

Assignment 4
James Livingstone

Answer #1

```
SELECT LastName, FirstName, CourseDescription
FROM Instructors AS I
LEFT JOIN Courses AS C ON I.InstructorID = C.InstructorID
ORDER BY LastName, FirstName;
```

	LastName	FirstName	CourseDescription
1	Amundsen	Rachel	Biology
2	Amundsen	Rachel	Microbiology
3	Black	Bill	Educational Theory
4	Brown	Billy	Beginning Accounting
5	Brown	Billy	Intermediate Accounting
6	Connors	Daniel	Social Psychology
7	Connors	Daniel	Population and Demographics
8	Drew	Daniel	Classic Literature
9	Drew	Daniel	Shakespeare
10	Gallegos	Tomas	Anatomy
11	Gallegos	Tomas	Physiology
12	Green	Gene	Intro to Marketing
13	Green	Gene	Social Media
14	Jones	Sally	Business Writing
15	Jones	Sally	Composition
16	McGregor	NULL	Abstract Algebra
17	McGregor	NULL	Intro to Calculus
18	Paxton	Arnold	NULL
19	Rogers	NULL	Intro to Management

Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | MurachCollege | 00:00:00 | 26 rows

Assignment 4
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Answer #2

```
SELECT 'UNDERGRAD' AS Status, FirstName, LastName, EnrollmentDate, GraduationDate
FROM Students
WHERE GraduationDate IS NULL
UNION
SELECT 'GRADUATED' AS Status, FirstName, LastName, EnrollmentDate, GraduationDate
FROM Students
WHERE GraduationDate IS NOT NULL
ORDER BY EnrollmentDate;
```

Results		Messages			
	Status	FirstName	LastName	EnrollmentDate	GraduationDate
1	GRADUATED	Amber	Howard	2015-12-18 16:44:26	2019-12-14
2	GRADUATED	George	White	2015-12-20 11:12:26	2019-12-14
3	GRADUATED	Tony	MacNamara	2015-12-21 09:21:55	2019-05-07
4	GRADUATED	Jonathan	Welch	2015-12-21 13:23:10	2019-12-14
5	UNDERGRAD	Donna	Taylor	2015-12-28 10:32:16	NULL
6	GRADUATED	Rose	Price	2016-01-02 12:37:31	2019-12-14
7	GRADUATED	Jesse	Rodriguez	2016-01-03 13:08:37	2019-05-07
8	UNDERGRAD	Bonnie	Williams	2016-01-03 15:44:56	NULL
9	UNDERGRAD	Thomas	Kent	2016-07-15 11:14:23	NULL
10	UNDERGRAD	Maggie	Kramer	2016-07-15 17:02:45	NULL
11	UNDERGRAD	Cameron	DeLorean	2016-07-18 12:48:43	NULL
12	UNDERGRAD	Frank	Sanchez	2016-07-20 09:37:53	NULL
13	GRADUATED	Roberta	Smith	2016-07-22 11:18:25	2019-12-14
14	UNDERGRAD	Wilma	Hoffman	2016-12-10 15:31:28	NULL
15	UNDERGRAD	Brian	Bonwell	2016-12-12 14:22:53	NULL
16	UNDERGRAD	Cal	Clement	2016-12-14 16:42:11	NULL
17	UNDERGRAD	Charles	Patrick	2016-12-22 08:43:48	NULL
18	UNDERGRAD	William	Landry	2017-01-02 11:28:49	NULL
19	UNDERGRAD	Monica	Momisey	2017-01-04 10:42:06	NULL

Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | MurachCollege | 00:00:00 | 43 rows

Assignment 4
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Answer #3

```
SELECT D.DepartmentName, C.CourseID
FROM Departments AS D
     LEFT JOIN Courses AS C ON D.DepartmentID = C.DepartmentID
WHERE C.CourseID IS NULL;
```

Results		Messages
	DepartmentName	CourseID
1	Political Science	NULL

Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | MurachCollege | 00:00:00 | 1 rows

Assignment 4
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Answer #4

```
SELECT COUNT(InstructorID) AS 'Instructor Count', AVG(AnnualSalary) AS 'Average Annual Salary'  
FROM Instructors  
WHERE Status = 'F';
```

Results		Messages
	Instructor Count	Average Annual Salary
1	9	73333.3333

Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | MurachCollege | 00:00:00 | 1 rows

Assignment 4
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Answer #5

```
SELECT D.DepartmentName, COUNT(InstructorID) AS 'Instructor Count', MAX(AnnualSalary) AS  
'Highest Paid Instructor Annual Salary'  
FROM Instructors AS I  
      JOIN Departments AS D ON I.DepartmentID = D.DepartmentID  
GROUP BY D.DepartmentName  
ORDER BY 'Instructor Count' DESC;
```

Results		Messages	
	DepartmentName	Instructor Count	Highest Paid Instructor Annual Salary
1	Business	4	77500.00
2	English	3	74000.00
3	Mathematics	2	74000.00
4	Music	2	36000.00
5	Science	2	79000.00
6	Education	2	73000.00
7	Sociology	1	71500.00

Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | MurachCollege | 00:00:00 | 7 rows

Assignment 4
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Answer #6

```
SELECT (I.FirstName + ' ' + I.LastName) AS 'Full Name', COUNT(C.CourseID) AS 'Number Of Courses', SUM(C.CourseUnits) AS 'Sum Of Course Units'
FROM Instructors as I
      JOIN Courses as C ON I.InstructorID = C.InstructorID
GROUP BY (I.FirstName + ' ' + I.LastName)
ORDER BY SUM(C.CourseUnits) DESC;
```

Results		Messages	
	Full Name	Number Of Courses	Sum Of Course Units
1	NULL	3	9
2	Rachel Amundsen	2	8
3	Tomas Gallegos	2	6
4	Gene Green	2	6
5	John Smith	2	6
6	Billy Brown	2	6
7	Daniel Connors	2	6
8	Daniel Drew	2	6
9	Denrick Thomas	2	5
10	Sally Jones	2	5
11	William Thomas	1	3
12	Jonathan Vilma	1	3
13	Angela Warren	1	3
14	Bill Black	1	3

Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | MurachCollege | 00:00:00 | 14 rows

Assignment 4
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Answer #7

```
SELECT D.DepartmentName, C.CourseDescription, COUNT(SC.StudentID) as 'Number Of Students'
FROM Departments AS D
      JOIN Courses AS C ON D.DepartmentID = C.DepartmentID
      JOIN StudentCourses AS SC ON C.CourseID = SC.CourseID
GROUP BY D.DepartmentName, C.CourseDescription
ORDER BY D.DepartmentName, COUNT(SC.StudentID);
```

	DepartmentName	CourseDescription	Number Of Students
1	Business	Beginning Accounting	4
2	Business	Intermediate Accounting	4
3	Business	Social Media	4
4	Business	Business Writing	5
5	Business	Statistical Analysis	6
6	Business	Intro to Marketing	7
7	Business	Intro to Management	8
8	Education	Primary Education	2
9	Education	Secondary Education	5
10	English	Composition	2
11	English	Creative Writing	4
12	English	Shakespeare	4
13	English	Classic Literature	5
14	Mathematics	Abstract Algebra	3
15	Mathematics	Intro to Calculus	5
16	Mathematics	Trigonometry	5
17	Music	Marching Band	2
18	Music	Music Theory	4
19	Science	Biology	2

✓ Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | MurachCollege | 00:00:00 | 24 rows

Assignment 4
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Answer #8

```
SELECT S.StudentID, SUM(C.CourseUnits) AS 'Sum Of Course Units'
FROM Students AS S
      JOIN StudentCourses AS SC ON S.StudentID = SC.StudentID
      JOIN Courses AS C ON SC.CourseID = C.CourseID
WHERE GraduationDate IS NULL
GROUP BY S.StudentID
HAVING SUM(C.CourseUnits) > 9
ORDER BY SUM(C.CourseUnits) DESC;
```

Results			Messages		
	StudentID	Sum Of Course Units			
1	5	13			
2	30	12			
3	37	12			
4	42	12			
5	43	12			
6	15	10			
7	21	10			
8	25	10			

Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | MurachCollege | 00:00:00 | 8 rows

Assignment 4
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Answer #9

```
SELECT (I.LastName + ', ' + I.FirstName) AS 'Full Name', COUNT(C.CourseID) AS 'Number Of Courses'
FROM Instructors AS I
      JOIN Courses AS C ON I.InstructorID = C.InstructorID
WHERE I.Status = 'P'
GROUP BY ROLLUP(I.LastName + ', ' + I.FirstName);
```

Results		Messages
	Full Name	Number Of Courses
1	NULL	1
2	Black, Bill	1
3	Thomas, Derick	2
4	Thomas, William	1
5	Vilma, Jonathan	1
6	Warren, Angela	1
7	NULL	7

Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | MurachCollege | 00:00:00 | 7 rows

Assignment 4
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Answer #10

```
SELECT Name AS 'Department Name', COUNT(HRED.DepartmentID) AS 'Number of Employees'
FROM HumanResources.Department AS HRD
    JOIN HumanResources.EmployeeDepartmentHistory AS HRED
        ON HRD.DepartmentID = HRED.DepartmentID
WHERE EndDate IS NULL
GROUP BY Name, HRED.DepartmentID
ORDER BY Name;
```

Results		Messages
	Department Name	Number of Employees
1	Document Control	5
2	Engineering	6
3	Executive	2
4	Facilities and Maintenance	7
5	Finance	10
6	Human Resources	6
7	Information Services	10
8	Marketing	9
9	Production	179
10	Production Control	6
11	Purchasing	12
12	Quality Assurance	6
13	Research and Development	4
14	Sales	18
15	Shipping and Receiving	6
16	Tool Design	4

✓ Query executed successfully. | MSI (15.0 RTM) | MSI\fred (73) | AdventureWorks2017 | 00:00:00 | 16 rows