

**Name: Fahim Mahmud Bhuiyan**

**ID: 20-42970-1**

**Section: G**

**Introduction to Database**

**Date: 25/11/2020**

## **Lab Task 1**

1) Select department name & location of all the employees working for CLARK.

**Query: select dname,loc from dept,emp where emp.deptno=dept.deptno and mgr= (select empno from emp where ename='CLARK');**

The screenshot shows the SQL Developer interface with the user 'SCOTT'. The SQL command window contains the query: `select dname,loc from dept,emp where emp.deptno=dept.deptno and mgr= (select empno from emp where ename='CLARK');`. The results pane displays a single row with the department name 'ACCOUNTING' and location 'NEWYORK'.

DNAME	LOC
ACCOUNTING	NEWYORK

1 rows returned in 0.00 seconds [CSV Export](#)

2) Select all the departmental information for all the managers.

**Query: select dept.\* from dept,emp where emp.deptno=dept.deptno and emp.job='MANAGER';**

The screenshot shows the SQL Developer interface with the user 'SCOTT'. The SQL command window contains the query: `select dept.* from dept,emp where emp.deptno=dept.deptno and emp.job='MANAGER';`. The results pane displays three rows of department information.

DEPTNO	DNAME	LOC
20	RESEARCH	DALLAS
30	SALES	CHICAGO
10	ACCOUNTING	NEWYORK

3 rows returned in 0.09 seconds [CSV Export](#)

3) Display the first maximum salary.

Query: **select max(sal) from emp;**

User: SCOTT  
Home > SQL > SQL Commands

☒ Autocommit    Display 10

```
select dname,loc from dept,emp where emp.deptno=dept.deptno and mgr= (select empno from emp where ename = 'MANAGER');
select dept.* from dept,emp where emp.deptno=dept.deptno and emp.job= 'MANAGER';
select max(sal) from emp;
```

Results   Explain   Describe   Saved SQL   History

MAX(SAL)
5000

1 rows returned in 0.67 seconds    [CSV Export](#)

4) Display the second maximum salary.

Query: **select max(sal) from emp where sal < (select max(sal) from emp);**

User: SCOTT  
Home > SQL > SQL Commands

☒ Autocommit    Display 10

```
select dname,loc from dept,emp where emp.deptno=dept.deptno and mgr= (select empno from emp where ename = 'MANAGER');
select dept.* from dept,emp where emp.deptno=dept.deptno and emp.job= 'MANAGER';
select max(sal) from emp;
select max(sal) from emp where sal < (select max(sal) from emp);
```

Results   Explain   Describe   Saved SQL   History

MAX(SAL)
3000

1 rows returned in 0.00 seconds    [CSV Export](#)

5) Display the third maximum salary.

Query: **select max(sal) from emp where sal < (select max(sal) from emp where sal < (select max(sal) from emp));**

User: SCOTT  
Home > SQL > SQL Commands

☒ Autocommit    Display 10

```
select dname,loc from dept,emp where emp.deptno=dept.deptno and mgr= (select empno from emp where ename = 'MANAGER');
select dept.* from dept,emp where emp.deptno=dept.deptno and emp.job= 'MANAGER';
select max(sal) from emp;
select max(sal) from emp where sal < (select max(sal) from emp);
select max(sal) from emp where sal < (select max(sal) from emp where sal < (select max(sal) from emp));
```

Results   Explain   Describe   Saved SQL   History

MAX(SAL)
2975

1 rows returned in 0.00 seconds    [CSV Export](#)

6) Display all the managers & clerks who work in Accounts and Marketing departments.

**Query:** select ename,dname from emp,dept where emp.deptno=dept.deptno and emp.job in('MANAGER','CLERK') and dept.dname in('ACCOUNTING','MARKETING');

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10

```
select dname,loc from dept,emp where emp.deptno=dept.deptno and mgr= (select empno from emp where ename='CLARK');
select dept.* from dept,emp where emp.deptno=dept.deptno and emp.job= 'MANAGER';
select max(sal) from emp;
select max(sal) from emp where sal< (select max(sal) from emp);
select max(sal) from emp where sal< (select max(sal) from emp where sal < (select max(sal) from emp));
select ename,dname from emp,dept where emp.deptno=dept.deptno and emp.job in('MANAGER','CLERK') and dept.dname in('ACCOUNTING','MARKETING');
```

Results Explain Describe Saved SQL History

ENAME	DNAME
CLARK	ACCOUNTING
MILLER	ACCOUNTING

2 rows returned in 0.00 seconds [CSV Export](#)

7) Display all the salesmen who are not located at DALLAS.

**Query:** select ename from emp,dept where emp.deptno=dept.deptno and job='SALESMAN' and dname<>'DALLAS';

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10

```
select dname,loc from dept,emp where emp.deptno=dept.deptno and mgr= (select empno from emp where ename='CLARK');
select dept.* from dept,emp where emp.deptno=dept.deptno and emp.job= 'MANAGER';
select max(sal) from emp;
select max(sal) from emp where sal< (select max(sal) from emp);
select max(sal) from emp where sal< (select max(sal) from emp where sal < (select max(sal) from emp));
select ename,dname from emp,dept where emp.deptno=dept.deptno and emp.job in('MANAGER','CLERK');
select ename from emp,dept where emp.deptno=dept.deptno and job='SALESMAN' and dname<>'DALLAS';
```

Results Explain Describe Saved SQL History

ENAME
ALLEN
WARD
MARTIN
TURNER

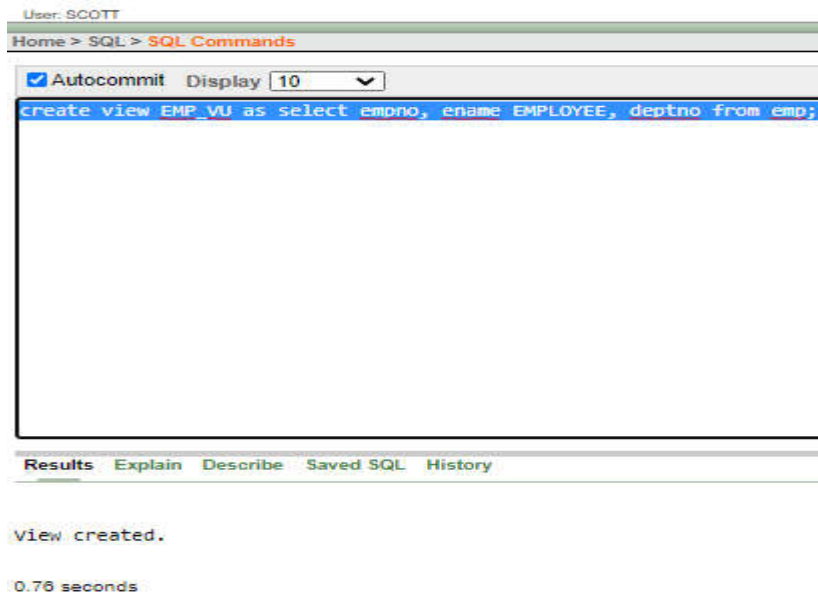
4 rows returned in 0.15 seconds [CSV Export](#)

**Date: 09/12/2020**

## **Lab Task 2**

1) Create a view called **EMP\_VU** based on the employee number, employee name, and department number from the EMP table. Change the heading for the employee name to EMPLOYEE.

**Query: create view EMP\_VU as select empno, ename EMPLOYEE, deptno from emp;**



The screenshot shows a SQL command window with the following elements:

- Top bar: User: SCOTT
- Navigation bar: Home > SQL > SQL Commands
- Toolbar: Autocommit (checked), Display 10 (dropdown)
- Command text area: `create view EMP_VU as select empno, ename EMPLOYEE, deptno from emp;`
- Bottom bar: Results, Explain, Describe, Saved SQL, History
- Output area: `view created.`
- Execution time: `0.76 seconds`

2) Display the contents of the **EMP\_VU** view. EMPNO EMPLOYEE DEPTNO

7839	KING	10
7698	BLAKE	30
7782	CLARK	10
7566	JONES	20
7654	MARTIN	30
7499	ALLEN	30
7844	TURNER	30
7900	JAMES	30
7521	WARD	30
7902	FORD	20
7369	SMITH	20
7788	SCOTT	20
7876	ADAMS	20
7934	MILLER	10

**Query: select\* from EMP\_VU;**

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10

```
create view EMP_VU as select empno, ename EMPLOYEE, deptno from emp;
select* from EMP_VU;
```

Results Explain Describe Saved SQL History

EMPNO	EMPLOYEE	DEPTNO
7369	SMITH	20
7499	ALLEN	30
7521	WARD	30
7566	JONES	20
7654	MARTIN	30
7698	BLAKE	30
7782	CLARK	10
7788	SCOTT	20
7839	KING	10
7844	TURNER	30

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.03 seconds [CSV Export](#)

3) using your view EMP\_VU, enter a query to display all employee names and department numbers.

```
EMPLOYEE DEPTNO
KING      10
BLAKE     30
CLARK     10
```

**Query: SELECT EMPLOYEE, DEPTNO FROM EMP\_VU;**

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10

```
create view EMP_VU as select empno, ename EMPLOYEE, deptno from emp;
select* from EMP_VU;
SELECT EMPLOYEE, DEPTNO FROM EMP_VU;
```

Results Explain Describe Saved SQL History

EMPLOYEE	DEPTNO
SMITH	20
ALLEN	30
WARD	30
JONES	20
MARTIN	30
BLAKE	30
CLARK	10
SCOTT	20
KING	10
TURNER	30

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.00 seconds [CSV Export](#)

4) Create a view named **DEPT20** that contains the employee number, employee name, and department number for all employees in department 20. Label the view column **EMPLOYEE\_ID**, **EMPLOYEE**, and **DEPARTMENT\_ID**. Do not allow an employee to be reassigned to another department through the view.

**Query: CREATE VIEW DEPT20 AS SELECT EMPNO EMPLOYEE\_ID,ENAME  
EMPLOYEE,DEPTNO DEPARTMENT\_ID FROM EMP WHERE DEPTNO=20 WITH CHECK  
OPTION CONSTRAINT DEPT20\_CK;**

**SELECT\* FROM DEPT20;**

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10

```
create view EMP_VU as select empno, ename EMPLOYEE, deptno from emp;  
select* from EMP_VU;  
SELECT EMPLOYEE, DEPTNO FROM EMP_VU;  
CREATE VIEW DEPT20 AS SELECT EMPNO EMPLOYEE_ID,ENAME EMPLOYEE,DEPTNO DEPARTMENT_ID FROM EMP WHERE DEPTNO=20 WITH CHECK OPTION CONSTRAINT DEPT20_CK;
```

Results Explain Describe Saved SQL History

View created.

0.73 seconds

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10

```
create view EMP_VU as select empno, ename EMPLOYEE  
select* from EMP_VU;  
SELECT EMPLOYEE, DEPTNO FROM EMP_VU;  
CREATE VIEW DEPT20 AS SELECT EMPNO EMPLOYEE_ID,EN  
SELECT* FROM DEPT20;
```

Results Explain Describe Saved SQL History

EMPLOYEE_ID	EMPLOYEE	DEPARTMENT_ID
7369	SMITH	20
7566	JONES	20
7788	SCOTT	20
7876	ADAMS	20
7902	FORD	20

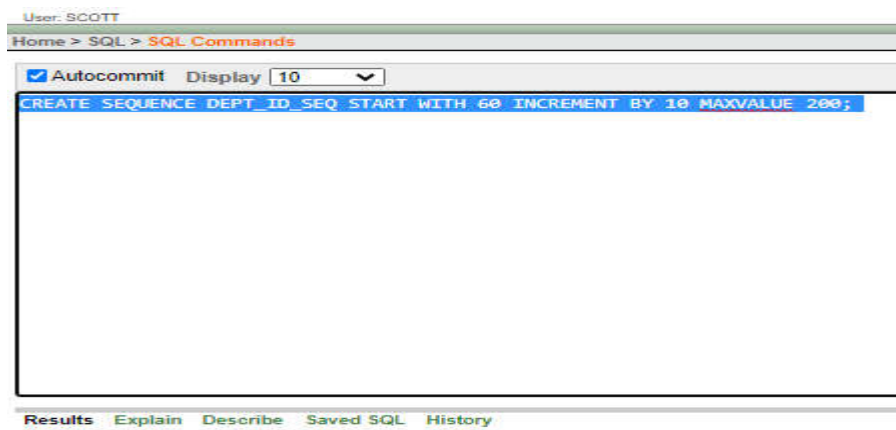
5 rows returned in 0.04 seconds [CSV Export](#)

**Date: 14/12/2020**

### **Lab Task 3**

1) Create a sequence to be used with the primary key column of the DEPARTMENT table. The sequence should start at 60 and have a maximum value of 200. Have your sequence increment by ten numbers. Name the sequence DEPT\_ID\_SEQ.

**Query: CREATE SEQUENCE DEPT\_ID\_SEQ START WITH 60 INCREMENT BY 10 MAXVALUE 200;**

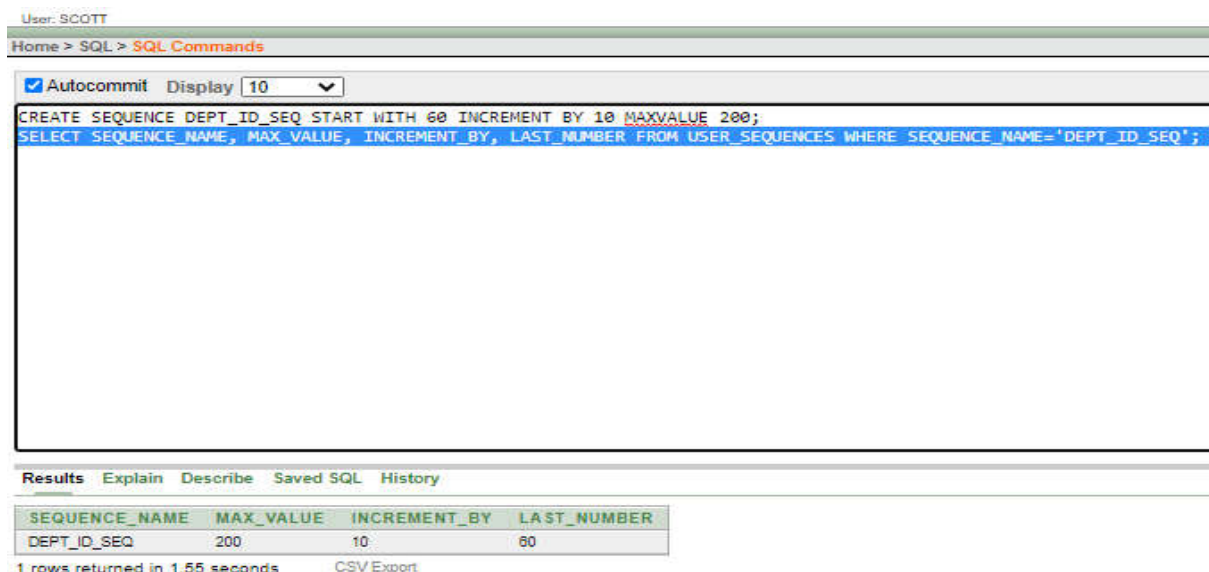


Sequence created.

0.12 seconds

2) Write a script to display the following information about your sequences: sequence name, maximum value, increment size, and last number.

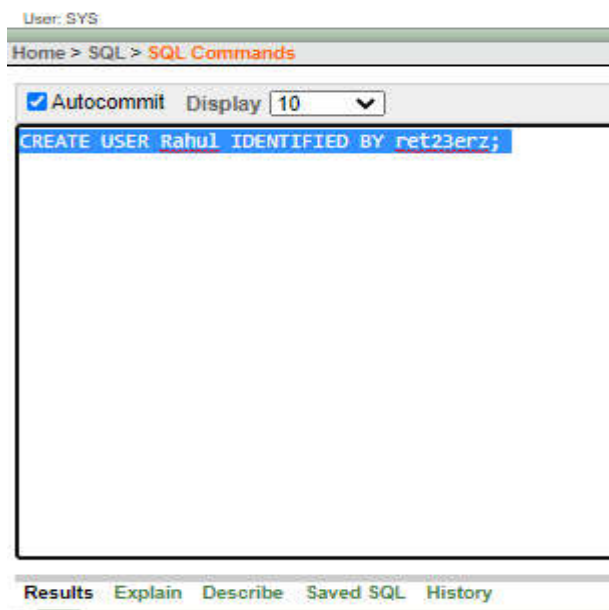
**Query: SELECT SEQUENCE\_NAME, MAX\_VALUE, INCREMENT\_BY, LAST\_NUMBER FROM USER\_SEQUENCES WHERE SEQUENCE\_NAME='DEPT\_ID\_SEQ';**





3) Create a user Rahul with the password ret23erz.

**Query: CREATE USER Rahul IDENTIFIED BY ret23erz;**

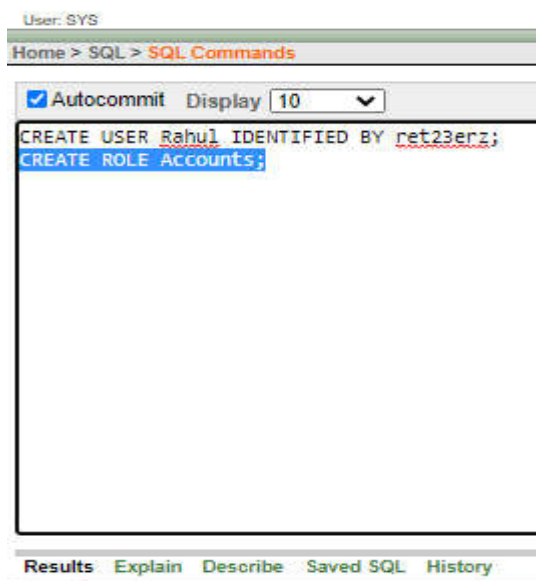


User created.

4.06 seconds

4) Create a new role Accounts.

**Query: CREATE ROLE Accounts;**



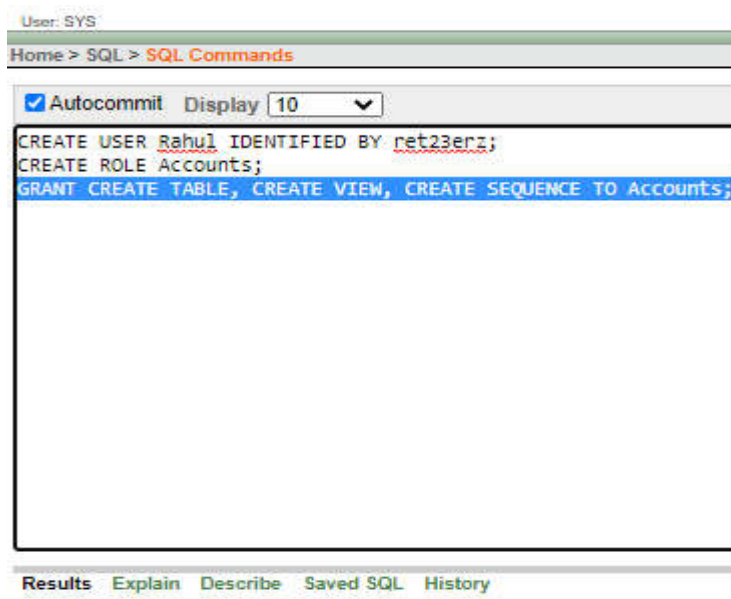
Role created.

0.00 seconds



5) Grant system privileges create table, view and sequence to role Accounts.

**Query: GRANT CREATE TABLE, CREATE VIEW, CREATE SEQUENCE TO Accounts;**

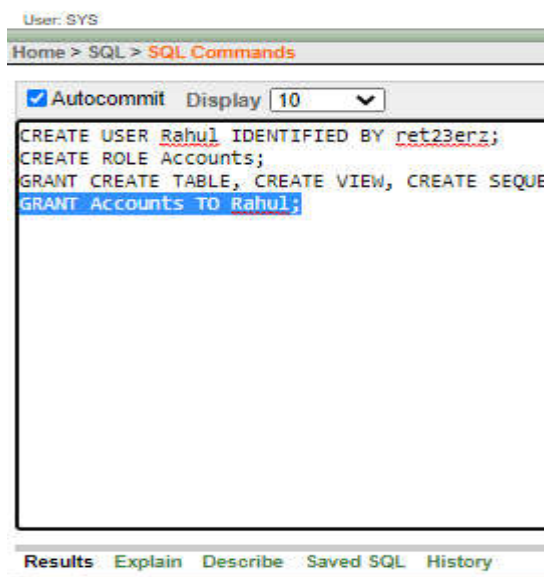


Statement processed.

0.10 seconds

6) Assign role Accounts to Rahul.

**Query: GRANT Accounts TO Rahul;**

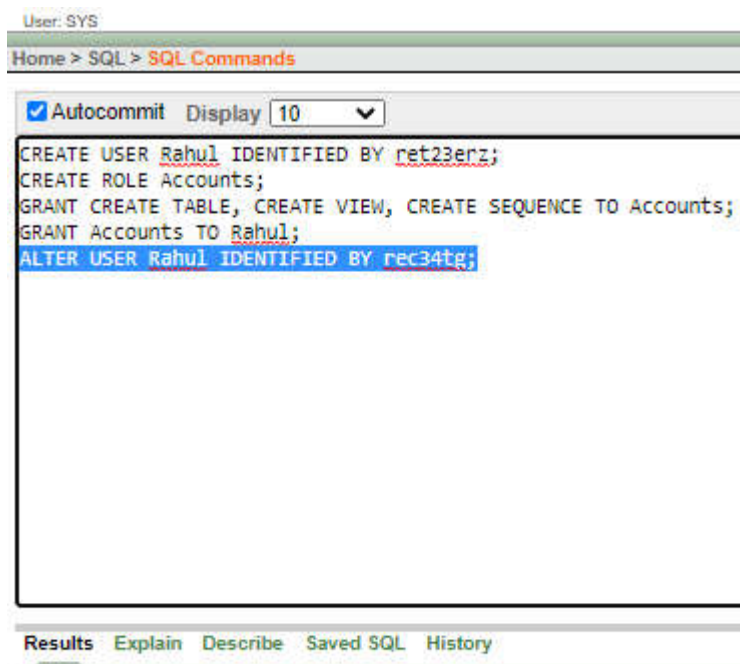


Statement processed.

0.11 seconds

7) Change password of Rahul with the new password rec34tg.

**Query: ALTER USER Rahul IDENTIFIED BY rec34tg;**



The screenshot shows a web-based SQL interface. At the top, it says 'User: SYS'. Below that is a breadcrumb 'Home > SQL > SQL Commands'. There is a checkbox for 'Autocommit' which is checked, and a 'Display' dropdown set to '10'. The main area contains the following SQL commands:   
CREATE USER Rahul IDENTIFIED BY ret23erz;  
CREATE ROLE Accounts;  
GRANT CREATE TABLE, CREATE VIEW, CREATE SEQUENCE TO Accounts;  
GRANT Accounts TO Rahul;  
ALTER USER Rahul IDENTIFIED BY rec34tg;  
The last line is highlighted in blue. At the bottom, there are tabs for 'Results', 'Explain', 'Describe', 'Saved SQL', and 'History'.

```
User: SYS
Home > SQL > SQL Commands
Autocommit Display 10
CREATE USER Rahul IDENTIFIED BY ret23erz;
CREATE ROLE Accounts;
GRANT CREATE TABLE, CREATE VIEW, CREATE SEQUENCE TO Accounts;
GRANT Accounts TO Rahul;
ALTER USER Rahul IDENTIFIED BY rec34tg;
Results Explain Describe Saved SQL History
```

User altered.

0.50 seconds