

COMPLETED

COMP 3610 : Database Systems Activity#2 (Marked)

Max marks : 20

Due by : 19th January 2023 11:59 PM

Use your Oracle USER ID stuxx/userxxxx on BTACS database.

1. Use the SQL Developer to login into your account
2. Create the following tables : (xx is your login number)

staffxx (**staffNo char(5)**, lname, fname, dept, desig, joiningDate, salary, rating char(1), **branchCode**)

branchxx (**branchCode char(5)**, address, city, phone, yearOfOpening number(4))

Please note the code for rating as CHAR(1) with the values as '1', '2' or '3' as:

1 = Full time employee

2 = Contract employee

3 = Visiting employee

** please note that branchCode is foreign key and works as primary key in branch table. So the data will go in branch table first before branchcode goes in staff table.

3. Insert 5 rows in the new table branchxx and then total 10 rows in staffxx
4. List both the tables
5. Now, Alter the staff table to add DOB, commission and gross salary fields

ALTER TABLE staff035
ADD DOB DATE;

ALTER TABLE staff035
ADD commision NUMBER;

ALTER TABLE staff035
ADD grossSalary NUMBER;

STAFF	LNAME	FNAME	DEPT	DESIG	JOININGDA	SALARY	R	BRANC	DOB	COMMISSION	GROSSSALARY
S1324	windy	jackson	sales	12563	01-OCT-01	150000	1	B1234			
S1325	min	tong	computer	12564	02-OCT-01	154000	2	B1234			
S1326	goodwin	hash	sales	12565	03-OCT-01	40000	2	B1234			
S1327	fes	mike	sales	12566	03-OCT-97	400000	2	B1234			
S1328	fes	john	marketing	12566	03-OCT-87	12000	3	B1234			
S1329	fes	wendy	marketing	12566	03-OCT-87	128000	3	B1234			
S1333	duck	donald	cleaning	12563	03-OCT-97	150	1	B1234			
S1331	twil	cohen	computer	12563	03-OCT-97	80000	1	B1234			
S1332	min	finly	consulting	12589	03-OCT-97	80000	1	B1234			
S1370	chiho	min	computer	12545	03-OCT-97	8000	3	B1234			

6. Write the queries to: (2 marks each)
 - a. List all the full time employees

SELECT * FROM staff035 WHERE rating = '1';

	STAFFNO	LNAME	FNAME	DEPT	DESIG	JOININGDATE	SALARY	RATING	BRANCHCODE	DOB	COMMISSION	GROSSSALARY
1	S1324	windy	jackson	sales	12563	01-OCT-01	150000	1	B1234	(null)	(null)	(null)
2	S1333	duck	donald	cleaning	12563	03-OCT-97	150	1	B1234	(null)	(null)	(null)
3	S1331	twil	cohen	computer	12563	03-OCT-97	80000	1	B1234	(null)	(null)	(null)
4	S1332	min	finly	consulting	12589	03-OCT-97	80000	1	B1234	(null)	(null)	(null)

- b. List the names of the employees who are managers (fname + lname)

```
UPDATE staff035
SET dept = 'managing'
WHERE staffNo = 'S1370';
```

```
SELECT fname, lname FROM staff035 WHERE dept = 'managing';
```

	FNAME	LNAME
1	min	chiho

- c. List the names of all employees who joined in last year

```
UPDATE staff035
SET joiningDate = to_date('10-12-22','MM-DD-YY')
WHERE staffNo = 'S1370';
```

```
UPDATE staff035
SET joiningDate = to_date('10-03-22','MM-DD-YY')
WHERE staffNo = 'S1325';
```

```
SELECT * FROM staff035 WHERE joiningDate >= TO_DATE('01-01-22','MM-DD-YY');
```

	FNAME	LNAME
1	tong	min
2	min	chiho

- d. List all the manager based on decreasing order of their salary

```
UPDATE staff035
SET dept = 'managing'
WHERE staffNo = 'S1329';
```

```
SELECT * FROM staff035 WHERE dept = 'managing' ORDER BY salary DESC;
```

	STAFFNO	LNAME	FNAME	DEPT	DESIG	JOININGDATE	SALARY	RATING	BRANCHCODE	DOB	COMMISSION	GROSSSALARY
1	S1329	fes	wendy	managing	12566	03-OCT-87	128000	3	B1234	(null)	(null)	(null)
2	S1370	chiho	min	managing	12545	12-OCT-22	8000	3	B1234	(null)	(null)	(null)

- e. Calculate the commission as 5% for managers and 4% for others

```
-- update for manager
UPDATE staff035
SET commision = salary*0.05
WHERE dept = 'managing';
```

```
-- update other than manager
UPDATE staff035
SET commision = salary*0.04
```

WHERE commision IS NULL;

	STAFFNO	LNAME	FNAME	DEPT	DESIG	JOININGDATE	SALARY	RATING	BRANCHCODE	DOB	COMMISSION	GROSSSALARY
1	S1324	windy	jackson	sales	12563	01-OCT-01	150000	1	B1234	(null)	6000	(null)
2	S1325	min	tong	computer	12564	03-OCT-22	154000	2	B1234	(null)	6160	(null)
3	S1326	goodwin	hash	sales	12565	03-OCT-01	40000	2	B1234	(null)	1600	(null)
4	S1327	fes	mike	sales	12566	03-OCT-97	400000	2	B1234	(null)	16000	(null)
5	S1328	fes	john	marketing	12566	03-OCT-87	12000	3	B1234	(null)	480	(null)
6	S1329	fes	wendy	managing	12566	03-OCT-87	128000	3	B1234	(null)	6400	(null)
7	S1333	duck	donald	cleaning	12563	03-OCT-97	150	1	B1234	(null)	6	(null)
8	S1331	twil	cohen	computer	12563	03-OCT-97	80000	1	B1234	(null)	3200	(null)
9	S1332	min	finly	consulting	12589	03-OCT-97	80000	1	B1234	(null)	3200	(null)
10	S1370	chiho	min	managing	12545	12-OCT-22	8000	3	B1234	(null)	400	(null)

- f. Calculate gross salary as sum of salary and commission

UPDATE staff035

SET grossSalary = salary + commision;

	STAFFNO	LNAME	FNAME	DEPT	DESIG	JOININGDATE	SALARY	RATING	BRANCHCODE	DOB	COMMISSION	GROSSSALARY
1	S1324	windy	jackson	sales	12563	01-OCT-01	150000	1	B1234	(null)	6000	156000
2	S1325	min	tong	computer	12564	03-OCT-22	154000	2	B1234	(null)	6160	160160
3	S1326	goodwin	hash	sales	12565	03-OCT-01	40000	2	B1234	(null)	1600	41600
4	S1327	fes	mike	sales	12566	03-OCT-97	400000	2	B1234	(null)	16000	416000
5	S1328	fes	john	marketing	12566	03-OCT-87	12000	3	B1234	(null)	480	12480
6	S1329	fes	wendy	managing	12566	03-OCT-87	128000	3	B1234	(null)	6400	134400
7	S1333	duck	donald	cleaning	12563	03-OCT-97	150	1	B1234	(null)	6	156
8	S1331	twil	cohen	computer	12563	03-OCT-97	80000	1	B1234	(null)	3200	83200
9	S1332	min	finly	consulting	12589	03-OCT-97	80000	1	B1234	(null)	3200	83200
10	S1370	chiho	min	managing	12545	12-OCT-22	8000	3	B1234	(null)	400	8400

- g. Display the estimated retirement date of every employee (based on the retirement age of 65, it should be the last day of that month)
Tip: (last_day(add_months(sysdate, 12))

-- (1) add date of birth to each staff

UPDATE staff035

SET DOB = to_date('10-02-1978','MM-DD-YY')

WHERE staffNo = 'S1324';

-- (2) calculate employee's retirement date

-- done through by adding 65 years to DOB and retirement date is last day of the month

SELECT last_day(ADD_MONTHS(DOB, 12*65)) FROM staff035;

Date of birth of employees Estimated retirement date of each employees

DOB	LAST_DAY(ADD_MONTHS(DOB,12*65))
02-OCT-78	1 31-OCT-43
05-OCT-88	2 31-OCT-53
05-OCT-81	3 31-OCT-46
05-DEC-81	4 31-DEC-46
05-JAN-71	5 31-JAN-36
05-MAY-61	6 31-MAY-26
08-MAY-72	7 31-MAY-37
08-AUG-80	8 31-AUG-45
07-AUG-70	9 31-AUG-35
06-AUG-71	10 31-AUG-36

- h. Display all employees whose ages are greater than 50

```
SELECT * FROM staff035
WHERE ROUND((to_date('01-18-2023','MM-DD-YY')-DOB)/365,0) >= 50 ;
```

	STAFFNO	LNAME	FNAME	DEPT	DESIG	JOININGDATE	SALARY	RATING	BRANCHCODE	DOB
1	S1328	fes	john	marketing	12566	03-OCT-87	12000	3	B1234	05-JAN-71
2	S1329	fes	wendy	marketing	12566	03-OCT-87	128000	3	B1234	05-MAY-61
3	S1333	duck	donald	cleaning	12563	03-OCT-97	150	1	B1234	08-MAY-72
4	S1332	min	finly	consulting	12589	03-OCT-97	80000	1	B1234	07-AUG-70
5	S1370	chiho	min	managing	12545	12-OCT-22	8000	3	B1234	06-AUG-71

- i. Display the employees based on ages (i.e. eldest on top)

```
SELECT * FROM staff035
ORDER BY ROUND((to_date('01-18-2023','MM-DD-YY')-DOB)/365,0)DESC;
```

	STAFFNO	LNAME	FNAME	DEPT	DESIG	JOININGDATE	SALARY	RATING	BRANCHCODE	DOB
1	S1329	fes	wendy	marketing	12566	03-OCT-87	128000	3	B1234	05-MAY-61
2	S1328	fes	john	marketing	12566	03-OCT-87	12000	3	B1234	05-JAN-71
3	S1332	min	finly	consulting	12589	03-OCT-97	80000	1	B1234	07-AUG-70
4	S1370	chiho	min	managing	12545	12-OCT-22	8000	3	B1234	06-AUG-71
5	S1333	duck	donald	cleaning	12563	03-OCT-97	150	1	B1234	08-MAY-72
6	S1324	windy	jackson	sales	12563	01-OCT-01	150000	1	B1234	02-OCT-78
7	S1331	twil	cohen	computer	12563	03-OCT-97	80000	1	B1234	08-AUG-80
8	S1327	fes	mike	sales	12566	03-OCT-97	400000	2	B1234	05-DEC-81
9	S1326	goodwin	hash	sales	12565	03-OCT-01	40000	2	B1234	05-OCT-81
10	S1325	min	tong	computer	12564	03-OCT-22	154000	2	B1234	05-OCT-88

- j. List the branches from the oldest to the newest branch.

SELECT * FROM branch001 ORDER BY yearOfOpening ASC;

	BRANCHCODE	ADDRESS	CITY	PHONE	YEAROFOPENING
1	B7777	Maniac Road	Chilli city	122222223	1999
2	B3333	Wilson Road	Sunway city	434343432	2000
3	B4444	Kashiwa	Toshi city	499699256	2001
4	B1234	1232 Mc Gill	Kamloops	2368898767	2022
5	B5555	1232 Mc West	Vancouver	4343435343	2033

Ref: https://docs.oracle.com/cd/E17952_01/mysql-5.6-en/date-and-time-functions.html
https://docs.oracle.com/cd/E17952_01/mysql-5.6-en/string-functions.html

To submit: - need to submit 2 files

- pdf – contains the commands for Q5 followed by screen shot showing the result
- Text - .sql - copy all the commands from the developer in it and save it as .sql (all commands from Q1 till Q5 (j))

Please save the file as .pdf and submit it on moodle with the .sql file