

## LAB ASSIGNMENT-3

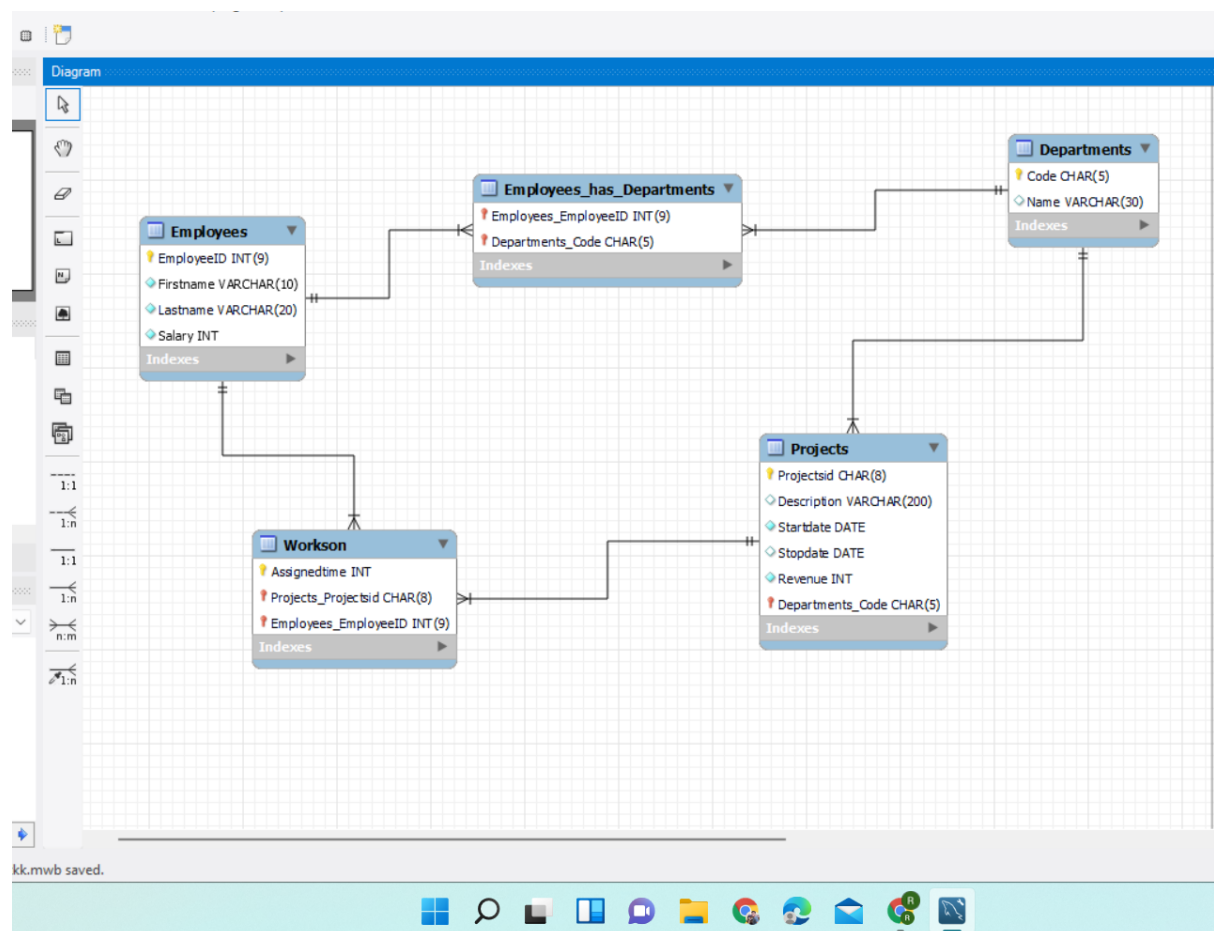
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Subject-CS310(DBMS)

AIM: The aim of this lab assignment is to create tables and define primary keys, foreign keys, and unique keys. Using these keys identifies relationships between them and performs many operations on the table, also aims to create ER-Diagram.

### ER-diagram



## Employee-table

The screenshot shows a database management tool interface. At the top, there are tabs for 'Query 1', 'personall', 'personal', 'personal', 'personal', and 'workson'. The 'workson' tab is active. Below the tabs, there is a toolbar with various icons and a 'Limit to 1000 rows' dropdown. The main area displays a SQL query: `select *from employees`. Below the query, there is a 'Result Grid' showing the data from the 'employees' table. The grid has columns: EmployeeID, FirstName, LastName, Deptcode, and Salary. The data is as follows:

EmployeeID	FirstName	LastName	Deptcode	Salary
1	Mukul	Gautam	503	60000.00
2	Adarsh	Gautam	500	40000.00
3	Aditya	Gupta	504	39000.00
4	Sachin	Chaudhan	505	30000.00
5	Ricky	Roy	501	45000.00
6	Ashish	Kumar	506	35000.00
7	Daksh	Sagar	502	60080.00
8	Nitin	Gautam	507	75000.00

Below the 'Result Grid', there is an 'Output' section showing the execution of the query. The output is as follows:

#	Time	Action	Message
91	01:15:47	insert into workson(Employeeid,Projectid,Assignedtime) values (2,107,8.9)	1 row(s) affected
92	01:18:30	insert into workson(Employeeid,Projectid,Assignedtime) values (5,103,6.7), (7,102,9.9), (3,104,9.5), (6,105,8.8),...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0
93	01:18:59	select *from workson LIMIT 0, 1000	8 row(s) returned
94	01:20:12	select *from employees LIMIT 0, 1000	8 row(s) returned

## Department-table

The screenshot shows a database management tool interface. At the top, there are tabs for 'Query 1', 'personall', 'personal', 'personal', 'personal', and 'workson'. The 'workson' tab is active. Below the tabs, there is a toolbar with various icons and a 'Limit to 1000 rows' dropdown. The main area displays a SQL query: `select *from departments`. Below the query, there is a 'Result Grid' showing the data from the 'departments' table. The grid has columns: Code, Name, Managerid, and Subdeptof. The data is as follows:

Code	Name	Managerid	Subdeptof
500	cse	2	500
501	ece	5	501
502	dsai	7	502
503	mc	1	503
504	ce	3	504
505	be	4	505
506	it	6	506
507	fe	8	507

Below the 'Result Grid', there is an 'Output' section showing the execution of the query. The output is as follows:

#	Time	Action	Message
92	01:18:30	insert into workson(Employeeid,Projectid,Assignedtime) values (5,103,6.7), (7,102,9.9), (3,104,9.5), (6,105,8.8),...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0
93	01:18:59	select *from workson LIMIT 0, 1000	8 row(s) returned
94	01:20:12	select *from employees LIMIT 0, 1000	8 row(s) returned
95	01:20:33	select *from departments LIMIT 0, 1000	8 row(s) returned

## Project-table

Query 1 | personal | personal | personal | personal | workson x

Limit to 1000 rows

1 • select \* from projects

Result Grid

Projectid	Deptcode	Description	Startdate	Stopdate	Revenue
100	503	hellow	2018-08-23	2018-10-25	100000.00
101	507	hi	2004-01-01	2005-06-18	145000.00
102	502	tiptop	2021-07-19	2021-12-30	200000.00
103	501	hiphop	2022-01-02	NULL	120000.00
104	504	rimjm	2015-09-24	2017-02-28	300000.00
105	506	jfdkgf	2001-04-08	2009-09-27	500000.00
106	505	ksdgf	2016-04-01	2018-02-02	340000.00
107	500	kdjfdf	2022-02-13	NULL	120000.00

projects 8 x

Output

Action Output

#	Time	Action	Message
93	01:18:59	select * from workson LIMIT 0, 1000	8 row(s) returned
94	01:20:12	select * from employees LIMIT 0, 1000	8 row(s) returned
95	01:20:33	select * from departments LIMIT 0, 1000	8 row(s) returned
96	01:20:51	select * from projects LIMIT 0, 1000	8 row(s) returned

## Workson table

The screenshot shows the SQL Server Enterprise Manager interface. The query editor at the top contains the following SQL statement:

```
1 • select *from workson
```

The query results are displayed in the 'Result Grid' below the editor. The grid has four columns: 'Employeeid', 'Projectid', and 'Assignedtime'. The data is as follows:

	Employeeid	Projectid	Assignedtime
1	100	7.80	
2	107	8.90	
5	103	6.70	
7	102	9.90	
3	104	9.50	
6	105	8.80	
4	106	9.20	
8	101	7.60	

The 'Output' pane at the bottom shows the execution log with the following entries:

#	Time	Action	Message
94	01:20:12	select *from employees LIMIT 0, 1000	8 row(s) returned
95	01:20:33	select *from departments LIMIT 0, 1000	8 row(s) returned
96	01:20:51	select *from projects LIMIT 0, 1000	8 row(s) returned
97	01:21:11	select *from workson LIMIT 0, 1000	8 row(s) returned

## Q.1 - List the first and last names of all employees.

The screenshot shows the SQL Server Enterprise Manager interface. The query editor at the top contains the following SQL statement:

```
1 • select FirstName,LastName  
2   from employees  
3
```

The query results are displayed in the 'Result Grid' below the editor. The grid has two columns: 'FirstName' and 'LastName'. The data is as follows:

	FirstName	LastName
1	Mukul	Gautam
2	Adarsh	Gautam
3	Aditya	Gupta
4	Sachin	Chaudhan
5	Ricky	Roy
6	Ashish	Kumar
7	Daksh	Sagar
8	Nitin	Gautam

The 'Output' pane at the bottom shows the execution log with the following entries:

#	Time	Action	Message
95	01:20:33	select *from departments LIMIT 0, 1000	8 row(s) returned
96	01:20:51	select *from projects LIMIT 0, 1000	8 row(s) returned
97	01:21:11	select *from workson LIMIT 0, 1000	8 row(s) returned
98	01:23:51	select FirstName,LastName from employees LIMIT 0, 1000	8 row(s) returned

## Q.2 - List all attributes of the projects with revenue greater than \$40,000.

The screenshot shows the Microsoft Access interface with a query named 'Query 1' open. The query is a simple SQL statement: `select* from Projects where Revenue>40000;`. The 'Result Grid' is displayed, showing a list of projects with columns: Projectid, Deptcode, Description, Startdate, Stopdate, and Revenue. The data is as follows:

Projectid	Deptcode	Description	Startdate	Stopdate	Revenue
100	503	hellow	2018-08-23	2018-10-25	100000.00
101	507	hi	2004-01-01	2005-06-18	145000.00
102	502	tiptop	2021-07-19	2021-12-30	200000.00
103	501	hiphop	2022-01-02	NULL	120000.00
104	504	rimjim	2015-09-24	2017-02-28	300000.00
105	506	jfdkjf	2001-04-08	2009-09-27	500000.00
106	505	ksdjf	2016-04-01	2018-02-02	340000.00
107	500	kdjfdf	2022-02-13	NULL	120000.00

Below the result grid, the 'Output' pane shows the 'Action Output' for the query, indicating that 8 rows were returned for the query: `select* from Projects where Revenue>40000 LIMIT 0, 1000`.

## Q.3 - List the department codes of the projects with revenue between \$100,000 and \$150,000.

The screenshot shows the Microsoft Access interface with a query named 'Query 1' open. The query is a simple SQL statement: `select Projectid from projects where Startdate<="2004-07-01";`. The 'Result Grid' is displayed, showing a list of projects with columns: Projectid, Deptcode, Description, Startdate, Stopdate, and Revenue. The data is as follows:

Projectid	Deptcode	Description	Startdate	Stopdate	Revenue
101	507	hi	2004-01-01	2005-06-18	145000.00
105	506	jfdkjf	2001-04-08	2009-09-27	500000.00

Below the result grid, the 'Output' pane shows the 'Action Output' for the query, indicating that 2 rows were returned for the query: `select Projectid from projects where Startdate<="2004-07-01" LIMIT 0, 1000`.

#### Q.4 - List the project IDs for the projects that started on or before July 1, 2004.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 select Deptcode
2 from projects
3 where Revenue between 100000 and 150000;
4
```

The Results grid displays the following data:

Deptcode
503
507
501
500

The Output tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
103	01:36:41	select Projectid from projects where Revenue in(2004-07-01,2022-02-15) LIMIT 0, 1000	0 row(s) returned	0.000 sec / 0.000 sec
104	01:37:14	select Projectid from projects where Startdate in(2004-07-01) LIMIT 0, 1000	0 row(s) returned	0.000 sec / 0.000 sec
105	01:37:33	select Projectid from projects where Startdate in(2004-07-01,2022-02-15) LIMIT 0, 1000	0 row(s) returned	0.016 sec / 0.000 sec
106	02:13:59	select Deptcode from projects where Revenue between 100000 and 150000 LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec

#### Conclusion:

From this lab assignment, we learn how to create tables and identify foreign keys, the primary keys, and unique keys. Using these keys identify the relationship between tables and how to insert data into the table and to see the specific data of the table using the where condition.