Lab Task 2

Name – **Muhammad Taha**

Roll NO – **23p-0559**

SECTION – **BCS(4A)**

Subject - **DataBase Lab**

(1)

```
--23P-0559--BSCS(4A)

SELECT FIRST_NAME,LAST_NAME FROM EMPLOYEES;
```

cript Output × ▶ Query Result ×

🖨 🔃 📇 SQL | Fetched 50 rows in 0.025 seconds

	FIRST_NAME	LAST_NAME
1	Ellen	Abel
2	Sundar	Ande
3	Mozhe	Atkinson
4	David	Austin
5	Hermann	Baer
6	Shelli	Baida
7	Amit	Banda
8	Elizabeth	Bates
9	Sarah	Bell
10	David	Bernstein
11	Laura	Bissot
12	Harrison	Bloom
13	Alexis	Bull
14	Anthony	Cabrio
15	Gerald	Cambrault
16	Nanette	Cambrault
17	John	Chen
18	Kelly	Chung
19	Karen	Colmenares
20	Curtis	Davies
21	Lex	De Haan
22	Julia	Dellinger
23	Jennifer	Dilly
24	Louise	Doran
25	Bruce	Ernst
26	Alberto	Errazuriz
27	Britney	Everett
28	Daniel	Faviet
29	Pat	Fay
30	Kevin	Feeney
31	Jean	Fleaur
32	Taylor	Fox

(2)

```
--23P-0559--BSCS(4A)

SELECT HIRE_DATE AS "Joining Date" FROM EMPLOYEES;
```

ript Output ×   ▶ Query Result ×

SQL | Fetched 50 rows in 0.006 seconds

Joining Date
1 17-JUN-03
2 21-SEP-05
3 13-JAN-01
4 03-JAN-06
5 21-MAY-07
6 25-JUN-05
7 05-FEB-06
8 07-FEB-07
9 17-AUG-02
10 16-AUG-02
11 28-SEP-05
12 30-SEP-05
13 07-MAR-06
14 07-DEC-07
15 07-DEC-02
16 18-MAY-03
17 24-DEC-05
18 24-JUL-05
19 15-NOV-06
20 10-AUG-07
21 18-JUL-04
22 10-APR-05
23 01-MAY-03
24 10-OCT-05
25 16-NOV-07
26 16-JUL-05
27 28-SEP-06
28 14-JAN-07
29 08-MAR-08
30 20-AUG-05

(3)

```
--23P-0559--BSCS(4A)

SELECT FIRST_NAME || ' ' || LAST_NAME AS "FULL NAME" FROM EMPLOYEES;
```

Script Output × ▶ Query Result ×

🖨 🔁 📋 SQL | Fetched 50 rows in 0.005 seconds

FULL NAME
1 Ellen Abel
2 Sundar Ande
3 Mozhe Atkinson
4 David Austin
5 Hermann Baer
6 Shelli Baida
7 Amit Banda
8 Elizabeth Bates
9 Sarah Bell
10 David Bernstein
11 Laura Bissot
12 Harrison Bloom
13 Alexis Bull
14 Anthony Cabrio
15 Gerald Cambrault
16 Nanette Cambrault
17 John Chen
18 Kelly Chung
19 Karen Colmenares
20 Curtis Davies
21 Lex De Haan
22 Julia Dellinger
23 Jennifer Dilly
24 Louise Doran
25 Bruce Ernst
26 Alberto Errazuriz
27 Britney Everett
28 Daniel Faviet
29 Pat Fay
30 Kevin Feeney
31 Joan Fleaur

(4)

```
--23P-0559--BSCS(4A)

SELECT salary FROM EMPLOYEES WHERE SALARY*12 > 20000 AND SALARY*12 < 30000 ;
```

Query Result ×

🖨 🔁 📋 SQL | All Rows Fetched: 5 in 0.006 seconds

SALARY
1 2400
2 2200
3 2100
4 2400
5 2200

```
--23P-0559--BSCS(4A)

SELECT employee_id,FIRST_NAME FROM EMPLOYEES WHERE DEPARTMENT_ID BETWEEN 60 AND 100;
```

Query Result ×

SQL | All Rows Fetched: 49 in 0.01 seconds

	EMPLOYEE_ID	FIRST_NAME
1	100	Steven
2	101	Neena
3	102	Lex
4	103	Alexander
5	104	Bruce
6	105	David
7	106	Valli
8	107	Diana
9	108	Nancy
10	109	Daniel
11	110	John
12	111	Ismael
13	112	Jose Manuel
14	113	Luis
15	145	John
16	146	Karen
17	147	Alberto
18	148	Gerald
19	149	Eleni
20	150	Peter
21	151	David
22	152	Peter
23	153	Christopher
24	154	Nanette
25	155	Oliver
26	156	Janette
27	157	Patrick
28	158	Allan
29	159	Lindsey
30	160	Louise
31	161	Sarath

Query builder

```
--23P-0559--BSCS(4A)

SELECT * FROM EMPLOYEES WHERE COMMISSION_PCT IS  NULL;
```

Query Result ×

SQL | Fetched 50 rows in 0.06 seconds

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
1	100	Steven	King	SKING	515.123.4567	17-JUN-03	AD PRES	24000	(null)	(null)	90
2	101	Neena	Kochhar	NKOCHHAR	515.123.4568	21-SEP-05	AD VP	17000	(null)	100	90
3	102	Lex	De Haan	LDEHAAN	515.123.4569	13-JAN-01	AD VP	17000	(null)	100	90
4	103	Alexander	Hunold	AHUNOLD	590.423.4568	03-JAN-06	IT PROG	9000	(null)	102	60
5	104	Bruce	Ernst	BERNST	590.423.4568	21-MAY-07	IT PROG	6000	(null)	103	60
6	105	David	Austin	DAUSTIN	590.423.4569	25-JUN-05	IT PROG	4800	(null)	103	60
7	106	Valli	Pataballa	VPATABAL	590.423.4560	05-FEB-06	IT PROG	4800	(null)	103	60
8	107	Diana	Lorentz	DLORENTZ	590.423.5567	07-FEB-07	IT PROG	4200	(null)	103	60
9	108	Nancy	Greenberg	NGREENBE	515.124.4569	17-AUG-02	FI MGR	12008	(null)	101	100
10	109	Daniel	Faviet	DFAVIET	515.124.4169	16-AUG-02	FI ACCOUNT	9000	(null)	108	100
11	110	John	Chen	JCHEN	515.124.4269	28-SEP-05	FI ACCOUNT	8200	(null)	108	100
12	111	Ismael	Sciarra	ISCIARRA	515.124.4369	30-SEP-05	FI ACCOUNT	7700	(null)	108	100
13	112	Jose Manuel	Urman	JMURMAN	515.124.4469	07-MAR-06	FI ACCOUNT	7800	(null)	108	100
14	113	Luis	Popp	LPOPP	515.124.4567	07-DEC-07	FI ACCOUNT	6900	(null)	108	100
15	114	Den	Raphaely	DRAPHEAL	515.127.4561	07-DEC-02	PU MAN	11000	(null)	100	30
16	115	Alexander	Khoo	AKHOO	515.127.4562	18-MAY-03	PU CLERK	3100	(null)	114	30
17	116	Shelli	Baida	SBAIDA	515.127.4563	24-DEC-05	PU CLERK	2900	(null)	114	30
18	117	Sigal	Tobias	STOBIAS	515.127.4564	24-JUL-05	PU CLERK	2800	(null)	114	30
19	118	Guy	Himuro	GHIMURO	515.127.4565	15-NOV-06	PU CLERK	2600	(null)	114	30
20	119	Karen	Colmenares	KCOLMENA	515.127.4566	10-AUG-07	PU CLERK	2500	(null)	114	30
21	120	Matthew	Weiss	MWEISS	650.123.1234	18-JUL-04	ST MAN	8000	(null)	100	50
22	121	Adam	Fripp	AFRIPP	650.123.2234	10-APR-05	ST MAN	8200	(null)	100	50
23	122	Payam	Kaufling	PKAUFLIN	650.123.3234	01-MAY-03	ST MAN	7900	(null)	100	50
24	123	Shanta	Vollman	SVOLLMAN	650.123.4234	10-OCT-05	ST MAN	6500	(null)	100	50
25	124	Kevin	Mourgos	KMOURGOS	650.123.5234	16-NOV-07	ST MAN	5800	(null)	100	50
26	125	Julia	Nayer	JNAYER	650.124.1214	16-JUL-05	ST CLERK	3200	(null)	120	50
27	126	Irene	Mikkilineni	IMIKKILI	650.124.1224	28-SEP-06	ST CLERK	2700	(null)	120	50
28	127	James	Landry	JLANDRY	650.124.1334	14-JAN-07	ST CLERK	2400	(null)	120	50
29	128	Steven	Markle	SMARKLE	650.124.1434	08-MAR-08	ST CLERK	2200	(null)	120	50
30	129	Laura	Bissot	LBISSOT	650.124.5234	20-AUG-05	ST CLERK	3300	(null)	121	50
31	130	Mozhe	Atkinson	MATKINSO	650.124.6234	30-OCT-05	ST CLERK	2800	(null)	121	50

```
--23P-0559--BSCS(4A)


SELECT * FROM EMPLOYEES ORDER BY SALARY DESC;
```

Query Result ×
SQL | Fetched 50 rows in 0.016 seconds

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
1	100 Steven	King	SKING	515.123.4567	17-JUN-03	AD_PRES	24000	(null)	(null)	90
2	101 Neena	Kochhar	NKOCHHAR	515.123.4568	21-SEP-05	AD_VP	17000	(null)	100	90
3	102 Lex	De Haan	LDEHAAN	515.123.4569	13-JAN-01	AD_VP	17000	(null)	100	90
4	145 John	Russell	JRUSSEL	011.44.1344.429268	01-OCT-04	SA_MAN	14000	0.4	100	80
5	146 Karen	Partners	KPARTNER	011.44.1344.467268	05-JAN-05	SA_MAN	13500	0.3	100	80
6	201 Michael	Hartstein	MHARTSTE	515.123.5555	17-FEB-04	MK_MAN	13000	(null)	100	20
7	108 Nancy	Greenberg	NGREENBE	515.124.4569	17-AUG-02	FI_MGR	12008	(null)	101	100
8	205 Shelley	Higgins	SHIGGINS	515.123.8080	07-JUN-02	AC_MGR	12008	(null)	101	110
9	147 Alberto	Errazuriz	AERRAZUR	011.44.1344.429278	10-MAR-05	SA_MAN	12000	0.3	100	80
10	168 Lisa	Ozer	LOZER	011.44.1343.929268	11-MAR-05	SA_REP	11500	0.25	148	80
11	114 Den	Raphaely	DRAPHEAL	515.127.4561	07-DEC-02	PU_MAN	11000	(null)	100	30
12	148 Gerald	Cambrault	GCAMBRAU	011.44.1344.619268	15-OCT-07	SA_MAN	11000	0.3	100	80
13	174 Ellen	Abel	EABEL	011.44.1644.429267	11-MAY-04	SA_REP	11000	0.3	149	80
14	149 Eleni	Zlotkey	EZLOTKEY	011.44.1344.429018	29-JAN-08	SA_MAN	10500	0.2	100	80
15	162 Clara	Vishney	CVISHNEY	011.44.1346.129268	11-NOV-05	SA_REP	10500	0.25	147	80
16	156 Janette	King	JKING	011.44.1345.429268	30-JAN-04	SA_REP	10000	0.35	146	80
17	150 Peter	Tucker	PTUCKER	011.44.1344.129268	30-JAN-05	SA_REP	10000	0.3	145	80
18	204 Hermann	Baer	HBAER	515.123.8888	07-JUN-02	PR_REP	10000	(null)	101	70
19	169 Harrison	Bloom	HBLOOM	011.44.1343.829268	23-MAR-06	SA_REP	10000	0.2	148	80
20	170 Tayler	Fox	TFOX	011.44.1343.729268	24-JAN-06	SA_REP	9600	0.2	148	80
21	163 Danielle	Greene	DGREENE	011.44.1346.229268	19-MAR-07	SA_REP	9500	0.15	147	80
22	151 David	Bernstein	DBERNSTE	011.44.1344.345268	24-MAR-05	SA_REP	9500	0.25	145	80
23	157 Patrick	Sully	PSULLY	011.44.1345.929268	04-MAR-04	SA_REP	9500	0.35	146	80
24	152 Peter	Hall	PHALL	011.44.1344.478968	20-AUG-05	SA_REP	9000	0.25	145	80
25	103 Alexander	Hunold	AHUNOLD	590.423.4567	03-JAN-06	IT_PROG	9000	(null)	102	60
26	158 Allan	McEwen	AMCEWEN	011.44.1345.829268	01-AUG-04	SA_REP	9000	0.35	146	80
27	109 Daniel	Faviet	DFAVIET	515.124.4169	16-AUG-02	FI_ACCOUNT	9000	(null)	108	100
28	175 Alyssa	Hutton	AHUTTON	011.44.1644.429266	19-MAR-05	SA_REP	8800	0.25	149	80
29	176 Jonathon	Taylor	JTAYLOR	011.44.1644.429265	24-MAR-06	SA_REP	8600	0.2	149	80
30	177 Jack	Livingston	JLIVINGS	011.44.1644.429264	23-APR-06	SA_REP	8400	0.2	149	80
31	206 William	Gietz	WGIETZ	515.123.8181	07-JUN-02	AC_ACCOUNT	8300	(null)	205	110

(8)

```
--23P-0559--BSCS(4A)


SELECT INITCAP(FIRST_NAME), LOWER(JOB_ID) FROM EMPLOYEES;
```

Query Result ×
SQL | Fetched 50 rows in 0.059 seconds

	INITCAP(FIRST_NAME)	LOWER(JOB_ID)
1	Ellen	sa_rep
2	Sundar	sa_rep
3	Mozhe	st_clerk
4	David	it_prog
5	Hermann	pr_rep
6	Shelli	pu_clerk
7	Amit	sa_rep
8	Elizabeth	sa_rep
9	Sarah	sh_clerk
10	David	sa_rep
11	Laura	st_clerk
12	Harrison	sa_rep
13	Alexis	sh_clerk
14	Anthony	sh_clerk
15	Gerald	sa_man
16	Nanette	sa_rep
17	John	fi_account
18	Kelly	sh_clerk
19	Karen	pu_clerk
20	Curtis	st_clerk
21	Lex	ad_vp
22	Julia	sh_clerk
23	Jennifer	sh_clerk
24	Louise	sa_rep
25	Bruce	it_prog
26	Alberto	sa_man
27	Britney	sh_clerk
28	Daniel	fi_account
29	Pat	mk_rep
30	Kevin	sh_clerk

Database Lab | FAST NUCES - PESHAWAR CAMPUS | 23P-0559

(9)


```
--23P-0559--BSCS(4A)
SELECT employee_id,HIRE_DATE,MONTHS_BETWEEN(SYSDATE,HIRE_DATE) as Month_between,
next_day(HIRE_DATE, 'FRIDAY') as nextday,last_day(HIRE_DATE) as lastday FROM EMPLOYEES
where MONTHS_BETWEEN(SYSDATE,HIRE_DATE) > 100;
```

Query Result × | Fetched 50 rows in 0.044 seconds

	EMPLOYEE_ID	HIRE_DATE	MONTH_BETWEEN	NEXTDAY	LASTDAY
1	100	17-JUN-03	259.483910543608124253285543608124253286	20-JUN-03	30-JUN-03
2	101	21-SEP-05	232.354878285543608124253285543608124425	23-SEP-05	30-SEP-05
3	102	13-JAN-01	288.612942801672640382317801672640382318	19-JAN-01	31-JAN-01
4	103	03-JAN-06	228.935523446833930704898446833930704898	06-JAN-06	31-JAN-06
5	104	21-MAY-07	212.354878285543608124253285543608124425	25-MAY-07	31-MAY-07
6	105	25-JUN-05	235.225846027479091995221027479091995221	01-JUL-05	30-JUN-05
7	106	05-FEB-06	227.871007317801672640382317801672640382	10-FEB-06	28-FEB-06
8	107	07-FEB-07	215.806491188769414575866188769414575866	09-FEB-07	28-FEB-07
9	108	17-AUG-02	269.483910543608124253285543608124253286	23-AUG-02	31-AUG-02
10	109	16-AUG-02	269.516168608124253285543608124253285544	23-AUG-02	31-AUG-02
11	110	28-SEP-05	232.129071833930704898446833930704898447	30-SEP-05	30-SEP-05
12	111	30-SEP-05	232.064555704898446833930704898446833931	07-OCT-05	30-SEP-05
13	112	07-MAR-06	226.806491188769414575866188769414575866	10-MAR-06	31-MAR-06
14	113	07-DEC-07	205.806491188769414575866188769414575866	14-DEC-07	31-DEC-07
15	114	07-DEC-02	265.806491188769414575866188769414575866	13-DEC-02	31-DEC-02
16	115	18-MAY-03	260.451652479091995221027479091995221027	23-MAY-03	31-MAY-03
17	116	24-DEC-05	229.258104091995221027479091995221027479	30-DEC-05	31-DEC-05
18	117	24-JUL-05	234.258104091995221027479091995221027479	29-JUL-05	31-JUL-05
19	118	15-NOV-06	218.548426672640382317801672640382317802	17-NOV-06	30-NOV-06
20	119	10-AUG-07	209.709716995221027479091995221027479092	17-AUG-07	31-AUG-07
21	120	18-JUL-04	246.451652479091995221027479091995221027	23-JUL-04	31-JUL-04
22	121	10-APR-05	237.709716995221027479091995221027479092	15-APR-05	30-APR-05
23	122	01-MAY-03		26	02-MAY-03	31-MAY-03
24	123	10-OCT-05	231.709716995221027479091995221027479092	14-OCT-05	31-OCT-05
25	124	16-NOV-07	206.516168608124253285543608124253285544	23-NOV-07	30-NOV-07
26	125	16-JUL-05	234.516168608124253285543608124253285544	22-JUL-05	31-JUL-05
27	126	28-SEP-06	220.129071833930704898446833930704898447	29-SEP-06	30-SEP-06
28	127	14-JAN-07	216.580684737156511350059737156511350060	19-JAN-07	31-JAN-07
29	128	08-MAR-08	202.774233124253285543608124253285543608	14-MAR-08	31-MAR-08
30	129	20-AUG-05	233.387136350059737156511350059737156511	26-AUG-05	31-AUG-05

(10)

```
--23P-0559--BSCS(4A)

SELECT employee_id,HIRE_DATE,TO_CHAR(HIRE_DATE,'MONTH')AS MONTH_STARTED FROM EMPLOYEES WHERE
TO_CHAR(hire_date, 'YYYY') = '2003';
```

Query Result × | All Rows Fetched: 6 in 0.046 seconds

	EMPLOYEE_ID	HIRE_DATE	MONTH_STARTED
1	100	17-JUN-03	JUNE
2	115	18-MAY-03	MAY
3	122	01-MAY-03	MAY
4	137	14-JUL-03	JULY
5	141	17-OCT-03	OCTOBER
6	200	17-SEP-03	SEPTEMBER

(11)

```
--23P-0559--BSCS(4A)


SELECT NEXT_DAY(SYSDATE,'MONDAY') AS NEXT_MONDAY_DATE FROM DUAL;
```

Query Result × | All Rows Fetched: 1 in 0.005 seconds

	NEXT_MONDAY_DATE
1	03-FEB-25

(12)

```
--23P-0559--BSCS(4A)

SELECT * FROM EMPLOYEES WHERE LAST_NAME LIKE 'A%';        --START
--SELECT * FROM EMPLOYEES WHERE LAST_NAME LIKE '%a%';     --ANYWHRE
--SELECT * FROM EMPLOYEES WHERE LAST_NAME LIKE '%a';      --END
```

Query Result ×

SQL | All Rows Fetched: 4 in 0.004 seconds

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
1	174	Ellen	Abel	EABEL	011.44.1644.429267	11-MAY-04	SA_REP	11000	0.3	149	80
2	166	Sundar	Ande	SANDE	011.44.1346.629268	24-MAR-08	SA_REP	6400	0.1	147	80
3	130	Mozhe	Atkinson	MATKINSO	650.124.6234	30-OCT-05	ST_CLERK	2800	(null)	121	50
4	105	David	Austin	DAUSTIN	590.423.4569	25-JUN-05	IT_PROG	4800	(null)	103	60

(13)

orksheet | Query Builder

```
--23P-0559--BSCS(4A)

SELECT first_name,SUBSTR(first_name, LENGTH(first_name)-2,3) AS substr_function FROM employees;
```

Query Result ×

SQL | Fetched 50 rows in 0.01 seconds

	FIRST_NAME	SUBSTR_FUNCTION
1	Ellen	len
2	Sundar	dar
3	Mozhe	zhe
4	David	vid
5	Hermann	ann
6	Shelli	lli
7	Amit	mit
8	Elizabeth	eth
9	Sarah	rah
10	David	vid
11	Laura	ura
12	Harrison	son
13	Alexis	xis
14	Anthony	ony
15	Gerald	ald
16	Nanette	tte
17	John	ohn
18	Kelly	lly
19	Karen	ren
20	Curtis	tis
21	Lex	Lex
22	Julia	lia
23	Jennifer	fer
24	Louise	ise
25	Bruce	uce
26	Alberto	rto
27	Britney	ney
28	Daniel	iel
29	Pat	Pat

HOME TASK:

(1)

(2)

(3)

```
--23P-0559--BSCS(4A)

SELECT FIRST_NAME || ' ' || LAST_NAME AS "FULL_NAME" , employee_id,salary,
SALARY + (SALARY * 0.15) AS "INCREMENTED_SALARY", (SALARY + (SALARY * 0.15)) - SALARY
AS "INCREMENTED_AMOUNT" FROM EMPLOYEES;
```

Query Result ×

SQL | Fetched 50 rows in 0.017 seconds

	FULL_NAME	EMPLOYEE_ID	SALARY	INCREMENTED_SALARY	INCREMENTED_AMOUNT
1	Steven King	100	24000	27600	3600
2	Neena Kochhar	101	17000	19550	2550
3	Lex De Haan	102	17000	19550	2550
4	Alexander Hunold	103	9000	10350	1350
5	Bruce Ernst	104	6000	6900	900
6	David Austin	105	4800	5520	720
7	Valli Pataballa	106	4800	5520	720
8	Diana Lorentz	107	4200	4830	630
9	Nancy Greenberg	108	12008	13809.2	1801.2
10	Daniel Faviet	109	9000	10350	1350
11	John Chen	110	8200	9430	1230
12	Ismael Sciarra	111	7700	8855	1155
13	Jose Manuel Urman	112	7800	8970	1170
14	Luis Popp	113	6900	7935	1035
15	Den Raphaely	114	11000	12650	1650
16	Alexander Khoo	115	3100	3565	465
17	Shelli Baida	116	2900	3335	435
18	Sigal Tobias	117	2800	3220	420
19	Guy Himuro	118	2600	2990	390
20	Karen Colmenares	119	2500	2875	375
21	Matthew Weiss	120	8000	9200	1200
22	Adam Fripp	121	8200	9430	1230
23	Payam Kaufling	122	7900	9085	1185
24	Shanta Vollman	123	6500	7475	975
25	Kevin Mourgos	124	5800	6670	870
26	Julia Nayer	125	3200	3680	480
27	Irene Mikkilineni	126	2700	3105	405

(4)

```
--23P-0559--BSCS(4A)

SELECT manager_id, department_id, ROUND( AVG(commission_pct),2) AS "AVG_COMMISION"
FROM EMPLOYEES WHERE COMMISSION_PCT IS NOT NULL GROUP BY manager_id, department_id;
```

Query Result ×

SQL | All Rows Fetched: 7 in 0.007 seconds

	MANAGER_ID	DEPARTMENT_ID	AVG_COMMISION
1	147	80	0.13
2	149	(null)	0.15
3	148	80	0.18
4	146	80	0.32
5	149	80	0.21
6	100	80	0.3
7	145	80	0.23