DB Lab 03 Tasks

Name: Yash Raj
Roll Number: 24k-0737

Task 01: Create a table Employees with columns:

Worksheet   Query Builder

```
create table newEmployee (
 emp_id VARCHAR2(10) PRIMARY KEY,
 emp_name VARCHAR2(50),
 age NUMBER,
 salary NUMBER,
 join_date DATE
);
```

Script Output ×

Task completed in 0.043 seconds

Table NEWEMPLOYEE created.
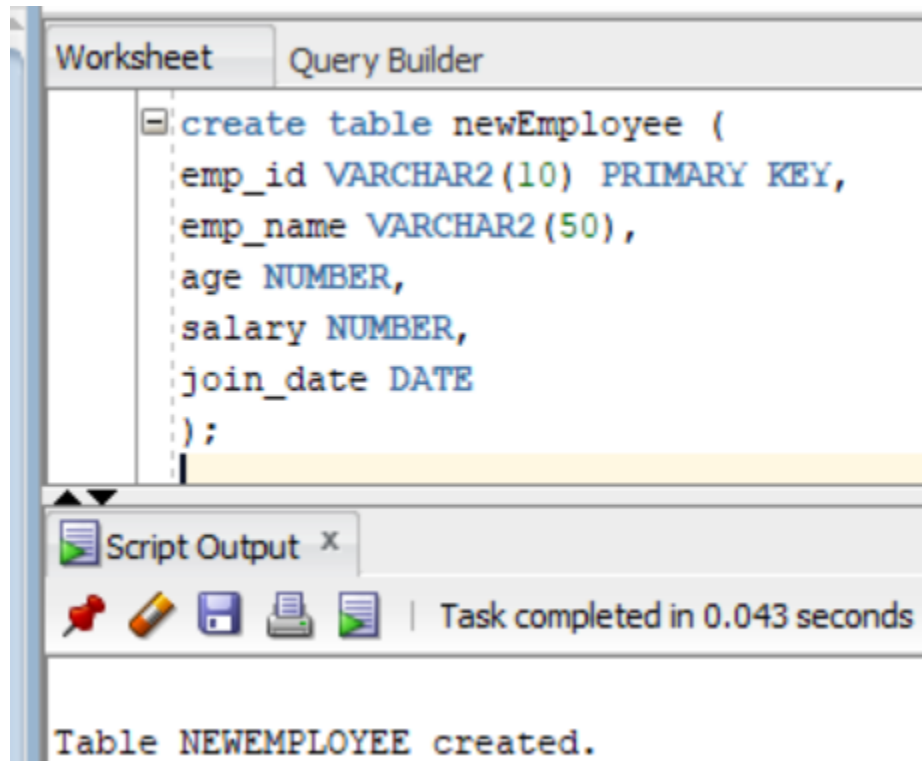
Task 02: Modify the emp_name column to allow 100 characters.

Worksheet   Query Builder

```
alter table newEmployee modify emp_name VARCHAR2(100);
desc newEmployee;
```

Script Output ×

Task completed in 0.304 seconds

Name	Null?	Type
EMP_ID	NOT NULL	VARCHAR2(10)
EMP_NAME		VARCHAR2(100)
AGE		NUMBER
SALARY		NUMBER
JOIN_DATE		DATE
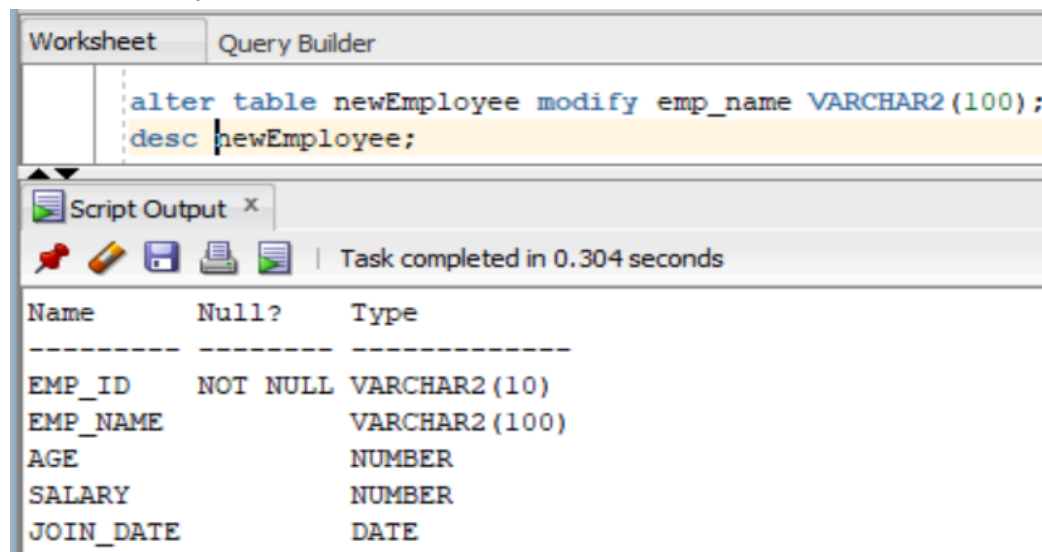
Task 03: Add a new column email VARCHAR2(100) to the table.

Worksheet	Query Builder

```
alter table newEmployee add email varchar2(100);
desc newEmployee;
```

Script Output ×

| Task completed in 0.129 seconds

```
Name          Null?      Type
----------    --------   --------------

EMP_ID       NOT NULL  VARCHAR2(10)
EMP_NAME               VARCHAR2(100)
AGE                    NUMBER
SALARY                 NUMBER
JOIN_DATE              DATE
EMAIL                  VARCHAR2(100)
```

Task 04: Add a UNIQUE constraint on the email column.

Worksheet	Query Builder

```
*/

alter table newEmployee add constraint email_all unique(emp_name);
```

Script Output ×

| Task completed in 0.046 seconds

```
Table NEWEMPLOYEE altered.
```
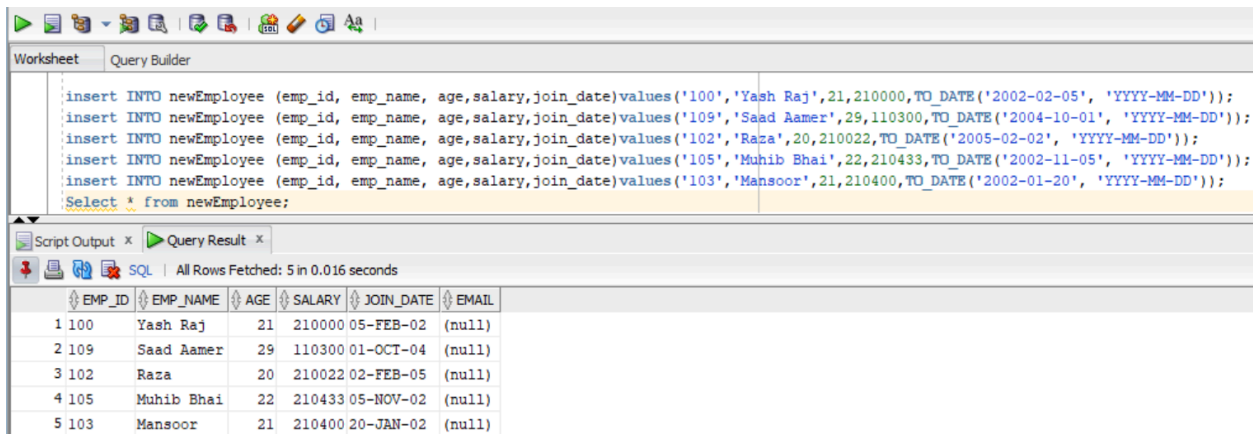
Task 05: Add a CHECK constraint to ensure age is greater than or equal to 18

```
alter table newEmployee add constraint check_age check (age >=18);
```

Script Output ×

| Task completed in 0.048 seconds

```
Table NEWEMPLOYEE altered.
```

Task 06: Insert 5 employees with different emp_id, emp_name, age, salary, and join_date.
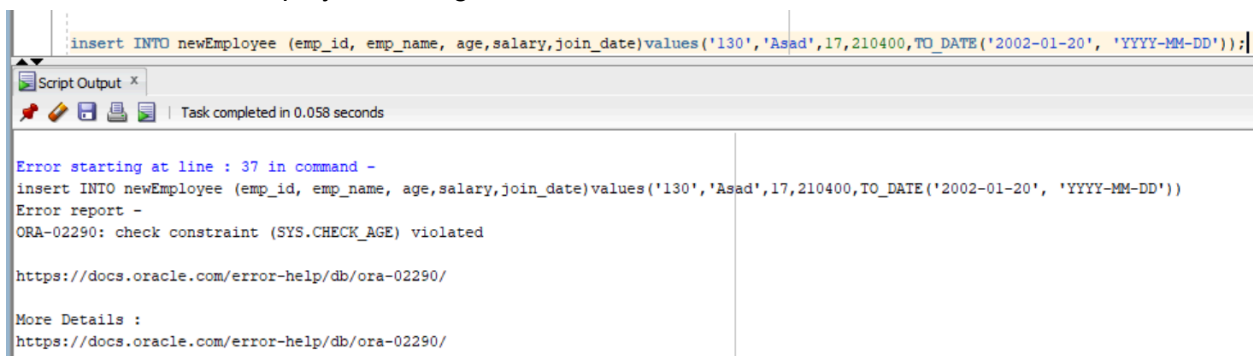
```
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date)values('100','Yash Raj',21,210000,TO_DATE('2002-02-05', 'YYYY-MM-DD'));
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date)values('109','Saad Aamer',29,110300,TO_DATE('2004-10-01', 'YYYY-MM-DD'));
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date)values('102','Raza',20,210022,TO_DATE('2005-02-02', 'YYYY-MM-DD'));
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date)values('105','Muhib Bhai',22,210433,TO_DATE('2002-11-05', 'YYYY-MM-DD'));
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date)values('103','Mansoor',21,210400,TO_DATE('2002-01-20', 'YYYY-MM-DD'));
Select * from newEmployee;
```

Script Output × | Query Result ×

SQL | All Rows Fetched: 5 in 0.016 seconds

	EMP_ID	EMP_NAME	AGE	SALARY	JOIN_DATE	EMAIL
1	100	Yash Raj	21	210000	05-FEB-02	(null)
2	109	Saad Aamer	29	110300	01-OCT-04	(null)
3	102	Raza	20	210022	02-FEB-05	(null)
4	105	Muhib Bhai	22	210433	05-NOV-02	(null)
5	103	Mansoor	21	210400	20-JAN-02	(null)

Task 07: Insert an employee with age = 16 and see the CHECK constraint fail.

```
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date)values('130','Asad',17,210400,TO_DATE('2002-01-20', 'YYYY-MM-DD'));
```

Script Output ×

Task completed in 0.058 seconds

```
Error starting at line : 37 in command -
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date)values('130','Asad',17,210400,TO_DATE('2002-01-20', 'YYYY-MM-DD'))
Error report -
ORA-02290: check constraint (SYS.CHECK_AGE) violated

https://docs.oracle.com/error-help/db/ora-02290/


More Details :
https://docs.oracle.com/error-help/db/ora-02290/
```

Task 08: Insert a new employee with an email that duplicates another employee and see the UNIQUE constraint fail.

```
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date,email)values('130','Asad',22,210400,TO_DATE('2002-01-20', 'YYYY-MM-DD'),'Yashmandhn@gmail.com');
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date,email)values('120','Asadullah',24,210400,TO_DATE('2002-01-20', 'YYYY-MM-DD'),'Yashmandhn@gmail.com');
```

Script Output ×

Task completed in 0.044 seconds

```
1 row inserted.


Error starting at line : 42 in command -
insert INTO newEmployee (emp_id, emp_name, age,salary,join_date,email)values('120','Asadullah',24,210400,TO_DATE('2002-01-20', 'YYYY-MM-DD'),'Yashmandhn@gmail.com')
Error report -
ORA-00001: unique constraint (SYS.SYS_C008316) violated

https://docs.oracle.com/error-help/db/ora-00001/

More Details :
https://docs.oracle.com/error-help/db/ora-00001/
```

Task 09: Delete an employee with emp_id = 'xyz' and use ROLLBACK to undo the deletion.

Before Deletion :

```
Select *from newEmployee;
```

Script Output ×   Query Result ×

SQL | All Rows Fetched: 5 in 0.005 seconds

	EMP_ID	EMP_NAME	AGE	SALARY	JOIN_DATE	EMAIL
1	100	Yash Raj	21	210000	05-FEB-02	(null)
2	109	Saad Aamer	29	110300	01-OCT-04	(null)
3	102	Raza	20	210022	02-FEB-05	(null)
4	105	Muhib Bhai	22	210433	05-NOV-02	(null)
5	103	Mansoor	21	210400	20-JAN-02	(null)

Deletion :

```
Select *from newEmployee;
delete from newEmployee where emp_id = '103';
```

Script Output ×

| Task completed in 0.027 seconds
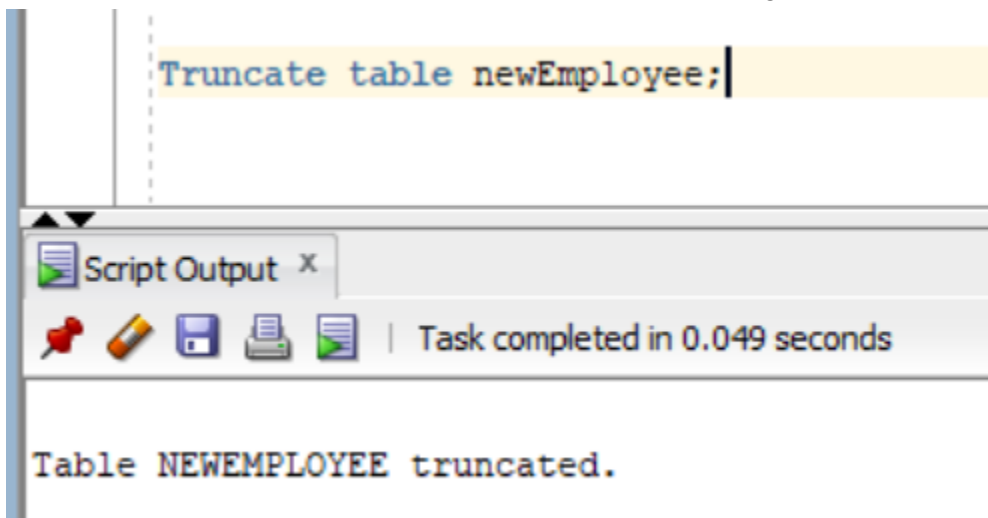
1 row deleted.

RollBack :

```
Select *from newEmployee;
delete from newEmployee where emp_id = '103';
rollback;
```

Script Output ×

| Task completed in 0.042 seconds

1 row deleted.

Rollback complete.

Task 10: Remove all records from the table without deleting the table structure.

```
Truncate table newEmployee;
```

Script Output ×

Task completed in 0.049 seconds

Table NEWEMPLOYEE truncated.

After Truncate :

```
Truncate table newEmployee;
Select * from newEmployee;
```

Script Output ×   Query Result ×

SQL | All Rows Fetched: 0 in 0.006 seconds

EMP_ID	EMP_NAME	AGE	SALARY	JOIN_DATE