

SQL Project:

TOPIC:

E-learning platform  
database  
management system

Submitted to: Chintan sir

By ~Khushbu Bhojvani

# StudLearning Dataset (By-Kaggle ) :

## Tables:

- Course Details
- Courses
- Student
- Department
- Faculty
- Test
- Test Details
- Notes
- Notes Details

# Tables

## Student:

[illegible]

Test:

[illegible]

## Test Details:

test_id	test_name	usn	marks
1	data types in C	LS20171010	10
1	data types in C	LS20171029	9
8	data types in python	LS20173333	7
8	data types in python	LS20174444	9
8	data types in python	LS20171826	9
8	data types in python	LS20171622	7
8	data types in python	LS20171011	5
3	Queue	LS20171356	8
3	Queue	LS20171728	8
3	Queue	LS20171019	8
3	Queue	LS20173333	5
3	Queue	LS20174444	8
2	List Tuples and Dictionary...	LS20171356	30
2	List Tuples and Dictionary...	LS20171019	28
2	List Tuples and Dictionary...	LS20173333	28
2	List Tuples and Dictionary...	LS20174444	28
2	List Tuples and Dictionary...	LS20171019	25
2	List Tuples and Dictionary...	LS20171139	25
1	data types in C	LS20171139	10
1	data types in C	LS20174444	10
1	data types in C	LS20171826	10
1	data types in C	LS20171580	7
1	data types in C	LS20171019	9
1	data types in C	LS20171011	10
6	Vlsi Design and technology	LS20171356	15

test\_details 10 ×

## Course Details:

usn	course_id
LS20171019	LSCS151
LS20171826	LSCS101
LS20174444	LSCS201
LS20171622	LSCS151
LS20173333	LSCS101
LS20173333	LSCS101
LS20174444	LSCS151
LS20172299	LSCS201
LS20172299	LSCS201
LS20171530	LSCS251
LS20171007	LSCS101
LS20171356	LSCS201

## Courses:

course_id	name	dept_id	no_of_credits	sem	prerequisites
▶ LSCS101	Python	CS	4	1	None
LSCS151	C Programming	CS	4	2	None
LSCS201	Data Structures	CS	4	3	LSCS201
LSCS251	Algorithms	CS	4	4	LSCS201
LSEC251	Signal and system	EC	4	4	None
LSEC301	VLSI	EC	4	5	None
LSEEE351	Transmission System	EEE	4	6	None
LSME201	Fluid Mechanics	ME	4	3	None
• NULL	NULL	NULL	NULL	NULL	NULL

## Faculty:

	emp_id	name	gender	email	designation	dept_id
▶	LSEM050	Deepak Ahuja	M	deepakahuja@gmail.com	Associate Professor	CS
	LSEM125	Anand Kumar	M	anandkumar@gmail.com	Professor	CS
	LSEM222	Anu Banerjee	F	anubanerjee@gmail.com	Professor	EEE
	LSEM346	Hari Chidella	M	harichindella@gmail.com	Lecturer	ME
	LSEM465	Chandrashekar B V	M	chandrashekar@gmail.com	Professor	ME
	LSEM568	Savitha Sood	F	savithasood@gmail.com	Lecturer	CS
	LSEM634	Gauri Govind	F	gaurigovind@gmail.com	Lecturer	EC
	LSEM789	Vishal Kandpal	M	viahalkandpal@gmail.com	Assistant Professor	EC
	LSEM896	Poonam Bisht	F	poonambisht@gmail.com	Professor	EC
	LSEM969	Sunitha A	F	sunitha@gmail.com	Lecturer	EEE
*	NULL	NULL	NULL	NULL	NULL	NULL

## Department:

	dept_id	name	no_of_students
▶	CS	Computer Science	25
	EC	Electronics and Communication	20
	EEE	Electrical Engineering	10
	ME	Mechanical Engineering	15
*	NULL	NULL	NULL

## Notes:

	notes_id	name	course_id	no_of_likes	emp_id	link
▶	050201102	Graphs	LSCS201	0	LSEM050	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>
	125201101	Trees	LSCS201	0	LSEM125	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>
	465201101	Fluid Mechanics	LSME201	0	LSEM346	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>
	568151101	DataTypes	LSCS151	0	LSEM568	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>
	568151102	Structures	LSCS151	0	LSEM568	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>
*	NULL	NULL	NULL	NULL	NULL	NULL

## Notes Details:

	usn	notes_id	likes
▶	LS20171029	125201101	1
	LS20171010	125201101	1

# Queries:

## 1. Total no of student in each dept

```
1 • use studlearning;  
2  
3 # The total number of students in each department.  
4  
5 • SELECT dept_id, COUNT(*) AS total_students FROM student GROUP BY dept_id;  
6  
7  
8  
9
```

100%	1:7
Result Grid	
Filter Rows: Search	
Export:	
dept_id	total_students
CS	11
EC	1
EEE	1
ME	2

2. All test in the computer sci dept

```
1 • use studlearning;
2
3 # All tests in the 'Computer Science' department.
4
5
6 • SELECT * FROM test WHERE course_id IN (SELECT course_id FROM courses WHERE dept_id = 'CS');
7
8
9
```

[illegible]

### 3. Students details who scored more than 20 marks in any test

```
1 • use studlearning;
2
3 # The students who have scored more than 20 marks in any test.
4
5
6 • SELECT DISTINCT usn FROM test_details WHERE marks > 20;
7
8
9
```

0%	1:7
result Grid	Filter Rows: Search Export:
usn	
LS20171149	
LS20171010	
LS20171444	
LS20171333	
LS20171029	
LS20171856	

5)



## 4. The course taken by sunil kumar

```
1 • use studlearning;
2
3 # the courses taken by 'Sunil Kumar'.
4
5 • SELECT c.* FROM courses c
6 INNER JOIN course_details cd ON c.course_id = cd.course_id
7 INNER JOIN student s ON cd.usn = s.usn
8 WHERE s.name = 'Sunil Kumar';
9
```

0% 1:9

Result Grid Filter Rows: Search Export:

	course_id	name	dept_id	no_of_credits	sem	prerequisites
▶	LSCS151	C Programming	CS	4	2	None
	LSCS101	Python	CS	4	1	None
	LSCS201	Data Structures	CS	4	3	LSCS201
	LSCS151	C Programming	CS	4	2	None
	LSCS101	Python	CS	4	1	None
	LSCS201	Data Structures	CS	4	3	LSCS201
	LSCS151	C Programming	CS	4	2	None
	LSCS101	Python	CS	4	1	None
	LSCS201	Data Structures	CS	4	3	LSCS201

5)

## 5. Name and email of all professors from faculty

```
1 • use studlearning;
2
3 # the names and email addresses of all faculty members who are professors.
4
5 • SELECT name, email FROM faculty WHERE designation = 'Professor';
6
7
8
9
```

10% 8:5

Result Grid Filter Rows: Search Export:

	name	email
▶	Anand Kumar	anandkumar@gmail.com
	Anu Banerjee	anubanerjee@gmail.com
	Chandrashekhar...	chandrashekar@gmail.com
	Poonam Bisht	poonambisht@gmail.com

## 6. Faculty member who have not conducted any test

```
1 • use studlearning;
2
3 # the faculty members who have not conducted any tests.
4
5
6 • SELECT f.* FROM faculty f
7 LEFT JOIN test t ON f.emp_id = t.emp_id
8 WHERE t.test_id IS NULL;
9
```

00% 1:9

**Result Grid** Filter Rows: Search Export:

emp_id	name	gender	email	designation	dept_id
LSEM050	Deepak Ahuja	M	deepakahuja@gmail.com	Associate Professor	CS
LSEM346	Hari Chidella	M	harichindella@gmail.com	Lecturer	ME
LSEM789	Vishal Kandpal	M	viahalkandpal@gmail.com	Assistant Professor	EC
LSEM969	Sunitha A	F	sunitha@gmail.com	Lecturer	EEE



## 7.select male faculty details




```
1 • use studlearning;
2
3 # the faculty members who are male.
4
5
6 • SELECT * FROM faculty WHERE gender = 'M';
7
8
9
10
11
12
13
14
```

0%

1:11

Result Grid

  Filter Rows:

Edit:   

Export/Import:

emp_id	name	gender	email	designation	dept_id
LSEM050	Deepak Ahuja	M	deepakahuja@gmail.com	Associate Professor	CS
LSEM125	Anand Kumar	M	anandkumar@gmail.com	Professor	CS
LSEM346	Hari Chidella	M	harichindella@gmail.com	Lecturer	ME
LSEM465	Chandrashekar...	M	chandrashekar@gmail.com	Professor	ME
LSEM789	Vishal Kandpal	M	viahalkandpal@gmail.com	Assistant Professor	EC
NULL	NULL	NULL	NULL	NULL	NULL

## 8.courses with no enrolled students

```
1 • use studlearning;
2
3 # the courses with no enrolled students.
4
5
6 • SELECT c.name AS course_name
7 FROM courses c
8 LEFT JOIN course_details cd ON c.course_id = cd.course_id
9 WHERE cd.usn IS NULL;
```




L0

L1

L2

L3

L4

0%	1:12	
Result Grid	  Filter Rows: <input type="text" value="Search"/>	Export: 
course_name		
▶ Fluid Mechanics		
Signal and system		
Transmission System		
VLSI		

## 9.Course and no of students enrolled

```
1 • use studlearning;
2
3 # the course names and the number of students enrolled in each course.
4
5 • SELECT c.name AS course_name, COUNT(cd.usn) AS enrolled_students
6 FROM courses c
7 LEFT JOIN course_details cd ON c.course_id = cd.course_id
8 GROUP BY c.name;
9
```

0% 1:9

result Grid Filter Rows: Search Export:

course_name	enrolled_studen...
Algorithms	3
C Programming	9
▶ Data Structures	12
Fluid Mechanics	0
Python	12
Signal and system	0
Transmission System	0
VLSI	0

## 10. Courses which have more than 3 credits

```
1 • use studlearning;
2
3 # the courses that have more than 3 credits.
4
5 • SELECT * FROM courses WHERE no_of_credits > 3;
6
7
8
9
```




100% 1:7

Result Grid Filter Rows: Search Edit: Export/

course_id	name	dept_id	no_of_credits	sem	prerequisites
LSCS101	Python	CS	4	1	None
LSCS151	C Programming	CS	4	2	None
LSCS201	Data Structures	CS	4	3	LSCS201
LSCS251	Algorithms	CS	4	4	LSCS201
LSEC251	Signal and system	EC	4	4	None
LSEC301	VLSI	EC	4	5	None
LSEEE351	Transmission System	EEE	4	6	None
LSME201	Fluid Mechanics	ME	4	3	None
NULL	NULL	NULL	NULL	NULL	NULL

## 11.Avg duration of all test




```
1 • use studlearning;  
2  
3 # the average duration of all tests.  
4  
5 • SELECT AVG(duration) AS avg_duration FROM test;  
6  
7  
8
```

100%	↕	1:6
<b>Result Grid</b>   Filter Rows: <input type="text" value="Search"/> Export: 		
avg_duration		
16.8750		

## 12.Students who haven taken python and c both

```
1 • use studlearning;
2
3 # the students who have taken both 'Python' and 'C Programming' courses.
4
5 • SELECT s.usn, s.name
6 FROM student s
7 INNER JOIN course_details cd ON s.usn = cd.usn
8 INNER JOIN courses c ON cd.course_id = c.course_id
9 WHERE c.name IN ('Python', 'C Programming')
10 GROUP BY s.usn, s.name
11 HAVING COUNT(DISTINCT c.course_id) = 2;
12
13
14
```

100% 1:13

**Result Grid**   Filter Rows:  Export: 

usn	name
LS20171010	Sunil Kumar
LS20171856	Aditya Verma



## 13.course bame and no of student eneolled

```
1 • use studlearning;
2
3 # the course names and the number of students enrolled, ordered by the number of students in descending order.
4
5
6 • SELECT c.name AS course_name, COUNT(cd.usn) AS enrolled_students
7 FROM courses c
8 LEFT JOIN course_details cd ON c.course_id = cd.course_id
9 GROUP BY c.name
10 ORDER BY enrolled_students DESC;
11
12
13
14
```

0% 1:13

Result Grid Filter Rows: Search Export:

course_name	enrolled_studen...
▶ Data Structures	12
Python	12
C Programming	9
Algorithms	3
Fluid Mechanics	0
Signal and system	0
Transmission System	0
VLSI	0

## 14.Course name and faculty member who conducted test for those course

```
1 • use studlearning;
2
3 # the course names and the faculty members who have conducted tests for those courses.
4
5 • SELECT c.name AS course_name, f.name AS faculty_name
6 FROM courses c
7 INNER JOIN test t ON c.course_id = t.course_id
8 INNER JOIN faculty f ON t.emp_id = f.emp_id;|
9
10
```

00% 45:8

**Result Grid** Filter Rows: Search Export:

course_name	faculty_name
C Programming	Savitha Sood
Python	Gauri Govind
Data Structures	Anand Kumar
Data Structures	Anand Kumar
Fluid Mechanics	Chandrashekhkar B V
VLSI	Poonam Bisht
Transmission System	Anu Banerjee
Python	Savitha Sood

## 15. List of students who not taken any test

```
1 • use studlearning;
2
3 # the students who have not taken any tests.
4
5 • SELECT s.usn, s.name
6 FROM student s
7 WHERE NOT EXISTS (
8     SELECT td.usn
9     FROM test_details td
10    WHERE td.usn = s.usn
11 );
12
```

0% 25:10

Result Grid



Filter Rows:



Search

Edit:






usn	name	
LS20171005	Rahul Mishra	
LS20171125	Granth Kohli	
LS20171299	Aman Sharma	
LS20171412	Abhishek Tiwari	
LS20171560	Surabhi Jain	
NULL	NULL	

## 16.students who have not liked any notes

```
1 • use studlearning;
2
3 # the students who have not liked any notes.
4
5 • SELECT s.* FROM student s
6 LEFT JOIN notes_details nd ON s.usn = nd.usn
7 WHERE nd.likes IS NULL;
8
9
10
11
12
```

00% 1:12

**Result Grid**   Filter Rows:  Export: 

	usn	name	sex	dob	email	stars	no_of_tests	dept_id
▶	LS20171005	Rahul Mishra	M	1999-07-21	rahulmishra@gmail.com	1	0	CS
	LS20171125	Granth Kohli	M	1999-05-07	granthkohli@gmail.com	1	0	CS
	LS20171149	Nikitha Bhatiya	F	1999-06-15	nikitha@gmail.com	1	2	CS
	LS20171256	Tulika Saxena	F	2000-02-29	tulikasaxena@gmail.com	1	1	EC
	LS20171299	Aman Sharma	M	1999-12-31	amansharma@gmail.com	1	0	ME
	LS20171333	Shikar Mishra	M	1999-08-25	shikar@gmail.com	1	3	ME
	LS20171380	Ankitha Anand	F	1999-03-23	ankitha@gmail.com	1	1	CS
	LS20171560	Surabhi Jain	F	1999-06-18	surabhijain@gmail.com	1	0	EEE
	LS20171856	Aditya Verma	M	2000-04-08	adityaverma@gmail.com	1	4	CS

## 17. Names and email addresses of student who are taking 'python' and 'c' both

```
1 • use studlearning;
2
3 #the names and email addresses of students who are taking 'Python' and 'C Programming' cc
4
5 • SELECT s.name, s.email
6 FROM student s
7 INNER JOIN course_details cd ON s.usn = cd.usn
8 INNER JOIN courses c ON cd.course_id = c.course_id
9 WHERE c.name IN ('Python', 'C Programming')
10 GROUP BY s.name, s.email
11 HAVING COUNT(DISTINCT c.course_id) = 2;
12
```

Result Grid		Filter Rows: <input type="text" value="Search"/>	Export:
name	email		
Aditya Verma	adityaverma@gmail.com		
Sunil Kumar	sunilkumar@gmail.com		

## 18.name and email addressof faculty who are professor and work in the computer science department

```
1 • use studlearning;
2
3 #the names and email addresses of faculty members who are professors and work in the 'Computer Science' department.
4
5 • SELECT name, email
6 FROM faculty
7 WHERE designation = 'Professor' AND dept_id = 'CS';
8
9
10
11
12
```

Result Grid		Filter Rows: <input type="text" value="Search"/>	Export:
name	email		
Anand Kumar	anandkumar@gmail.com		

## 19. The course names and the enrolled students for courses with more than 10 students

```
1 • use studlearning;
2
3 #the course names and the number of enrolled students for courses with more than 10 students.
4
5 • SELECT c.name AS course_name, COUNT(cd.usn) AS enrolled_students
6 FROM courses c
7 LEFT JOIN course_details cd ON c.course_id = cd.course_id
8 GROUP BY c.name
9 HAVING COUNT(cd.usn) > 10;
```

10

11

12

0% 1:12

Result Grid



Filter Rows:



Search

Export:



course_name	enrolled_studen...
▶ Data Structures	12
Python	12

## 20.count male students and female students

```
SELECT sex , COUNT(*) AS student_count
```

```
FROM student
```

```
GROUP BY sex;
```

	sex	student_count
▶	M	12
	F	8

## 21. merge table notes with notes\_details

```
FROM notes AS All_details_of_notes
```

```
left JOIN notes_details AS All_notes_details
```

```
ON All_details_of_notes.notes_id = All_notes_details.notes_id;
```

	notes_id	name	course_id	no_of_likes	emp_id	link	usn	notes_id	likes
▶	050201102	Graphs	LSCS201	0	LSEM050	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>	NULL	NULL	NULL
	125201101	Trees	LSCS201	0	LSEM125	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>	LS20171010	125201101	1
	125201101	Trees	LSCS201	0	LSEM125	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>	LS20171029	125201101	1
	465201101	Fluid Mechanics	LSME201	0	LSEM346	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>	NULL	NULL	NULL
	568151101	DataTypes	LSCS151	0	LSEM568	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>	NULL	NULL	NULL
	568151102	Structures	LSCS151	0	LSEM568	<a href="https://drive.google.com/open?id=0B8F7Frp3O...">https://drive.google.com/open?id=0B8F7Frp3O...</a>	NULL	NULL	NULL

## 22. Sccommon values of table notes with notes\_details

FROM notes AS All\_details\_of\_notes

Inner JOIN notes\_details AS All\_notes\_details

ON All\_details\_of\_notes.notes\_id = All\_notes\_details.notes\_id;

	notes_id	name	course_id	no_of_likes	emp_id	link	usn	notes_id	likes
▶	125201101	Trees	LSCS201	0	LSEM125	https://drive.google.com/open?id=0B8F7Frp3O...	LS20171029	125201101	1
	125201101	Trees	LSCS201	0	LSEM125	https://drive.google.com/open?id=0B8F7Frp3O...	LS20171010	125201101	1

## 23. Selecting the students who have taken maximum number of test

SELECT usn,name from student where usn in (SELECT usn FROM test\_details

GROUP BY usn

HAVING COUNT(usn) =

(SELECT MAX(num) FROM

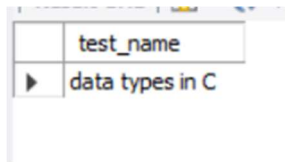
(SELECT COUNT(usn) AS num FROM test\_details GROUP BY usn)y));

	usn	name
▶	LS20171019	Aman Gupta
	LS20174444	Isha Verma
*	NULL	NULL



## 24. Select the subjects in which students have taken maximum number of test

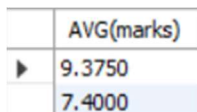
```
SELECT test_name FROM test_details  
GROUP BY test_name  
HAVING COUNT(test_name) =  
        (SELECT MAX(num) FROM  
         (SELECT COUNT(test_name) AS num FROM test_details  
          GROUP BY test_name)y);
```



test_name
data types in C

## 25. Find average marks of students in a course which is uploaded by a particular faculty

```
SELECT AVG(marks) FROM test_details  
WHERE test_name IN  
        (SELECT test_name FROM test WHERE emp_id =  
        'LSEM568')group by test_name;
```



AVG(marks)
9.3750
7.4000

26. how many courses a particular student has taken

```
select count(*)  
from course_details  
where usn = 'LS20173333';
```

	count(*)
▶	2

27. Select total number of students from each department

```
select dept_id,count(*) from student group by dept_id;
```

	dept_id	count(*)
▶	CS	15
	EC	2
	EEE	1
	ME	2

## 28. How many credits a student has taken

```
select usn,sum(courses.no_of_credits) from courses,course_details
```

```
where course_details.course_id = courses.course_id
```

```
group by usn;
```

	usn	sum(courses.no_of_credits)
▶	LS20171019	4
	LS20171826	4
	LS20174444	8
	LS20171622	4
	LS20173333	8
	LS20172299	8
	LS20171530	4
	LS20171007	4
	LS20171356	4

## 29. Find average of all the subjects

```
select test_name,avg(marks) from test_details
```

```
group by test_name;
```

	test_name	avg(marks)
▶	data types in C	9.3750
	data types in python	7.4000
	List Tuples and Dictionary in Python	27.3333
	Queue	7.4000
	Visi Design and technology	15.0000

30. select notes names where likes>5 or if it belongs to a cs dept

```
SELECT DISTINCT notes.name from notes,courses,dept
```

```
WHERE no_of_likes>5 OR dept.dept_id = courses.dept_id and dept.dept_id = 'CS'
and courses.course_id = notes.course_id;
```

	name
►	Structures
	DataTypes
	Trees
	Graphs

## 31. Details of CS

Select\*

from students

where student\_id=CS

[illegible]