

S20230010225

DBMS LAB 11 Assignment screenshots

Q1 – a

```
247
248 • select title from course where credits = 3 and dept_name = "Comp. Sci.";
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

title
Robotics
Image Processing
Database System...

Q1 – b

```
250 • select takes.ID from takes join teaches on takes.course_id = teaches.course_id and takes.sec_id = teaches.sec_id
251 and takes.semester = teaches.semester and takes.year = teaches.year join instructor on teaches.id = instructor.ID
252 where instructor.name="einstein";
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

ID
44553

Q1 – c

```
254 • select max(instructor.salary) from instructor;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

max(instructor.salary)
95000.00

Q1 – d

```
256 • select name from instructor where salary = (select max(salary) from instructor);
257
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

name
Einstein

Q1 – e

```
258 • select course_id, sec_id, count(ID) from takes where semester = "fall" and year = "2009" group by course_id, sec_id;
```

Result Grid

	course_id	sec_id	count(ID)
▶	CS-101	1	6
	CS-347	1	2
	PHY-101	1	1

Q1 – f

```
269 • select max(enrollment) as max_enrollment from
270 (select count(id) as enrollment from takes where semester = "Fall" and year = 2009 group by course_id, sec_id)
```

Result Grid

	max_enrollment
▶	6

Q1 – g

```
264 • select course_id, sec_id from (select course_id, sec_id, count(id) as enrollment from takes where semester = 'fall' and year = 2009
group by course_id, sec_id) as sec_enrollments where enrollment = (select max(enrollment) from (select count(id) as enrollment from
takes where semester = 'fall' and year = 2009 group by course_id, sec_id) as max_enroll);
```

Result Grid

	course_id	sec_id
▶	CS-101	1

Q2 – a

```
266 • update instructor set salary = salary*1.1 where dept_name = "comp. sci.";
267
268
```

Output

#	Time	Action	Message
✗ 158	16:07:25	select max(enrollment) as max_enrollment from (select count(id) as enrollment from...	Error Code: 1248. Every derived table must have its own alias
✗ 159	16:13:01	select course_id, sec_id from (select course_id, sec_id, count(ID) from takes wh...	Error Code: 1064. You have an error in your SQL syntax; check the manu...
✗ 160	16:13:12	select course_id, sec_id from (select course_id, sec_id, count(ID) from takes wh...	Error Code: 1064. You have an error in your SQL syntax; check the manu...
✓ 161	16:14:05	select course_id, sec_id from (select course_id, sec_id, count(id) as enrollment fr...	1 row(s) returned
✓ 162	16:18:40	update instructor set salary = salary*1.1 where dept_name = "comp. sci."	3 row(s) affected Rows matched: 3 Changed: 3 Warnings: 0

Q2 – b

```
268 • delete from course where course_id not in (select course_id from section)
269
```

Output				
Action Output				
#	Time	Action	Message	
159	16:13:01	select course_id, sec_id from (select course_id, sec_id, count(ID) from takes wh...	Error Code: 1064. You have an error in your SQL sy...	
160	16:13:12	select course_id, sec_id from (select course_id, sec_id, count(ID) from takes wh...	Error Code: 1064. You have an error in your SQL sy...	
161	16:14:05	select course_id, sec_id from (select course_id, sec_id, count(id) as enrollment fr...	1 row(s) returned	
162	16:18:40	update instructor set salary = salary*1.1 where dept_name = "comp. sci."	3 row(s) affected Rows matched: 3 Changed: 3 W...	
163	16:20:17	delete from course where course_id not in (select course_id from section)	1 row(s) affected	

Q2- c

Have set salary as 30000 due to constraint defined in schema

```
270 • insert into instructor(id, name, dept_name, salary)
271 select id, name, dept_name, 30000 from student where tot_cred>100
```

Output				
Action Output				
#	Time	Action	Message	
161	16:14:05	select course_id, sec_id from (select course_id, sec_id, count(id) as enrollment fr...	1 row(s) returned	
162	16:18:40	update instructor set salary = salary*1.1 where dept_name = "comp. sci."	3 row(s) affected Rows matched: 3 Changed: 3 Warnings: 0	
163	16:20:17	delete from course where course_id not in (select course_id from section)	1 row(s) affected	
164	16:22:35	insert into instructor(id, name, dept_name, salary) select id, name, dept_name, 10...	Error Code: 3819. Check constraint 'instructor_chk_1' is violated.	
165	16:23:57	insert into instructor(id, name, dept_name, salary) select id, name, dept_name, 30...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	

Q3

```
273 • select dept_name from department where lower(dept_name) like "%sci%";
```

Result Grid		Filter Rows:	Edit:	Export/Import:	Wrap Cell Content:
	dept_name				
▶	Comp. Sci.				
*	NULL				

Q4 - a

```

275 • select instructor.id, instructor.name, count(teaches.course_id) from instructor left join teaches on instructor.id = teaches.id
276 group by instructor.id, instructor.name

```

id	name	count(teaches.course_id)
00128	Zhang	0
10101	Srinivasan	3
12121	Wu	1
15151	Mozart	1
22222	Einstein	1
23121	Chavez	0
32343	El Said	1
33456	Gold	0
45565	Katz	2
58583	Califieri	0

Q4 – b

```

278 • select instructor.id, instructor.name, (select count(teaches.course_id) from teaches where teaches.id=instructor.id) as sections from
instructor

```

id	name	sections
00128	Zhang	0
10101	Srinivasan	3
12121	Wu	1
15151	Mozart	1
22222	Einstein	1
23121	Chavez	0
32343	El Said	1
33456	Gold	0
45565	Katz	2
58583	Califieri	0



#	Time	Action	Message	Duration / Fetch
167	16:30:01	select instructor.id, instructor.name, count(teaches.course_id) from instructor left j...	15 row(s) returned	0.000 sec / 0.000 sec
168	16:32:38	select instructor.id, instructor.name, (select count(teaches.course_id) from teach...	15 row(s) returned	0.000 sec / 0.000 sec

Q4 – c

```

280 • select s.course_id, s.sec_id, s.semester, s.year,
281        ifnull(i.name, '-') as instructor_name
282 from section s
283 left join teaches t on s.course_id = t.course_id
284 and s.sec_id = t.sec_id
285 and s.semester = t.semester
286 and s.year = t.year
287 left join instructor i on t.id = i.id
288 where s.semester = 'spring'
289 and s.year = 2010;
290

```

Result Grid |  Filter Rows: | Export:  | Wrap Cell Content: 


	course_id	sec_id	semester	year	instructor_name
▶	CS-101	1	Spring	2010	Katz
	FIN-201	1	Spring	2010	Wu
	MU-199	1	Spring	2010	Mozart
	HIS-351	1	Spring	2010	El Said
	CS-319	2	Spring	2010	Brandt
	CS-319	1	Spring	2010	Katz
	CS-315	1	Spring	2010	Srinivasan

Q4 – d

```

292 • select d.dept_name, count(i.ID) as num_instructors
293 from department d
294 left join instructor i on d.dept_name = i.dept_name
295 group by d.dept_name;

```

Result Grid |  Filter Rows: | Export:  | Wrap Cell Content: 

	dept_name	num_instructors
▶	Biology	2
	Comp. Sci.	4
	Elec. Eng.	1
	Finance	3
	History	2
	Music	1
	Physics	2

Q5 – a

```

297 • select student.id, student.name, student.dept_name, student.tot_cred, takes.course_id, takes.sec_id, takes.semester,
298       takes.year, takes.grade
299 from student, takes
300 where student.id = takes.id
301 union all
302 select student.id, student.name, student.dept_name, student.tot_cred, null, null, null, null, null
303 from student
304 where student.id not in (select id from takes);

```

	id	name	dept_name	tot_cred	course_id	sec_id	semester	year	grade
▶	00128	Zhang	Comp. Sci.	102	CS-101	1	Fall	2009	A
	00128	Zhang	Comp. Sci.	102	CS-347	1	Fall	2009	A-
	12345	Shankar	Comp. Sci.	32	CS-101	1	Fall	2009	C
	12345	Shankar	Comp. Sci.	32	CS-190	2	Spring	2009	A
	12345	Shankar	Comp. Sci.	32	CS-315	1	Spring	2010	A
	12345	Shankar	Comp. Sci.	32	CS-347	1	Fall	2009	A
	19991	Brandt	History	80	HIS-351	1	Spring	2010	B

Q5 – b

```

306 • select student.id, student.name, student.dept_name, student.tot_cred, takes.course_id, takes.sec_id, takes.semester,
307       takes.year, takes.grade
308 from student, takes
309 where student.id = takes.id
310 union all
311 select student.id, student.name, student.dept_name, student.tot_cred, null, null, null, null, null
312 from student
313 where student.id not in (select id from takes)
314 union all
315 select null, null, null, null, takes.course_id, takes.sec_id, takes.semester, takes.year, takes.grade
316 from takes
317 where takes.id not in (select id from student);

```

	id	name	dept_name	tot_cred	course_id	sec_id	semester	year	grade
▶	00128	Zhang	Comp. Sci.	102	CS-101	1	Fall	2009	A
	00128	Zhang	Comp. Sci.	102	CS-347	1	Fall	2009	A-
	12345	Shankar	Comp. Sci.	32	CS-101	1	Fall	2009	C
	12345	Shankar	Comp. Sci.	32	CS-190	2	Spring	2009	A
	12345	Shankar	Comp. Sci.	32	CS-315	1	Spring	2010	A
	12345	Shankar	Comp. Sci.	32	CS-347	1	Fall	2009	A
	19991	Brandt	History	80	HIS-351	1	Spring	2010	B

Q6

```

329         signal sqlstate '45000' set message_text = 'loan amount cannot exceed 10 lakhs';
330     end if;
331 end//
332 • create trigger before_update
333     before update on bankcustomers
334     for each row
335     begin
336         if new.loan > 1000000 then
337             signal sqlstate '45000' set message_text = 'loan amount cannot exceed 10 lakhs';
338         end if;
339     end//
340 delimiter ;
341
342 • insert into bankcustomers (accnum, name, loan) values (1, 'shriansh', 1500000);

```

Output				
Action Output				
#	Time	Action	Message	
✓ 178	17:02:01	select student.id, student.name, student.dept_name, student.tot_cred, takes.cou...	23 row(s) returned	
✓ 179	17:11:18	create table bankcustomers (accnum int primary key, name varchar(255), ...	0 row(s) affected	
✓ 180	17:11:18	create trigger before_insert before insert on bankcustomers for each row begin ...	0 row(s) affected	
✓ 181	17:11:18	create trigger before_update before update on bankcustomers for each row begi...	0 row(s) affected	
✗ 182	17:11:18	insert into bankcustomers (accnum, name, loan) values (1, 'shriansh', 1500000)	Error Code: 1644, loan amount cannot exceed 10 lakhs	