



CSE 370 LAB ASSIGNMENT 3

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Section :05

Department of Computer Science and Engineering

Course Code: CSE 370	Credits: 3.0
Course Name: Database Systems	

Lab Homework 3

Proving yourself worthy of being able to handle bigger tasks, the tech lead has decided to give you a challenging job. However, this time, the data that you would be handling is very sensitive and no one wants this data to be leaked. Therefore, instead of getting the entire table, the tech lead has given you the list of attributes that the table contains and the table name. The information given is as follows:

Table Name: <i>employees</i>

Attribute Name	Attribute type
<i>employee_id</i>	char(10)
<i>first_name</i>	varchar(20)
<i>last_name</i>	varchar(20)
<i>email</i>	varchar(60)
<i>phone_number</i>	char(14)
<i>hire_date</i>	date
<i>job_id</i>	int
<i>salary</i>	int
<i>commission_pct</i>	decimal(5,3)
<i>manager_id</i>	char(10)
<i>department_id</i>	int

You are tasked with building the queries to retrieve the following information [test out your queries with dummy data]: [7 X 2 =14]

1. Find the **first_name**, **last_name**, **email**, **phone_number**, **hire_date** and **department_id** of all the employees with the latest **hire_date**.

Ans: SELECT first_name, last_name, email, phone_number, hire_date,
-> department_id from employee order by hire_date DESC;

Administrator: XAMPP for Windows - mysql - h localhost - u root - p

68 rows in set (0.001 sec)

```

MariaDB [cse370]> SELECT first_name, last_name, email, phone_number, hire_date,
-> department_id FROM employee ORDER BY hire_date DESC;

```

first_name	last_name	email	phone_number	hire_date	department_id
Othelia	Boucher	oboucher1@shareasale.com	711-221-5786	2022-06-17	0
Gerrilee	Stanfield	gstanfield@gifeng.com	551-801-0859	2022-04-02	1
Toby	Harling	tharling@google.com.au	747-723-5239	2021-10-08	0
Stanly	Tomsu	stomsu@barnesandnoble.com	779-884-6348	2021-09-12	3
Katine	Sarjeant	ksarjeant1@paginiegialle.it	565-131-3934	2021-03-25	8
Alf	Baudy	abaudy2@odnoklassniki.ru	413-431-0451	2021-03-07	6
Gunter	Wiggins	gwiggins@census.gov	916-293-1877	2020-12-24	0
Kristo	Lewlie	klewlie@biglobe.ne.jp	495-404-3064	2020-12-17	2
Shelby	Oglevie	soglevie@shareasale.com	692-555-5935	2020-08-22	3
Petr	Pirri	ppirri18@virginia.edu	713-364-8346	2020-08-11	5
Leandra	Avrahamov	lavrahamov7@virginia.edu	460-613-5708	2020-05-13	8
Kelsy	Hulbert	khulbert12@marriott.com	433-656-5631	2020-04-27	8
Valentine	Ahearn	vahearn1@google.co.uk	147-107-9721	2020-02-09	9
Loriamne	Huegett	lhuegett@quantcast.com	757-271-9728	2020-01-06	9
Reed	Gaywood	rgaywood8@irs.gov	445-481-2068	2020-01-02	0
Brianne	Buggs	bbuggs13@free.fr	154-232-0682	2019-11-08	2
Arvie	Kaubisch	akaubisch1@cbc.ca	181-916-9094	2019-08-17	4
Perri	Rowse	prose13@studiopress.com	820-855-5401	2019-07-21	10
Salomon	Sorbie	ssorbie10@loglines.com	192-530-5223	2019-06-15	3
Carmelia	Mafham	cmafham14@instagram.com	744-115-9063	2019-03-05	9
Meghan	Roby	mroby1@wunderground.com	452-774-0952	2018-09-12	7
Blinnie	Ryley	bryley@wikimedia.org	226-187-8778	2018-08-29	2
Rozelle	Nuton	rnuton1@uisc.edu	126-918-6114	2018-08-27	7
Damal	Edson	jedson@nsw.gov.au	160-640-5002	2018-07-28	2
Pet	Chavez	pchavez2@technorati.com	507-540-1317	2018-03-07	6
Tiphany	Brodeley	tbrodeley2@dropbox.com	734-735-7112	2018-02-16	1
Moll	Ranger	mranger1@siteometer.com	446-772-4460	2018-01-26	4
Sayres	Ceaplen	sceaplen@gengadget.com	582-121-8512	2017-10-26	10
Tibout	Vand	tvand@redit.com	687-889-7213	2017-09-17	3
Opaline	Baudinet	obaudinet@artisteer.com	485-222-5775	2017-08-11	0
Dyana	Poytress	dpoytress@amsung.com	952-699-4635	2017-07-29	10
Wandie	Ivakhnov	wivakhnov@yolasite.com	609-824-1218	2017-05-15	3
Rollo	Burtwell	rburtwell5@merriam-webster.com	173-137-9515	2017-01-04	4
Conroy	Hickford	chickford@forbes.com	501-372-3911	2016-11-07	3
Toby	Cremer	tcremer@ouku.com	373-543-3537	2016-10-25	1
Jeffrey	Pessolt	jpessolt1@surveymonkey.com	513-614-9891	2016-08-02	5
Hendrik	Lain	hlain@wikimedia.org	852-708-0253	2016-05-15	2
Ferdie	Kubecka	fkubecka5@hp.com	943-341-5989	2016-02-22	10
Archer	Smeewings	asmeewings1@dyndns.org	901-248-3388	2016-01-17	7
Anna-diana	Sillocks	asillocks2@iilbeian.gov.cn	237-219-2447	2015-11-29	2
Joete	Feldharker	jfeldharker1@ameblo.jp	927-898-6175	2015-10-31	4

- Find the **first_name**, **last_name**, **employee_id**, **phone_number**, **salary** and **department_id** of all the employees with the lowest **salary** in each department.

ANS: SELECT first_name, last_name, email, phone_number, min(salary), department_id
-> from employee group by department_id;

68 rows in set (0.002 sec)

```

MariaDB [cse370]> SELECT first_name, last_name, email, phone_number, min(salary), department_id
-> FROM employee GROUP BY department_id;

```

first_name	last_name	email	phone_number	min(salary)	department_id
Toby	Harling	tharling@google.com.au	747-723-5239	260030	0
Toby	Cremer	tcremer@ouku.com	373-543-3537	87530	1
Kristo	Lewlie	klewlie@biglobe.ne.jp	495-404-3064	118204	2
Shelby	Oglevie	soglevie@shareasale.com	692-555-5935	7281	3
Rollo	Burtwell	rburtwell5@merriam-webster.com	173-137-9515	275472	4
Berte	Ding	bdingj@ox.ac.uk	748-515-1401	54180	5
Alf	Baudy	abaudy2@odnoklassniki.ru	413-431-0451	503873	6
Editha	Abbott	eabbott5@earthlink.net	400-151-0607	466315	7
Leandra	Avrahamov	lavrahamov7@virginia.edu	460-613-5708	229285	8
Karlee	Kopps	kkopps1@unblog.fr	530-551-1243	244083	9
Perri	Rowse	prose13@studiopress.com	820-855-5401	63762	10

11 rows in set (0.003 sec)

```

MariaDB [cse370]>

```

- Find the **first_name**, **last_name**, **employee_id**, **commission_pct** and **department_id** of all the employees in department XYZABC (**department_id** = 7) who have a lower **commission_pct** than all of the employees of department ABCXYZ (**department_id** = 5).

ANS: Select first_name, last_name, employee_id, commission_pct, department_id from

employee where department_id = 7 and commission_pct < all(Select commission_pct from employee where department_id = 5)

Administrator: XAMPP for Windows - mysql -u root -h localhost -p

59-1571519	Katine	Sarjeant	ksarjeant1b@paginegialle.it	565-131-3934	2021-03-25	851	229285	51.000	Accounting	8
37-2706016	Anna-diana	Silcocks	asilcocks1d@belgian.gov.cn	237-210-2447	2015-11-29	577	578017	91.000	Sales	2
20-2300140	Conroy	Hickford	chickford1d@forbes.com	501-372-3911	2016-11-07	242	238043	83.000	Support	3
67-3125780	Meghan	Roby	mrobyle1@underground.com	452-774-0952	2018-09-12	339	466315	57.000	Accounting	7
22-6776389	Ben	Brittan	bbrittan1f@wordpress.com	140-740-9957	2012-09-08	857	244083	9.000	Research a	9
97-0013481	Lorenza	Tethacot	ltethacot1g@example.com	152-677-3281	2010-09-23	766	87539	60.000	Research a	1
57-2001546	Oona	Gayther	ogayther1h@unc.edu	451-615-6365	2011-04-19	69	171811	79.000	Accounting	1
92-1509845	Holl	Ranger	mranger1i@sitester.com	446-772-4469	2018-01-26	138	351476	84.000	Engineerin	4
00-5903694	Anatollo	Do	adolj@acoz.ru	206-974-4270	2014-06-14	17	210160	15.000	Engineerin	10
83-5020830	Arvie	Kaubisch	akaubisch1k@cbc.ca	181-916-9094	2019-08-17	938	922789	12.000	Training	4
25-3117948	Brodie	Cheshire	bcheshire1l@google.nl	664-312-0829	2014-05-01	504	125968	20.000	Training	1
96-4110123	Zachary	Moreton	zmoreton1m@slideshare.net	675-751-5655	2011-12-19	577	379119	86.000	Services	5
74-7018114	Laeton	Smale	lsmale1n@bnewey.com	560-825-5567	2015-09-11	976	768043	92.000	Support	0
38-4876048	Opaline	Baudinet	obaudinet1o@artisteer.com	405-222-5775	2017-08-11	46	393302	43.000	Marketing	0
55-7561357	Valentine	Ahearne	vahearne1p@google.co.uk	147-107-9721	2020-02-09	738	428211	99.000	Engineerin	9
40-5942725	Rozele	Nuton	rnuton1q@wisc.edu	126-918-6114	2018-08-27	571	884512	99.000	Sales	7
92-3929063	Archer	Smewings	asmewings1r@dyndns.org	901-248-3388	2016-01-17	562	720469	22.000	Product Ma	7
09-4277777	Ivy	Iczokvitz	ticzokvitz1s@independent.co.uk	980-520-3233	2011-01-20	774	365666	14.000	Legal	9
74-5304066	Jeddy	Simmy	jsimmy1t@homestead.com	138-989-5224	2015-10-27	292	643256	32.000	Sales	4
58-2527340	Jeffry	Pessolt	jpessolt1u@surveymonkey.com	513-614-9891	2016-08-02	770	970224	67.000	Training	5
25-7876740	Merci	Lovatt	mlovatt1v@netlog.com	678-658-1308	2011-08-06	154	275472	99.999	Research a	4

58 rows in set (0.001 sec)

```

MariaDB [cse370]> Select first_name, last_name, employee_id, commission_pct, department_id from
-> employee where department_id = 7 and commission_pct < all(Select commission_pct
-> from employee where department_id = 5);
Empty set (0.004 sec)

MariaDB [cse370]>

```

- Find the **department_id** and total number of employees of each department which does not have a single employee under it with a **salary** more than 30,000.

ANS: Select department_id, count(*) as total_employees from employee where salary < 30000 group by department_id;

```

MariaDB [cse370]>
MariaDB [cse370]> Select department_id, count(*) as total_employees from employee where salary <
-> 30000 group by department_id;

```

department_id	total_employees
3	1

1 row in set (0.002 sec)

```

MariaDB [cse370]>

```

- For each of the departments, find the **department_id**, **job_id** and **commission_pct** with **commission_pct** less than at least one other **job_id** in that department.

ANS: Select department_id, job_id, commission_pct from employee where commission_pct < any(Select commission_pct from employee) and job_id < any(Select job_id from employee);

Administrator: XAMPP for Windows - mysql -u root -h localhost -p

```

MariaDB [cse370]> Select department_id, job_id, commission_pct from employee where
-> commission_pct < any(select commission_pct from employee) and job_id < any(select
-> job_id from employee);

```

department_id	job_id	commission_pct
7	167	88.000
3	455	53.000
6	668	63.000
10	884	42.000
10	897	31.000
10	630	65.000
2	58	54.000
8	369	6.000
10	745	33.000
2	137	41.000
2	846	19.000
10	980	97.000
1	197	64.000
0	723	43.000
2	237	45.000
6	451	3.000
2	199	90.000
6	950	71.000
5	13	21.000
0	946	28.000
9	674	8.000
9	842	35.000
8	573	15.000
3	163	84.000
1	905	97.000
3	644	29.000
6	665	18.000
4	553	18.000
0	41	85.000
7	913	62.000
0	948	97.000
2	221	64.000
1	679	62.000
5	561	57.000
1	909	46.000
3	361	23.000
0	907	96.000
2	956	56.000
0	674	10.000

6. Find the **manager_id** who does not have any employee under them with a **salary** less than 3500.

ANS: Select manager_id, count(*) from employee where salary < 3500 group by manager_id;

65 rows in set (0.002 sec)

```

MariaDB [cse370]> Select manager_id, count(*) from employee where salary < 3500 group by
-> manager_id;
Empty set (0.001 sec)

```

7. Find the **first_name**, **last_name**, **employee_id**, **email**, **salary**, **department_id** and **commission_pct** of the employee who has the lowest **commission_pct** under each manager.

ANS: Select first_name, last_name, employee_id, email, salary, department_id, min(commission_pct) as minimum_pct from employee group by manager_id

```
MariaDB [cse370]> Select first_name, last_name, employee_id, email, salary, department_id, min(commission_pct)
-> as minimum_pct from employee group by manager_id;
```

first_name	last_name	employee_id	email	salary	department_id	minimum_pct
Toby	Harling	17-2147203	tharlingd@google.com.au	457021	0	43.000
Shelby	Oglevie	96-5191133	soglevie1@sshareasale.com	162220	3	18.000
Karlee	Kopps	96-8079804	kkoppsl@unblog.fr	925932	9	8.000
Wandie	Ivakhnov	68-8310242	wivakhnov@yolasite.com	7281	3	29.000
Lorianne	Huegett	38-3044720	lhuegett@quantcast.com	548024	9	14.000
Alf	Baudy	20-5047207	abaudy2@odnoklassniki.ru	503873	6	1.000
Kristo	Lawlie	45-2642939	klawlie6@biglobe.ne.jp	523171	2	22.000
Perri	Rowse	03-4330161	prorowse1@studiopress.com	847114	10	9.000
Editha	Abbott	91-4149345	eabbots0@earthlink.net	557518	7	3.000
Leandra	Avrahamov	14-9310768	lavrahamov7@virginia.edu	545062	8	6.000
Toby	Baleine	65-1024284	tbaleinep@tinyurl.com	292713	1	18.000
Dyana	Poytress	30-8235022	dpoytress@samsung.com	63762	10	12.000

```
12 rows in set (0.001 sec)
```

```
MariaDB [cse370]>
```

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Haze



10:27 PM
11/12/2022