ASSIGNMENT NO.3

COURSE NAME : DATABASE MANAGEMENT SYSTEM

COURSE CODE: INT306

PROJECT NAME – MUNICIPAL CORPORATION SYSTEM

SUBMITTED TO – DR. BALRAJ SINGH

STUDENT DETAILS: - (SECTION – E2003, GROUP -1)

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ANNEXURE 1- : INTRODUCTION

MUNICIPAL CORPORATION SYSTEM

Citizens & Municipal Officials Connecting System is a tool designed to function as a platform for the citizens to communicate with the Municipal corporation authorities and replace the old method of writing letters and e-mails as they are a time-consuming mode of communicating with the authorities.

The objective of our project is to provide solutions to both – the citizens and the municipal corporation. Another objective of the project is to provide the municipal corporation with a tool – which they previously didn't have – to manage all the complaints that they receive, the projects they handle and its management, the services which is provided by the municipal corporation to citizen and the departments handled by them.

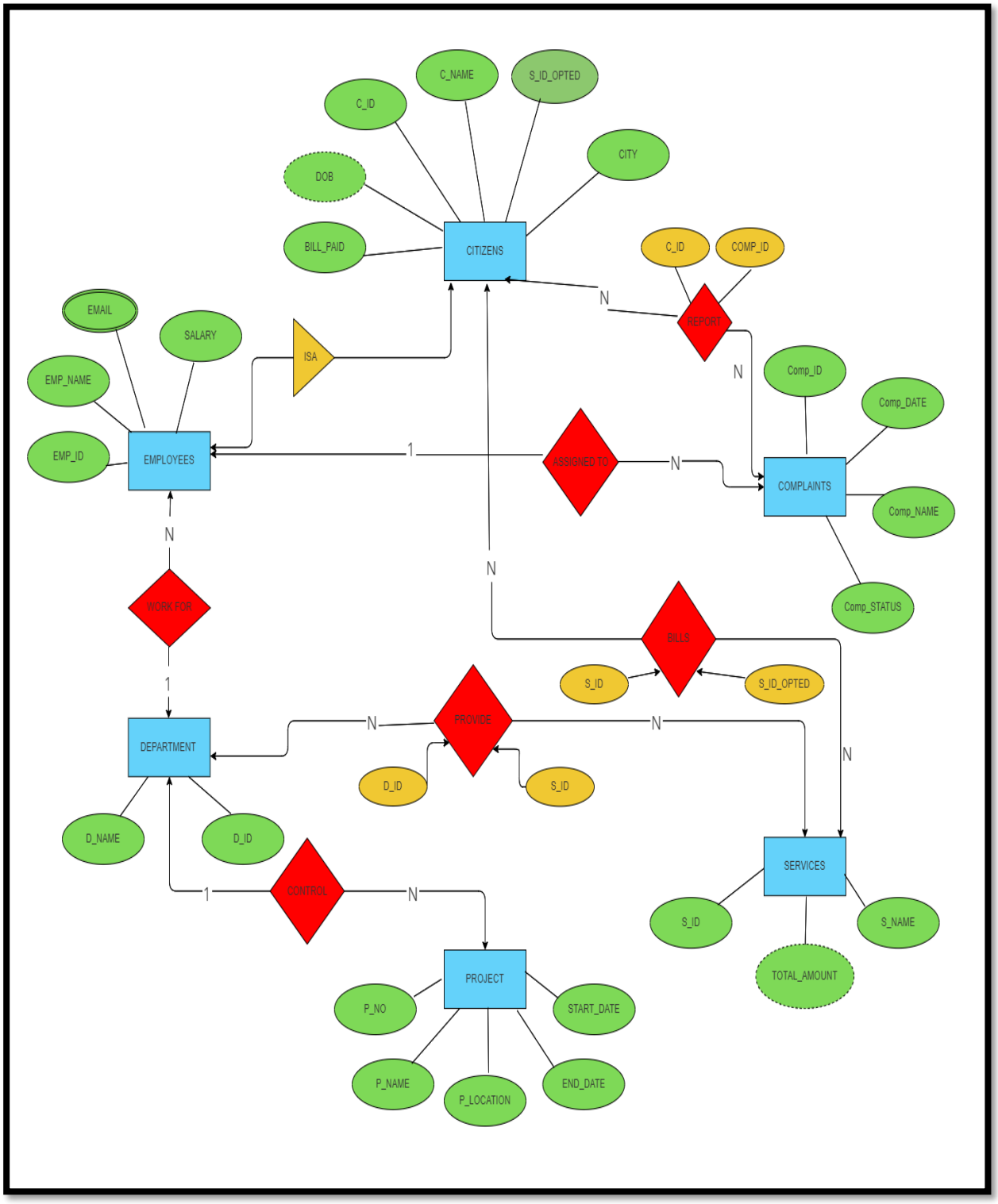
The scope of our system ranges from the citizens that will use the system to report their grievances, to the Municipal authorities that will use the system to then manage those complaints, services, employees and projects.

Here I have taken total of six tables for citizen, complaints, service, employees, department and project.

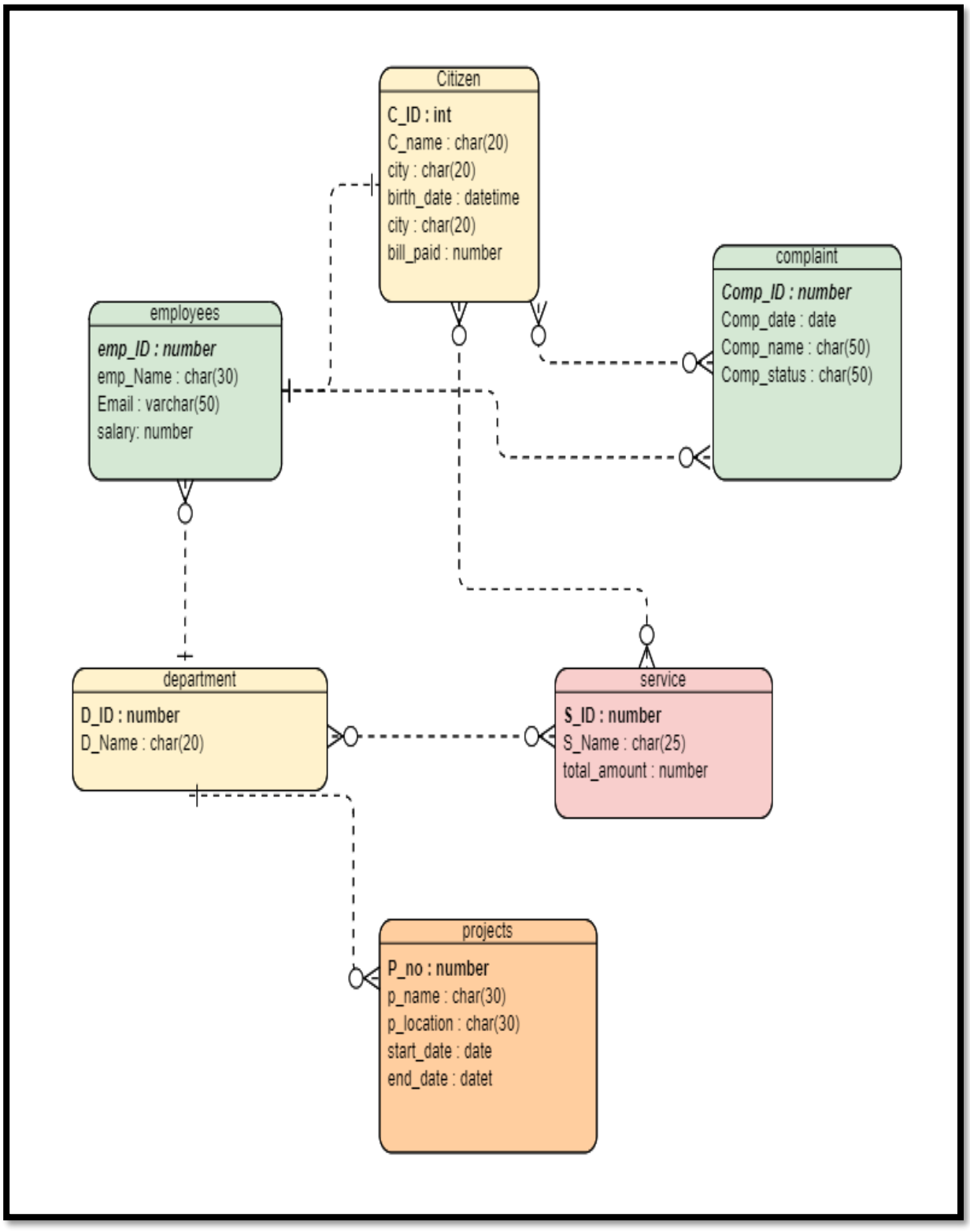
The assumptions are that municipal corporation have citizens data who have some employees out of the same citizens and the citizens have filed the complaints where citizen ID and complaint ID is same. And the services are also provided to the same citizens who have paid the bills for the services where, they are having service ID opted same as the service ID.

ANNEXURE 2: DESIGN OF THE PROJECT

ENTITY RELATIONSHIP DIAGRAM-



RELATION DESIGN



ANNEXURE 3: SCREENSHOTS

Department table-

Results Explain Describe Saved SQL History

D_ID	D_NAME
1	Public services
2	Health services
3	Education
4	Public employment
5	Environmental development
6	Housing and zoning

6 rows returned in 0.00 seconds CSV Export

Object Type **TABLE** Object **DEPARTMENT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DEPARTMENT	D_ID	Number	-	-	-	1	-	-	-
	D_NAME	Varchar2	50	-	-	-	✓	-	-

1 - 2

Service table -

Results Explain Describe Saved SQL History

S_ID	S_NAME	TOTAL_AMOUNT
1	Street light	3000
2	Hospital facility	1000
3	New schools	2000
4	Skill improving schemes	3000
5	River cleaning	1200
6	Property management	1000

6 rows returned in 0.00 seconds CSV Export

Object Type **TABLE** Object **SERVICE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
SERVICE	S_ID	Number	-	-	-	1	-	-	-
	S_NAME	Char	50	-	-	-	✓	-	-
	TOTAL_AMOUNT	Number	-	-	-	-	✓	-	-

1 - 3

Complaint table -

Results Explain Describe Saved SQL History

COMP_ID	COMP_NAME	COMP_DATE	COMP_STATUS
41	plumbing	20-JUN-22	close
42	garbage collection	10-OCT-22	open
43	electricity	03-JUL-22	close

3 rows returned in 0.00 seconds CSV Export

Object Type **TABLE** Object **COMPLAINT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
COMPLAINT	COMP_ID	Number	-	-	-	-	✓	-	-
	COMP_NAME	Char	50	-	-	-	✓	-	-
	COMP_DATE	Date	7	-	-	-	✓	-	-
	COMP_STATUS	Char	20	-	-	-	✓	-	-

1 - 4

Citizen table -

Results Explain Describe Saved SQL History

C_ID	S_ID_OPT	C_NAME	DOB	CITY	BILL_PAID
41	1	Priya	20-JUN-98	Nashik	1200
42	2	Sahil	10-OCT-89	Nagpur	1000
43	3	Sonali	03-JUL-00	ozar	2000
44	4	Raja	06-JUN-92	mumbai	3000
45	5	Ramesh	10-JAN-90	kholapur	2000

5 rows returned in 0.00 seconds CSV Export

Object Type **TABLE** Object **CITIZEN**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CITIZEN	C_ID	Number	-	-	-	1	-	-	-
	S_ID_OPT	Number	-	-	-	-	✓	-	-
	C_NAME	Char	50	-	-	-	✓	-	-
	DOB	Date	7	-	-	-	✓	-	-
	CITY	Varchar2	20	-	-	-	✓	-	-
	BILL_PAID	Number	-	-	-	-	✓	-	-

1 - 6

Employees table-

Results Explain Describe Saved SQL History

EMP_ID	EMP_NAME	EMAIL	SALARY
41	Priya	bjhdudh@gmail.com	70000
42	Sahil	hugdhwd@gmail.com	50000
45	Ramesh	jhdgugw@gmail.com	60000

3 rows returned in 0.01 seconds CSV Export

Object Type **TABLE** Object **EMPLOYEES**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMPLOYEES	EMP_ID	Number	-	-	-	1	-	-	-
	EMP_NAME	Char	20	-	-	-	✓	-	-
	EMAIL	Varchar2	50	-	-	-	✓	-	-
	SALARY	Number	-	-	-	-	✓	-	-

1 - 4

Project table -

Results Explain Describe Saved SQL History

P_NO	P_NAME	P_LOCATION	START_DATE	END_DATE
102	ganga safai	Nashik	25-MAY-17	08-APR-20
106	drainage system	Nagpur	15-OCT-19	08-DEC-20
485	bridge making	ozar	02-JUN-18	20-JUN-22
781	electricity providing	mumbai	30-SEP-19	08-APR-22

4 rows returned in 0.00 seconds CSV Export

Object Type **TABLE** Object **PROJECT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PROJECT	P_NO	Number	-	-	-	-	-	-	-
	P_NAME	Char	50	-	-	-	✓	-	-
	P_LOCATION	Char	50	-	-	-	✓	-	-
	START_DATE	Date	7	-	-	-	✓	-	-
	END_DATE	Date	7	-	-	-	✓	-	-

1 - 5

ANNEXURE 4: CODE

```
create table department(
d_id number primary key ,
d_name varchar2(50)
);

insert into department values(1,'Public services');
insert into department values(2,'Health services');
insert into department values(3,'Education');
insert into department values(4,'Public employment');
insert into department values(5,'Environmental development');
insert into department values(6,'Housing and zoning');


create table service(
s_id number primary key,
s_name char(50),
total_amount number,
foreign key(s_id) references department(d_id)
);

insert into service values(1,'Street light',3000);
insert into service values(2,'Hospital facility',1000);
insert into service values(3,'New schools',2000);
insert into service values(4,'Skill improving schemes',3000);
insert into service values(5,'River cleaning',1200);
insert into service values(6,'Property management',1000);

select*from service;

create table citizen(
c_id number primary key,
s_id_opt number,
c_name char(50),
dob date,
city char(20),
bill_paid number,
foreign key(s_id_opt) references service(s_id)
);

insert into citizen values(41,1,'Priya','20-june-1998','Nashik',1200);
insert into citizen values(42,2,'Sahil','10-oct-1989','Nagpur',1000);
insert into citizen values(43,3,'Sonali','03-july-2000','ozar',2000);
insert into citizen values(44,4,'Raja','06-june-1992','mumbai',3000);
insert into citizen values(45,5,'Ramesh','10-jan-1990','kholapur',2000);

select*from citizen
```

```
create table project(
p_no number not null,
p_name char(50),
p_location char(50),
start_date date,
end_date date);

insert into project values(102,'ganga safai','Nashik','25-may-2017','08-april-2020');
insert into project values(106,'drainage system','Nagpur','15-oct-2019','08-dec-2020');
insert into project values(485,'bridge making','ozar','02-june-2018','20-june-2022');
insert into project values(781,'electricity providing','mumbai','30-sep-2019','08-april-2022');
select*from project

create table employees(
emp_id number primary key,
emp_name char(20),
email varchar2(50),
salary number
);

insert into employees values(41,'Priya','bjhdudh@gmail.com',70000);
insert into employees values(42,'Sahil','hugdhwd@gmail.com',50000);
insert into employees values(45,'Ramesh','jhdgugw@gmail.com',60000);

select * from employees

create table complaint(
comp_id number,
comp_name char(50),
comp_date date,
comp_status char(20) check (comp_status in('open','close')),
foreign key(comp_id) references citizen(c_id)
);

insert into complaint values(41,'plumbing','20-june-2022','close');
insert into complaint values(42,'garbage collection','10-oct-2022','open');
insert into complaint values(43,'electricity','03-july-2022','close');

select*from complaint
```

ANNEXURE 5: QUERIES

DML

1. Employees having salary more than 50000
   Ans= select*from employees where salary>50000;

Results Explain Describe Saved SQL History

EMP_ID	EMP_NAME	EMAIL	SALARY
41	Priya	bjhdudh@gmail.com	70000
45	Ramesh	jhdgugw@gmail.com	60000

2 rows returned in 0.00 seconds CSV Export

2. Citizen who have paid bills of amount 1000 and 2000 or city with letter ending r.
   Ans= select c_id,c_name from citizen where city like '%r' or bill_paid in('1000','2000');

Results Explain Describe Saved

C_ID	C_NAME
42	Sahil
43	Sonali
45	Ramesh

3 rows returned in 0.00 seconds

3. No. of records present in department.
   Ans= select count(*)from department;

Results Explain Describe Sa

COUNT(*)
6

1 rows returned in 0.02 seconds

4. Updating the name of citizen having C_id =45
   Ans= update citizen set c_name='Suraj' where c_id=45;
   select * from citizen

Results Explain Describe Saved SQL History

C_ID	S_ID_OPT	C_NAME	DOB	CITY	BILL_PAID
41	1	Priya	20-JUN-98	Nashik	1200
42	2	Sahil	10-OCT-89	Nagpur	1000
43	3	Sonali	03-JUL-00	ozar	2000
44	4	Raja	06-JUN-92	mumbai	3000
45	5	Suraj	10-JAN-90	kholapur	2000

5 rows returned in 0.00 seconds CSV Export

5. Deduct the salary of employee by 2
   Ans= select emp_name,salary/2 from employees;

Results Explain Describe Sa

EMP_NAME	SALARY/2
Priya	35000
Sahil	25000
Ramesh	30000

3 rows returned in 0.00 seconds

6. Showing the average of total amount which is grouped by s_name of service
   Ans= select s_name,avg(total_amount) from service group by s_name;

Results Explain Describe Saved SQL History

S_NAME	AVG(TOTAL_AMOUNT)
Street light	3000
Skill improving schemes	3000
River cleaning	1200
Hospital facility	1000
Property management	1000
New schools	2000

6 rows returned in 0.01 seconds CSV Export

7. The citizens who are the employees in municipal corporation.

Ans= select citizen.c_id,c_name,bill_paid,salary from citizen,employees where citizen.c_id=employees.emp_id;

Results Explain Describe Saved SQL History

C_ID	C_NAME	BILL_PAID	SALARY
41	Priya	1200	70000
42	Sahil	1000	50000
45	Suraj	2000	60000

3 rows returned in 0.00 seconds CSV Export

8. Insert the values in project table.
   Ans= insert into project values(281,'cleanliness','mumbai','03-sep-2020','08-april-2021');

   select*from project

Results Explain Describe Saved SQL History

P_NO	P_NAME	LOCATION	START_DATE	END_DATE
102	ganga safai	Nashik	25-MAY-17	08-APR-20
106	drainage system	Nagpur	15-OCT-19	08-DEC-20
485	bridge making	ozar	02-JUN-18	20-JUN-22
781	electricity providing	mumbai	30-SEP-19	08-APR-22
281	cleanliness	mumbai	03-SEP-20	08-APR-21

5 rows returned in 0.00 seconds CSV Export

9. Delete the column having p_no=102
   Ans= delete from project where p_no=102;
   select * from project

Results Explain Describe Saved SQL History

P_NO	P_NAME	LOCATION	START_DATE	END_DATE
106	drainage system	Nagpur	15-OCT-19	08-DEC-20
485	bridge making	ozar	02-JUN-18	20-JUN-22
781	electricity providing	mumbai	30-SEP-19	08-APR-22
281	cleanliness	mumbai	03-SEP-20	08-APR-21

4 rows returned in 0.01 seconds CSV Export

10. Different locations present in project table
    Ans= select distinct location from project;

Results Explain Describe Sa

LOCATION
Nagpur
mumbai
ozar

3 rows returned in 0.01 seconds

DDL

1. Creating table employees
   Ans= create table employees(

   emp_id number primary key,

   emp_name char(20),

   email varchar2(50),

   salary number);

Results Explain Describe Saved SQL History

EMP_ID	EMP_NAME	EMAIL	SALARY
41	Priya	bjhdudh@gmail.com	70000
42	Sahil	hugdhwd@gmail.com	50000
45	Ramesh	jhdgugw@gmail.com	60000

3 rows returned in 0.01 seconds CSV Export

2. Renaming the name of column
   Ans= alter table project rename column location to p_location;

3. Modifying the datatype
   Ans= alter table citizen modify(city varchar(20));

4. Renaming the name of table
   Ans= rename complaint to c_file;

5. Dropping the column by using alter
   Ans= alter table c_file drop(comp_date);
   select*from c_file

Results Explain Describe Saved SQL History

COMP_ID	COMP_NAME	COMP_STATUS
41	plumbing	close
42	garbage collection	open
43	electricity	close

3 rows returned in 0.02 seconds CSV Export

6. Truncating the table
   Ans= truncate table department

7. Drop the table
   Ans= drop table project

8. To add the column in the table
   Ans= alter table department add(d_location char(30))

D_ID	D_NAME	D_LOCATION
1	Public services	-
2	Health services	-
3	Education	-
4	Public employment	-
5	Environmental development	-
6	Housing and zoning	-

6 rows returned in 0.00 seconds CSV Export

9. To drop multiple table
   Ans=alter table citizen drop (s_id_opt,bill_paid);

10. To add multiple column
    Ans= alter table citizen add(pin number ,district char(30));

ANNEXURE 6: PLSQL

1.

```
declare
 a number;
begin
select total_amount into a from service where s_id=1;
dbms_output.put_line(a);
end;
```

OUTPUT- 3000

2.

```
declare
 a number;
begin
select salary into a from employees where emp_id=41;
a:=a*2;
update employees set salary=a where emp_id=41;
dbms_output.put_line(a);
end;
```

OUTPUT- 140000

3.

```
declare
record employees%rowtype;
begin
select * into record from employees where emp_id=42;
record.salary:=record.salary*2;
update employees set salary=record.salary where emp_id=42;
dbms_output.put_line(record.salary);
end;
```

OUTPUT- 100000

4.

```
declare


begin
update citizen set bill_paid=1500 where c_id=46;
if sql%found then
 dbms_output.put_line('Record Found');
elsif sql%notfound then
 dbms_output.put_line('Record not Found');
end if;
end;
```

OUTPUT- Record not Found