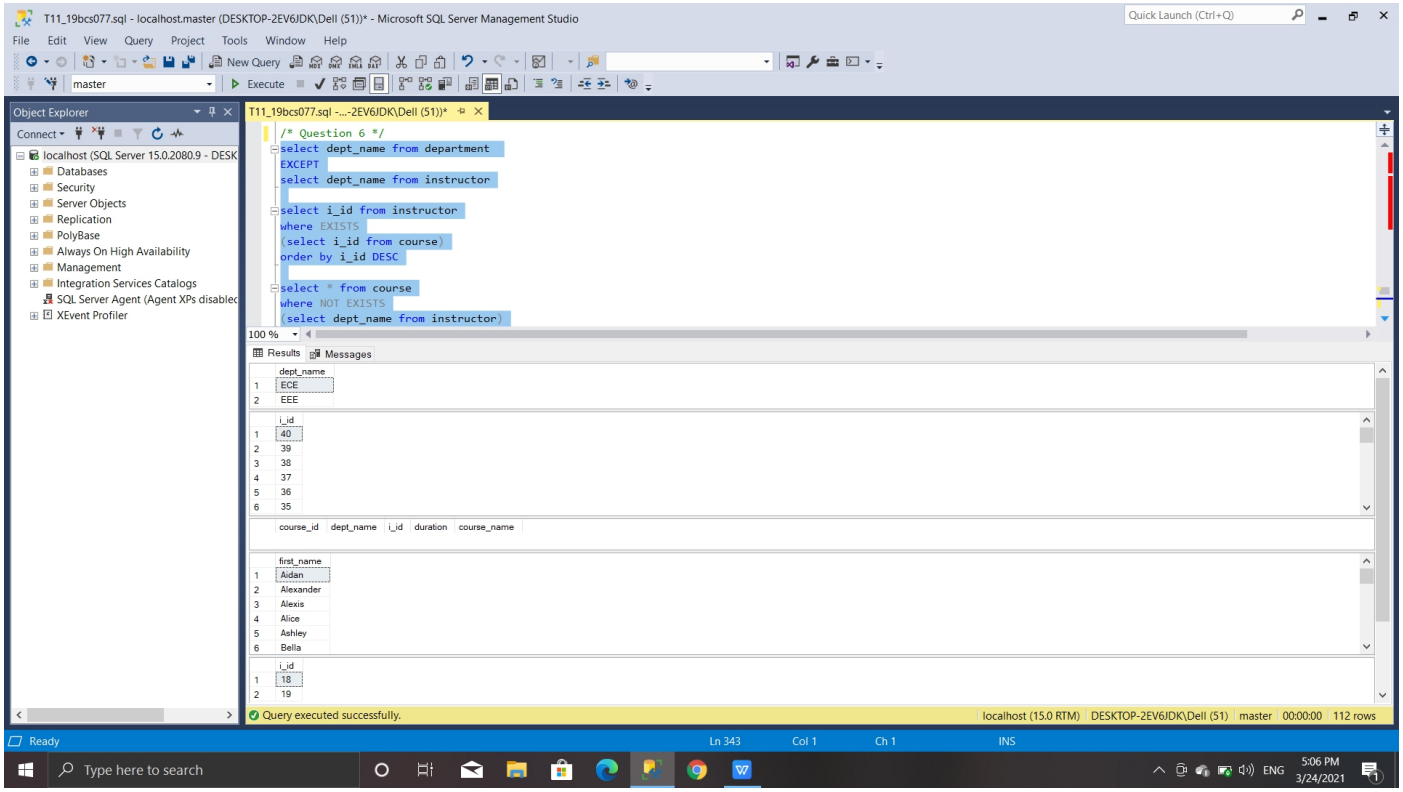


Q5).Write atleast three nested queries using order by, group by and having clause

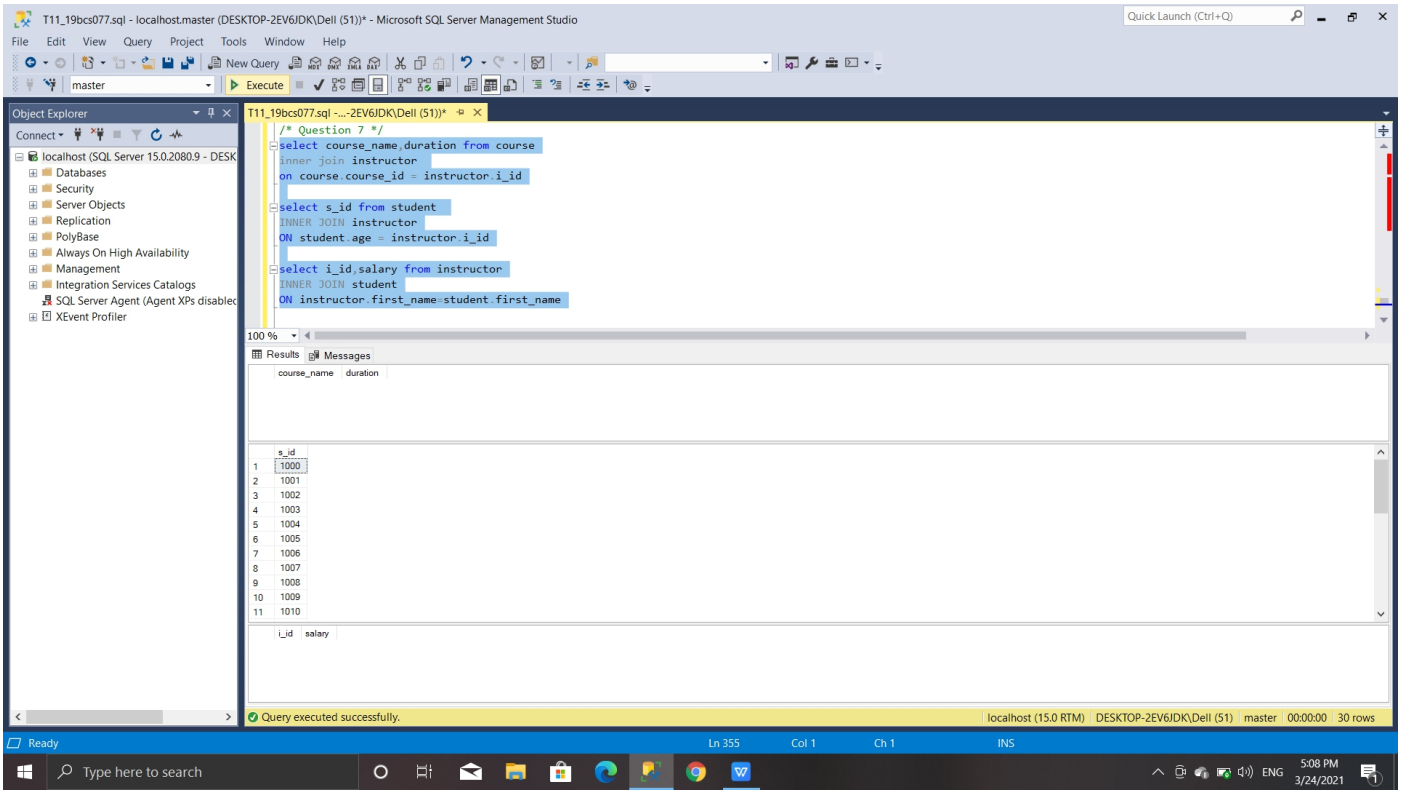


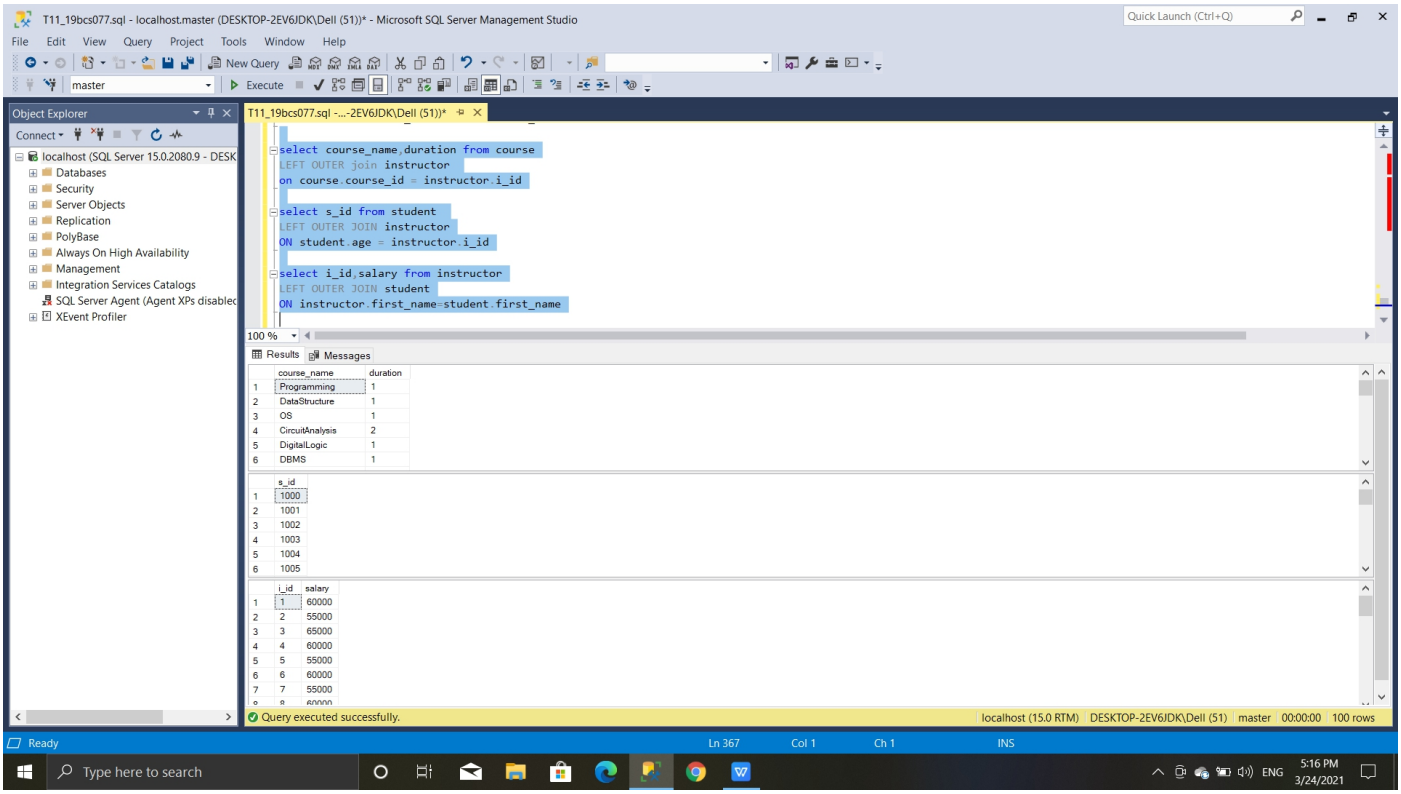
Q6).Illustrate the Usage of Except, Exists, Not Exists, Union, Intersection

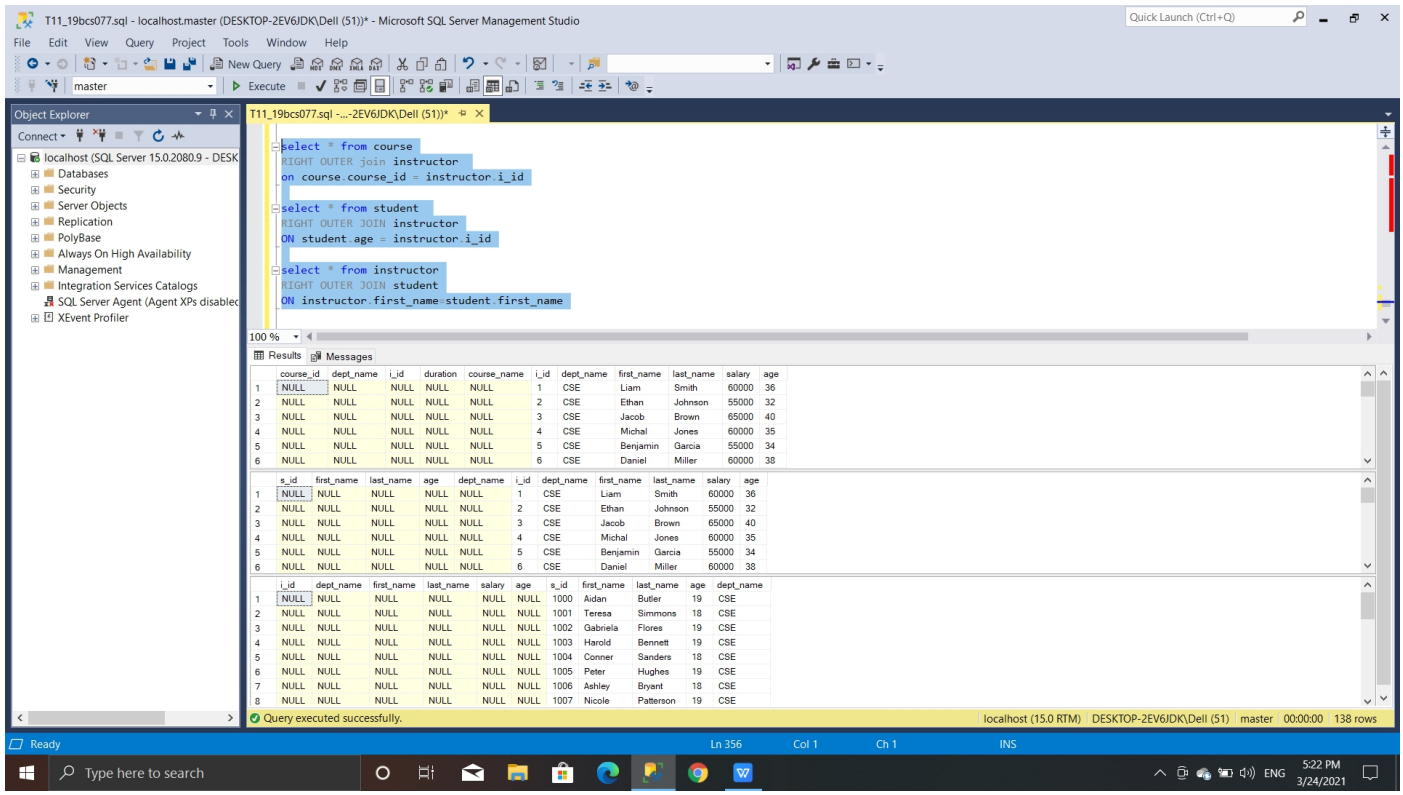
```
/* Question 6 */
select dept_name from department
EXCEPT
select dept_name from instructor

select i_id from instructor
where EXISTS
(select i_id from course)
order by i_id DESC

select * from course
where NOT EXISTS
(select dept_name from instructor)

select first_name from instructor
UNION
select first_name from student

select i_id from instructor
intersect
select age from student
```



Q7).INNER JOIN, LEFT OUTER JOIN, RIGHT OUTER JOIN- 3 queries for each instance




T11_19bcs077.sql - localhost.master (DESKTOP-2EV6JDK\Dell (51))* - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
New Query
Execute
master
Object Explorer
Connect
localhost (SQL Server 15.0.2080.9 - DESK
Databases
Security
Server Objects
Replication
PolyBase
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disablec
XEvent Profiler
T11_19bcs077.sql -...-2EV6JDK\Dell (51))*
select course_name,duration from course
LEFT OUTER join instructor
on course.course_id = instructor.i_id
select s_id from student
LEFT OUTER JOIN instructor
ON student.age = instructor.i_id
select i_id,salary from instructor
LEFT OUTER JOIN student
ON instructor.first_name=student.first_name
100 %
Results
Messages
course_name duration
1 Programming 1
2 DataStructure 1
3 OS 1
4 CircuitAnalysis 2
5 DigitalLogic 1
6 DBMS 1
s_id
1 1000
2 1001
3 1002
4 1003
5 1004
6 1005
i_id salary
1 1 60000
2 2 55000
3 3 65000
4 4 60000
5 5 55000
6 6 60000
7 7 55000
Query executed successfully.
localhost (15.0 RTM) DESKTOP-2EV6JDK\Dell (51) master 00:00:00 100 rows
Ready
Ln 367 Col 1 Ch 1 INS
Type here to search
ENG
5:16 PM
3/24/2021


T11_19bcs077.sql - localhost.master (DESKTOP-2EV6JDK\Dell (51))* - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
New Query
Execute
master
Object Explorer
Connect
localhost (SQL Server 15.0.2080.9 - DESK
Databases
Security
Server Objects
Replication
PolyBase
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disablec
XEvent Profiler
T11_19bcs077.sql -...-2EV6JDK\Dell (51))*
select * from course
RIGHT OUTER join instructor
on course.course_id = instructor.i_id
select * from student
RIGHT OUTER JOIN instructor
ON student.age = instructor.i_id
select * from instructor
RIGHT OUTER JOIN student
ON instructor.first_name=student.first_name
100 %
Results
Messages
course_id dept_name i_id duration course_name i_id dept_name first_name last_name salary age
1 NULL NULL NULL NULL NULL 1 CSE Liam Smith 60000 36
2 NULL NULL NULL NULL NULL 2 CSE Ethan Johnson 55000 32
3 NULL NULL NULL NULL NULL 3 CSE Jacob Brown 65000 40
4 NULL NULL NULL NULL NULL 4 CSE Michal Jones 60000 35
5 NULL NULL NULL NULL NULL 5 CSE Benjamin Garcia 55000 34
6 NULL NULL NULL NULL NULL 6 CSE Daniel Miller 60000 38
s_id first_name last_name age dept_name i_id dept_name first_name last_name salary age
1 NULL NULL NULL NULL NULL 1 CSE Liam Smith 60000 36
2 NULL NULL NULL NULL NULL 2 CSE Ethan Johnson 55000 32
3 NULL NULL NULL NULL NULL 3 CSE Jacob Brown 65000 40
4 NULL NULL NULL NULL NULL 4 CSE Michal Jones 60000 35
5 NULL NULL NULL NULL NULL 5 CSE Benjamin Garcia 55000 34
6 NULL NULL NULL NULL NULL 6 CSE Daniel Miller 60000 38
i_id dept_name first_name last_name salary age s_id first_name last_name age dept_name
1 NULL NULL NULL NULL NULL NULL 1000 Aidan Butler 19 CSE
2 NULL NULL NULL NULL NULL NULL 1001 Teresa Simmons 18 CSE
3 NULL NULL NULL NULL NULL NULL 1002 Gabriela Flores 19 CSE
4 NULL NULL NULL NULL NULL NULL 1003 Harold Bennett 19 CSE
5 NULL NULL NULL NULL NULL NULL 1004 Conner Sanders 18 CSE
6 NULL NULL NULL NULL NULL NULL 1005 Peter Hughes 19 CSE
7 NULL NULL NULL NULL NULL NULL 1006 Ashley Bryant 18 CSE
8 NULL NULL NULL NULL NULL NULL 1007 Nicole Patterson 19 CSE
Query executed successfully.
localhost (15.0 RTM) DESKTOP-2EV6JDK\Dell (51) master 00:00:00 138 rows
Ready
Ln 356 Col 1 Ch 1 INS
Type here to search
ENG
5:22 PM
3/24/2021