



Spring-2024 DataBase Systems (CS-103)

Lab Task # 05

SQL-SELECT, Arithmetic Operation, Comparison Operator

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Date: 29 April 2023

Important Instruction

1. No plagiarism allowed.
2. You will required to submit only soft copy via google classroom
3. Late submission not accepted
4. Rename submission file DB24-Name-RegNo. like: **DB24-hamza-1234**
5. You will required to submit single **pdf**

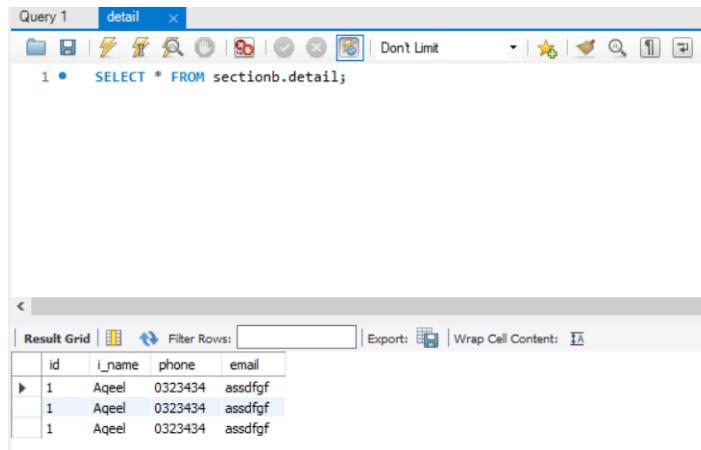
Submission Example

Question .

Write query to select all data from table:

Solution

```
SELECT * FROM db.detail;
```



Question 1

Write SQL query based on given table:

Table: employees

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
100	Steven	King	SKING	515.123.4567	2003-06-17	AD_PRES	24000.00	0.00	0	90
101	Neena	Kochhar	NKOCHHAR	515.123.4568	2005-09-21	AD_VP	17000.00	0.00	100	90
102	Lex	De Haan	LDEHAAN	515.123.4569	2001-01-13	AD_VP	17000.00	0.00	100	90
103	Alexander	Hunold	AHUNOLD	590.423.4567	2006-01-03	IT_PROG	9000.00	0.00	102	60
104	Bruce	Ernst	BERNST	590.423.4568	2007-05-21	IT_PROG	6000.00	0.00	103	60
105	David	Austin	DAUSTIN	590.423.4569	2005-06-25	IT_PROG	4800.00	0.00	103	60
106	Valli	Pataballa	VPATABAL	590.423.4560	2006-02-05	IT_PROG	4800.00	0.00	103	60
107	Diana	Lorentz	DLORENTZ	590.423.5567	2007-02-07	IT_PROG	4200.00	0.00	103	60
108	Nancy	Greenberg	NGREENBE	515.124.4569	2002-08-17	FI_MGR	12000.00	0.00	101	100
109	Daniel	Faviet	DFAVIET	515.124.4169	2002-08-16	FI_ACCOUNT	9000.00	0.00	108	100
110	John	Chen	JCHEN	515.124.4269	2005-09-28	FI_ACCOUNT	8200.00	0.00	108	100
111	Ismael	Sciarra	ISCIARRA	515.124.4369	2005-09-30	FI_ACCOUNT	7700.00	0.00	108	100
112	Jose Manuel	Urman	JMURMAN	515.124.4469	2006-03-07	FI_ACCOUNT	7800.00	0.00	108	100
113	Luis	Popp	LPOPP	515.124.4567	2007-12-07	FI_ACCOUNT	6900.00	0.00	108	100
114	Den	Raphaely	DRAPHEAL	515.127.4561	2002-12-07	PU_MAN	11000.00	0.00	100	30
115	Alexander	Khoo	AKHOO	515.127.4562	2003-05-18	PU_CLERK	3100.00	0.00	114	30
116	Shelli	Baida	SBAIDA	515.127.4563	2005-12-24	PU_CLERK	2900.00	0.00	114	30
117	Sigal	Tobias	STOBIAS	515.127.4564	2005-07-24	PU_CLERK	2800.00	0.00	114	30
118	Guy	Himuro	GHIIMURO	515.127.4565	2006-11-15	PU_CLERK	2600.00	0.00	114	30
119	Karen	Colmenares	KCOLMENA	515.127.4566	2007-08-10	PU_CLERK	2500.00	0.00	114	30
120	Matthew	Weiss	MWEISS	650.123.1234	2004-07-18	ST_MAN	8000.00	0.00	100	50
121	Adam	Fripp	AFRIPP	650.123.2234	2005-04-10	ST_MAN	8200.00	0.00	100	50
122	Payam	Kaufling	PKAUFLIN	650.123.3234	2003-05-01	ST_MAN	7900.00	0.00	100	50
123	Shanta	Vollman	SVOLLMAN	650.123.4234	2005-10-10	ST_MAN	6500.00	0.00	100	50
124	Kevin	Mourgos	KMOURGOS	650.123.5234	2007-11-16	ST_MAN	5800.00	0.00	100	50
125	Julia	Nayer	JNAYER	650.124.1214	2005-07-16	ST_CLERK	3200.00	0.00	120	50
126	Irene	Mikkilineni	IMIKKILI	650.124.1224	2006-09-28	ST_CLERK	2700.00	0.00	120	50
127	James	Landry	JLANDRY	650.124.1334	2007-01-14	ST_CLERK	2400.00	0.00	120	50
128	Steven	Markle	SMARKLE	650.124.1434	2008-03-08	ST_CLERK	2200.00	0.00	120	50
129	Laura	Bissot	LBISSOT	650.124.5234	2005-08-20	ST_CLERK	3300.00	0.00	121	50
130	Mozhe	Atkinson	MATKINSO	650.124.6234	2005-10-30	ST_CLERK	2800.00	0.00	121	50
131	James	Marlow	JMARLOW	650.124.7234	2005-02-16	ST_CLERK	2500.00	0.00	121	50
132	TJ	Olson	TJOLSON	650.124.8234	2007-04-10	ST_CLERK	2100.00	0.00	121	50
133	Jason	Mallin	JMALLIN	650.127.1934	2004-06-14	ST_CLERK	3300.00	0.00	122	50
134	Michael	Rogers	MROGERS	650.127.1834	2006-08-26	ST_CLERK	2900.00	0.00	122	50
135	Ki	Gee	KGEE	650.127.1734	2007-12-12	ST_CLERK	2400.00	0.00	122	50
136	Hazel	Philtanker	HPHILTAN	650.127.1634	2008-02-06	ST_CLERK	2200.00	0.00	122	50
137	Renske	Ladwig	RLADWIG	650.121.1234	2003-07-14	ST_CLERK	3600.00	0.00	123	50
138	Stephen	Stiles	SSTILES	650.121.2034	2005-10-26	ST_CLERK	3200.00	0.00	123	50
139	John	Seo	JSEO	650.121.2019	2006-02-12	ST_CLERK	2700.00	0.00	123	50
140	Joshua	Patel	JPADEL	650.121.1834	2006-04-06	ST_CLERK	2500.00	0.00	123	50

Table: departments

DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID	LOCATION_ID
10	Administration	200	1700
20	Marketing	201	1800
30	Purchasing	114	1700
40	Human Resources	203	2400
50	Shipping	121	1500
60	IT	103	1400
70	Public Relations	204	2700
80	Sales	145	2500
90	Executive	100	1700
100	Finance	108	1700
110	Accounting	205	1700
120	Treasury	0	1700
130	Corporate Tax	0	1700
140	Control And Credit	0	1700
150	Shareholder Services	0	1700
160	Benefits	0	1700
170	Manufacturing	0	1700
180	Construction	0	1700
190	Contracting	0	1700
200	Operations	0	1700
210	IT Support	0	1700
220	NOC	0	1700
230	IT Helpdesk	0	1700
240	Government Sales	0	1700
250	Retail Sales	0	1700
260	Recruiting	0	1700
270	Payroll	0	1700

Table: locations

LOCATION_ID	STREET_ADDRESS	POSTAL_CODE	CITY	STATE_PROVINCE	COUNTRY_ID
1000	1297 Via Cola di Rie	989	Roma		IT
1100	93091 Calle della Testa	10934	Venice		IT
1200	2017 Shinjuku-ku	1689	Tokyo	Tokyo Prefecture	JP
1300	9450 Kamiya-cho	6823	Hiroshima		JP
1400	2014 Jabberwocky Rd	26192	Southlake	Texas	US
1500	2011 Interiors Blvd	99236	South San Francisco	California	US
1600	2007 Zagora St	50090	South Brunswick	New Jersey	US
1700	2004 Charade Rd	98199	Seattle	Washington	US
1800	147 Spadina Ave	M5V 2L7	Toronto	Ontario	CA
1900	6092 Boxwood St	Y5W 9T2	Whitehorse	Yukon	CA
2000	40-5-12 Laogianggen	190518	Beijing		CN
2100	1298 Vileparle (E)	490231	Bombay	Maharashtra	IN
2200	12-98 Victoria Street	2901	Sydney	New South Wales	AU
2300	198 Clementi North	540198	Singapore		SG
2400	8204 Arthur St		London		UK
2500	Magdalen Centre, The Oxford Science Park	OX9 9ZB	Oxford	Oxford	UK
2600	9702 Chester Road	9629850293	Stretford	Manchester	UK
2700	Schwanthalerstr. 7031	80925	Munich	Bavaria	DE
2800	Rua Frei Caneca 1360	01307-002	Sao Paulo	Sao Paulo	BR
2900	20 Rue des Corps-Saints	1730	Geneva	Geneve	CH
3000	Murtenstrasse 921	3095	Bern	BE	CH
3100	Pieter Breughelstraat 837	3029SK	Utrecht	Utrecht	NL
3200	Mariano Escobedo 9991	11932	Mexico City	Distrito Federal,	MX

Table: countries

COUNTRY_ID	COUNTRY_NAME	REGION_ID
AR	Argentina	2
AU	Australia	3
BE	Belgium	1
BR	Brazil	2
CA	Canada	2
CH	Switzerland	1
CN	China	3
DE	Germany	1
DK	Denmark	1
EG	Egypt	4
FR	France	1
IL	Israel	4
IN	India	3
IT	Italy	1
JP	Japan	3
KW	Kuwait	4
ML	Malaysia	3
MX	Mexico	2
NG	Nigeria	4
NL	Netherlands	1
SG	Singapore	3
UK	United Kingdom	1
US	United States of America	2
ZM	Zambia	4
ZW	Zimbabwe	4

Table: job_history

EMPLOYEE_ID	START_DATE	END_DATE	JOB_ID	DEPARTMENT_ID
102	2001-01-13	2006-07-24	IT_PROG	60
101	1997-09-21	2001-10-27	AC_ACCOUNT	110
101	2001-10-28	2005-03-15	AC_MGR	110
201	2004-02-17	2007-12-19	MK_REP	20
114	2006-03-24	2007-12-31	ST_CLERK	50
122	2007-01-01	2007-12-31	ST_CLERK	50
200	1995-09-17	2001-06-17	AD_ASST	90
176	2006-03-24	2006-12-31	SA_REP	80
176	2007-01-01	2007-12-31	SA_MAN	80
200	2002-07-01	2006-12-31	AC_ACCOUNT	90

Table: jobs

JOB_ID	JOB_TITLE	MIN_SALARY	MAX_SALARY
AD_PRES	President	20080	40000
AD_VP	Administration Vice President	15000	30000
AD_ASST	Administration Assistant	3000	6000
FI_MGR	Finance Manager	8200	16000
FI_ACCOUNT	Accountant	4200	9000
AC_MGR	Accounting Manager	8200	16000
AC_ACCOUNT	Public Accountant	4200	9000
SA_MAN	Sales Manager	10000	20000
SA_REP	Sales Representative	6000	12000
PU_MAN	Purchasing Manager	8000	15000
PU_CLERK	Purchasing Clerk	2500	5500
ST_MAN	Stock Manager	5500	8500
ST_CLERK	Stock Clerk	2000	5000
SH_CLERK	Shipping Clerk	2500	5500
IT_PROG	Programmer	4000	10000
MK_MAN	Marketing Manager	9000	15000
MK_REP	Marketing Representative	4000	9000
HR_REP	Human Resources Representative	4000	9000
PR_REP	Public Relations Representative	4500	10500

- Write a query to display employee_id, name and salary, department of all employees also display increased salary by 2000.
- Write a query to display employee_id, name and salary, department of all employees also display increased salary by 5 %.
- Write a query to display employee_id, first_name, salary of those employee whose job_id is IT_Prog
- Write a query to display employee_id, first_name, salary, department_id of those employee who working as pu_clerk and salary not equal to 20000.
- Write a query to display all records of those employee who job_id 125 or salary equal to 3200.
- Write a query to display all records of those employee who joining date is 20 June 1999 to 25 Aug 2001.
- Write a query to display employee_id, email, salary, job_id of those employee who working as faculty and clerk and salary greater than equal to 12000.
- Write a query to display all records of those employee who working as programmer and analyst and department 10 and 20 and hire_date from 20-Aug-2018 to 19- AUG- 2021.
- Write a query to display all records of those employee whose first_name started from **A** character.
- Write a query in SQL to display the first_name and last_name, department_id and salary from employees Table who earn more than 20000.
- Write a query in SQL to display the first_name and last_name, email, salary and manager_ID for those employees whose managers_ID is 120, 103 or 145.
- Write a query in SQL to display the first_name and last_name, department_id and salary from employees Table who earn more than 8000 And whose managers_ID is 120, 103 or 145.
- Write a query to display all records of those employee whose first_name last character is r.
- Write a query to display all records of those employee whose first_name second character is a and last_name second last character is i.
- Write a query to display employee_id, first_name as name and salary increased by 10 % as Increased salary of those employee whose first_name third last character is p and getting salary 10000, 20000 and 30000.
- Write a query to display all records of those employee whose first_name not started with A letter and salary is not mentioned.
- Write a query to display employee_id, first_name and salary in descending order using salary column.

- Write a query to display all the locations (id, city) which do not have any state province mentioned.
- Write a query to display the job title whose minimum salary is greater than 8000 and max salary less than 20000.
- Print a bonafide certificate for an employee (say for emp. id 123) to certify that 'full name' with employee id 'emp. id' is working as 'job id' in dept. 'dept ID'.
- Write a query to display the employee id, salary & salary range of employees as 'Tier1', 'Tier2' or 'Tier3' as per the range '5000, 5000-10000, >10000' respectively, ordering the output by those tiers.