

DMDD Lab 2 Homework - SQL Query Homework

1.

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'SERVERS' tree is expanded to 'localhost, <default> (sa)', and the 'Tables' folder is expanded to show 'dbo.Departments'. The main window displays a query window titled 'DMDD_assignment2 - (61) L...EU (sa)'. The query text is as follows:

```
200 INSERT INTO Registrations (RegistrationID, StudentID, CourseSectionID, Grade)
201 VALUES (9, 5, 9, 'A');
202 INSERT INTO Registrations (RegistrationID, StudentID, CourseSectionID, Grade)
203 VALUES (10, 5, 6, 'B');
204
205
206 --Retrieve all departments
207 SELECT DepartmentID, DepartmentName FROM Departments;
208
209
```

The 'Results' tab is selected, showing the following data:

	DepartmentID	DepartmentName
1	1	Computer-Science
2	2	Art and-Design
3	3	Marketing
4	4	Mechanical-Engineering
5	5	Nursing

The status bar at the bottom indicates 'Ln 206, Col 1 (79 selected) Spaces: 4 UTF-8 LF SQL 5 rows Choose SQL Language 00:00:00 localhost: NEU (61)'.

2.

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'SERVERS' tree with 'localhost, <default> (sa)' expanded, showing 'Databases', 'System Databases', 'NEU', 'Security', and 'Server Objects'. The 'NEU' database is selected. The right pane shows the 'DMDD_assignment2 - (61) L...EU (sa)' window. The query editor contains the following SQL code:

```
200 INSERT INTO Registrations (RegistrationID, StudentID, CourseSectionID, Grade)
201 VALUES (9, 5, 0, 'A');
202 INSERT INTO Registrations (RegistrationID, StudentID, CourseSectionID, Grade)
203 VALUES (10, 5, 6, 'B');
204
205
206 --Retrieve all departments
207 SELECT DepartmentID, DepartmentName FROM Departments;
208
209
210 --Find all professors belonging to a specific department
211 SELECT ProfessorID, FirstName, LastName, Email FROM Professors
212 WHERE DepartmentID = 1;
213
214
215
```

The 'Results' tab is active, showing a single row of data:

ProfessorID	FirstName	LastName	Email
1	Professor	Johnson	prof.johnson@example.com

The status bar at the bottom indicates 'Ln 210, Col 1 (143 selected)', 'Spaces: 4', 'UTF-8', 'LF', 'SQL', '1 rows', 'Choose SQL Language', '00:00:00', and 'localhost : NEU (61)'.

3.

The screenshot displays the SQL Server Enterprise Manager interface. On the left, the 'SERVERS' tree shows the connection to 'localhost, <default> (sa)'. The 'Databases' folder is expanded, showing 'System Databases', 'NEU', 'Security', and 'Server Objects'. The 'NEU' database is selected. The main pane shows a query window with the following SQL code:

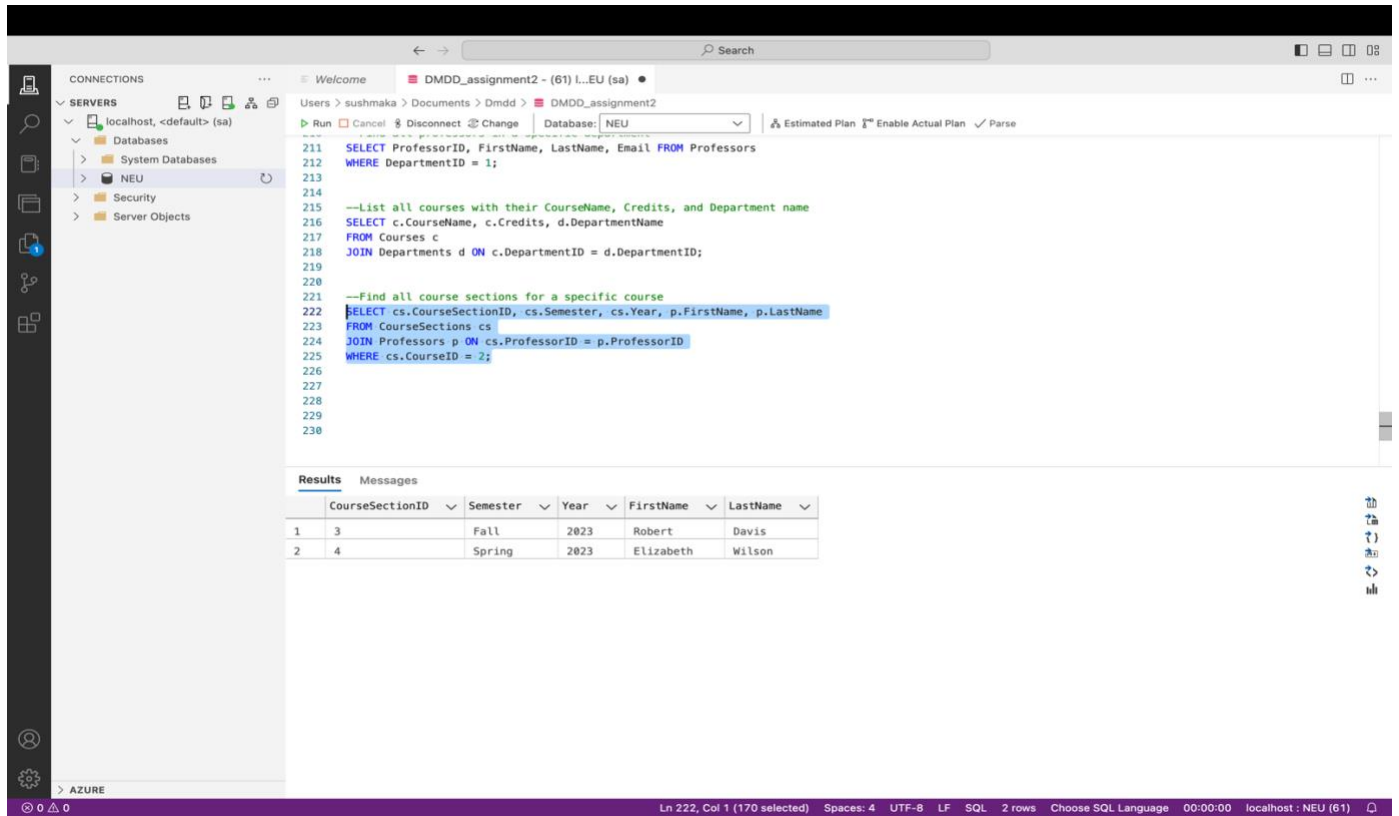
```
200 INSERT INTO Registrations (RegistrationID, StudentID, CourseSectionID, Grade)
201 VALUES (9, 5, 9, 'A');
202 INSERT INTO Registrations (RegistrationID, StudentID, CourseSectionID, Grade)
203 VALUES (10, 5, 6, 'B');
204
205
206 --Retrieve all departments
207 SELECT DepartmentID, DepartmentName FROM Departments;
208
209
210 --Find all professors in a specific department
211 SELECT ProfessorID, FirstName, LastName, Email FROM Professors
212 WHERE DepartmentID = 1;
213
214
215 --List all courses with their CourseName, Credits, and Department name
216 SELECT c.CourseName, c.Credits, d.DepartmentName
217 FROM Courses c
218 JOIN Departments d ON c.DepartmentID = d.DepartmentID;
219
220
221
```

Below the query window, the 'Results' tab is active, displaying a table with 5 rows and 3 columns: CourseName, Credits, and DepartmentName.

	CourseName	Credits	DepartmentName
1	Introduction to Programming	3	Computer Science
2	Calculus I	4	Computer Science
3	Graphic Design Fundamentals	3	Art and Design
4	Principles of Marketing	3	Marketing
5	Thermodynamics	4	Mechanical Engineering

The status bar at the bottom indicates 'Ln 216, Col 1 (118 selected)', 'Spaces: 4', 'UTF-8', 'LF', 'SQL', '5 rows', 'Choose SQL Language', '00:00:00', and 'localhost : NEU (61)'.

4.



Users > sushmaka > Documents > Dmdd > DMDD_assignment2

Database: NEU | Estimated Plan | Enable Actual Plan | Parse

```
211 SELECT ProfessorID, FirstName, LastName, Email FROM Professors
212 WHERE DepartmentID = 1;
213
214
215 --List all courses with their CourseName, Credits, and Department name
216 SELECT c.CourseName, c.Credits, d.DepartmentName
217 FROM Courses c
218 JOIN Departments d ON c.DepartmentID = d.DepartmentID;
219
220
221 --Find all course sections for a specific course
222 SELECT cs.CourseSectionID, cs.Semester, cs.Year, p.FirstName, p.LastName
223 FROM CourseSections cs
224 JOIN Professors p ON cs.ProfessorID = p.ProfessorID
225 WHERE cs.CourseID = 2;
226
227
228
229
230
```

Results Messages

	CourseSectionID	Semester	Year	FirstName	LastName
1	3	Fall	2023	Robert	Davis
2	4	Spring	2023	Elizabeth	Wilson

Ln 222, Col 1 (170 selected) Spaces: 4 UTF-8 LF SQL 2 rows Choose SQL Language 00:00:00 localhost: NEU (61)

5.

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'CONNECTIONS' pane shows a server named 'localhost, <default> (sa)'. The 'SERVERS' pane shows a tree view with 'Databases', 'System Databases', 'NEU', 'Security', and 'Server Objects'. The 'NEU' database is selected. The main window displays a query execution window for 'DMDD_assignment2 - (61) L..EU (sa)'. The query is as follows:

```

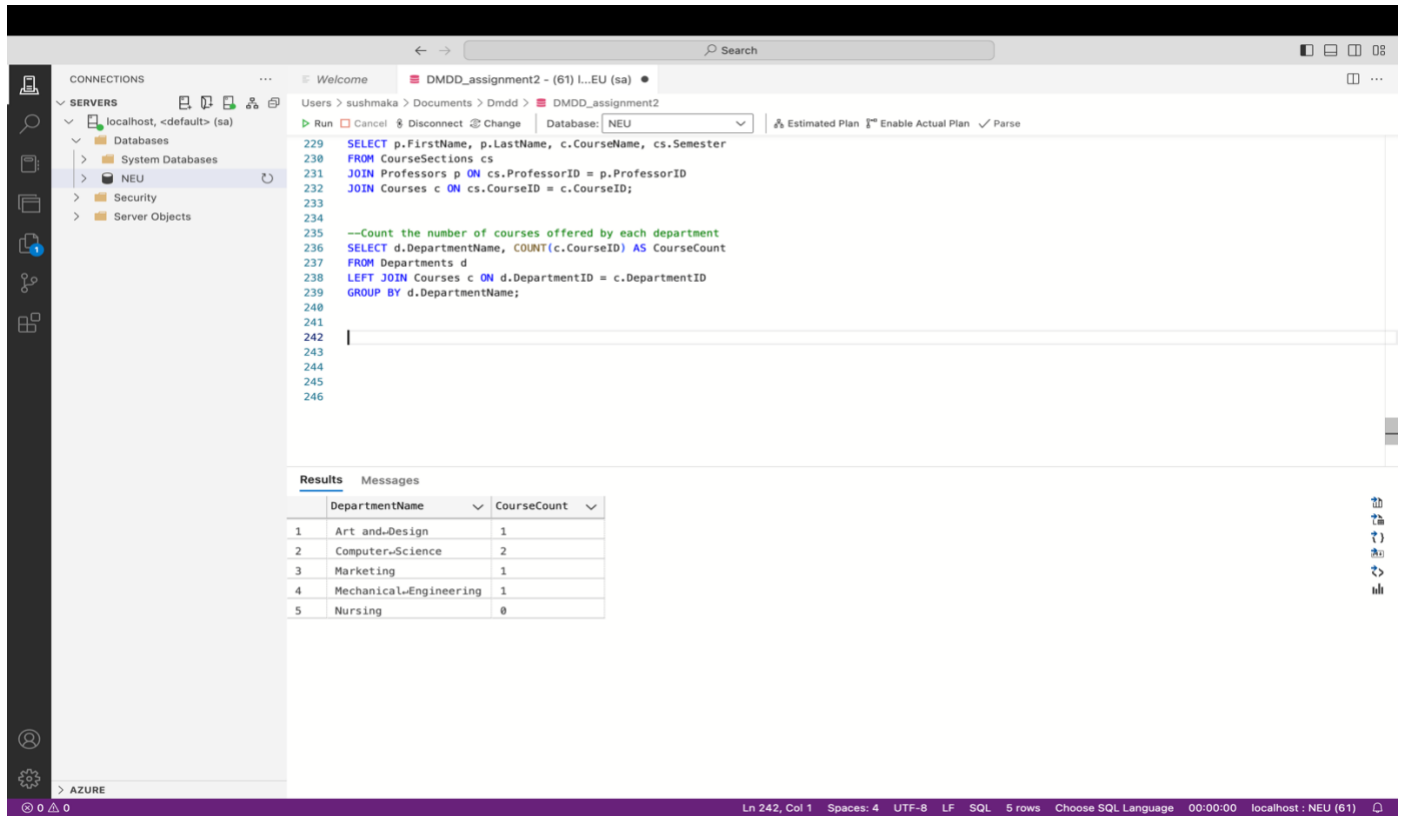
212 WHERE DepartmentID = 1;
213
214
215 --List all courses with their CourseName, Credits, and Department name
216 SELECT c.CourseName, c.Credits, d.DepartmentName
217 FROM Courses c
218 JOIN Departments d ON c.DepartmentID = d.DepartmentID;
219
220
221 --Find all course sections for a specific course
222 SELECT cs.CourseSectionID, cs.Semester, cs.Year, p.FirstName, p.LastName
223 FROM CourseSections cs
224 JOIN Professors p ON cs.ProfessorID = p.ProfessorID
225 WHERE cs.CourseID = 2;
226
227
228 --List all professors and the courses they teach, including the semester
229 SELECT p.FirstName, p.LastName, c.CourseName, cs.Semester
230 FROM CourseSections cs
231 JOIN Professors p ON cs.ProfessorID = p.ProfessorID
232 JOIN Courses c ON cs.CourseID = c.CourseID;
233
234
  
```

The 'Results' pane shows the following data:

	FirstName	LastName	CourseName	Semester
1	Professor	Johnson	Introduction to Programming	Fall
2	Mary	Smith	Introduction to Programming	Spring
3	Robert	Davis	Calculus I	Fall
4	Elizabeth	Wilson	Calculus I	Spring
5	William	Brown	Graphic Design Fundamentals	Fall
6	Professor	Johnson	Graphic Design Fundamentals	Spring
7	Mary	Smith	Principles of Marketing	Fall
8	Robert	Davis	Principles of Marketing	Spring
9	Elizabeth	Wilson	Thermodynamics	Fall
10	William	Brown	Thermodynamics	Spring

The status bar at the bottom shows 'Ln 228, Col 1 (249 selected) Spaces: 4 UTF-8 LF SQL 10 rows Choose SQL Language 00:00:00 localhost : NEU (61)'.

6.



The screenshot displays the SQL Server Enterprise Manager interface. On the left, the 'SERVERS' tree shows a connection to 'localhost, <default> (sa)'. The 'Databases' folder is expanded, showing 'System Databases', 'NEU', 'Security', and 'Server Objects'. The 'NEU' database is selected. The main pane shows a query window with the following SQL code:

```
229 SELECT p.FirstName, p.LastName, c.CourseName, cs.Semester
230 FROM CourseSections cs
231 JOIN Professors p ON cs.ProfessorID = p.ProfessorID
232 JOIN Courses c ON cs.CourseID = c.CourseID;
233
234
235 --Count the number of courses offered by each department
236 SELECT d.DepartmentName, COUNT(c.CourseID) AS CourseCount
237 FROM Departments d
238 LEFT JOIN Courses c ON d.DepartmentID = c.DepartmentID
239 GROUP BY d.DepartmentName;
240
241
242
243
244
245
246
```

Below the query window, the 'Results' tab is active, displaying a table with 5 rows and 2 columns: 'DepartmentName' and 'CourseCount'.

	DepartmentName	CourseCount
1	Art and-Design	1
2	Computer-Science	2
3	Marketing	1
4	Mechanical-Engineering	1
5	Nursing	0

The status bar at the bottom indicates the current position is 'Ln 242, Col 1', with 'Spaces: 4', 'UTF-8', 'LF', 'SQL', '5 rows', 'Choose SQL Language', '00:00:00', and 'localhost: NEU (61)'.

7.

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'SERVERS' tree is expanded to 'Databases' > 'System Databases' > 'NEU'. The main pane displays a SQL query in the 'DMDD_assignment2' database. The query is as follows:

```
227  
228 --List all professors and the courses they teach, including the semester  
229 SELECT p.FirstName, p.LastName, c.CourseName, cs.Semester  
230 FROM CourseSections cs  
231 JOIN Professors p ON cs.ProfessorID = p.ProfessorID  
232 JOIN Courses c ON cs.CourseID = c.CourseID;  
233  
234  
235 --Count the number of courses offered by each department  
236 SELECT d.DepartmentName, COUNT(c.CourseID) AS CourseCount  
237 FROM Departments d  
238 LEFT JOIN Courses c ON d.DepartmentID = c.DepartmentID  
239 GROUP BY d.DepartmentName;  
240  
241  
242 --Find the most recent course section  
243 SELECT TOP 1 cs.CourseSectionID, c.CourseName, cs.Year, cs.Semester  
244 FROM CourseSections cs  
245 JOIN Courses c ON cs.CourseID = c.CourseID  
246 ORDER BY cs.Year DESC;  
247  
248
```

Below the query, the 'Results' tab is active, showing a single row of data:

CourseSectionID	CourseName	Year	Semester
1	Introduction to Programming	2023	Fall

The status bar at the bottom indicates 'Ln 240, Col 1', 'Spaces: 4', 'UTF-8', 'LF', 'SQL', '1 rows', 'Choose SQL Language', '00:00:00', and 'localhost : NEU (61)'.

8.

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the server hierarchy under 'localhost, <default> (sa)'. The 'Databases' folder is expanded, showing 'System Databases' and 'NEU'. The 'NEU' database is selected. The right pane shows the 'DMDD_assignment2 - (61) L..EU (sa)' window. The 'Users' tab is active, showing the path 'Users > sushmaka > Documents > Dmdd > DMDD_assignment2'. The 'Database' dropdown is set to 'NEU'. The 'Run' button is highlighted. The query text is as follows:

```
245 JOIN Courses c ON cs.CourseID = c.CourseID
246 ORDER BY cs.Year DESC;
247
248
249
250 --Find professors who teach more than one course
251 SELECT p.FirstName, p.LastName, COUNT(cs.CourseID) AS CourseCount
252 FROM CourseSections cs
253 JOIN Professors p ON cs.ProfessorID = p.ProfessorID
254 GROUP BY p.FirstName, p.LastName
255 HAVING COUNT(cs.CourseID) > 1;
256
257
258
259
260
261
262
263
```

The 'Results' tab is active, displaying the following table:

	FirstName	LastName	CourseCount
1	William	Brown	2
2	Robert	Davis	2
3	Professor	Johnson	2
4	Mary	Smith	2
5	Elizabeth	Wilson	2

The status bar at the bottom indicates 'Ln 250, Col 1 (253 selected) Spaces: 4 UTF-8 LF SQL 5 rows Choose SQL Language 00:00:00 localhost: NEU (61)'.