

**:: DBMS PROJECT ::**  
**“DIGITAL MARKETING AGENCY  
MANAGEMENT SYSTEM”**



Computer Engineering Department  
Birla Vishvakarma Mahavidyalaya  
Vallabh Vidyanagar October – 2022

Guided By  
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Developed by  
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**Birla Vishvakarma Mahavidyalaya**

Computer Engineering Department

( An Autonomous Institution )

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**Certificate**

I, hereby, certify that this project report entitled “E-PM Portal” submitted to BVM, V.V. Nagar in partial fulfilment of requirement for the Degree of Diploma Engineering embodies the result of the Bonafied work carried out by:

Sr.no	ID no	Name
1	21CP031	Navneetkumar Thakor

I find the work complete and sufficient high standard to warrant its presentation for the examination.

I further certify that the work has been carried out under my guidance.

Guided By:

Prof. Kirtikumar J. Sharma

Place: V.V. Nagar

Date:

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## Functional Requirements

### 1. Agency point of view

- Agency can Enter and Mange & Delete all the details.
- Agency can Maintain & Mange the Client's personal details.
- Agency can also Enter, Delete & Mange the information about different departments which exists in agency.
- Agency can Enter, Delete & Mange the record of staff in which, their personal information, their position in agency.
- Agency can also Mange the personal account for every client which consists many kinds of projects.
- Agency can Manage the record of all the projects which is going on or completed under dedicated department.
- Agency can also manage the salary for staff members along with bonuses which is given them for their special efforts in particular project, for particular month.

### 2. Non-functional Requirement

- Performance
- Capacity
- Availability
- Security

## System design

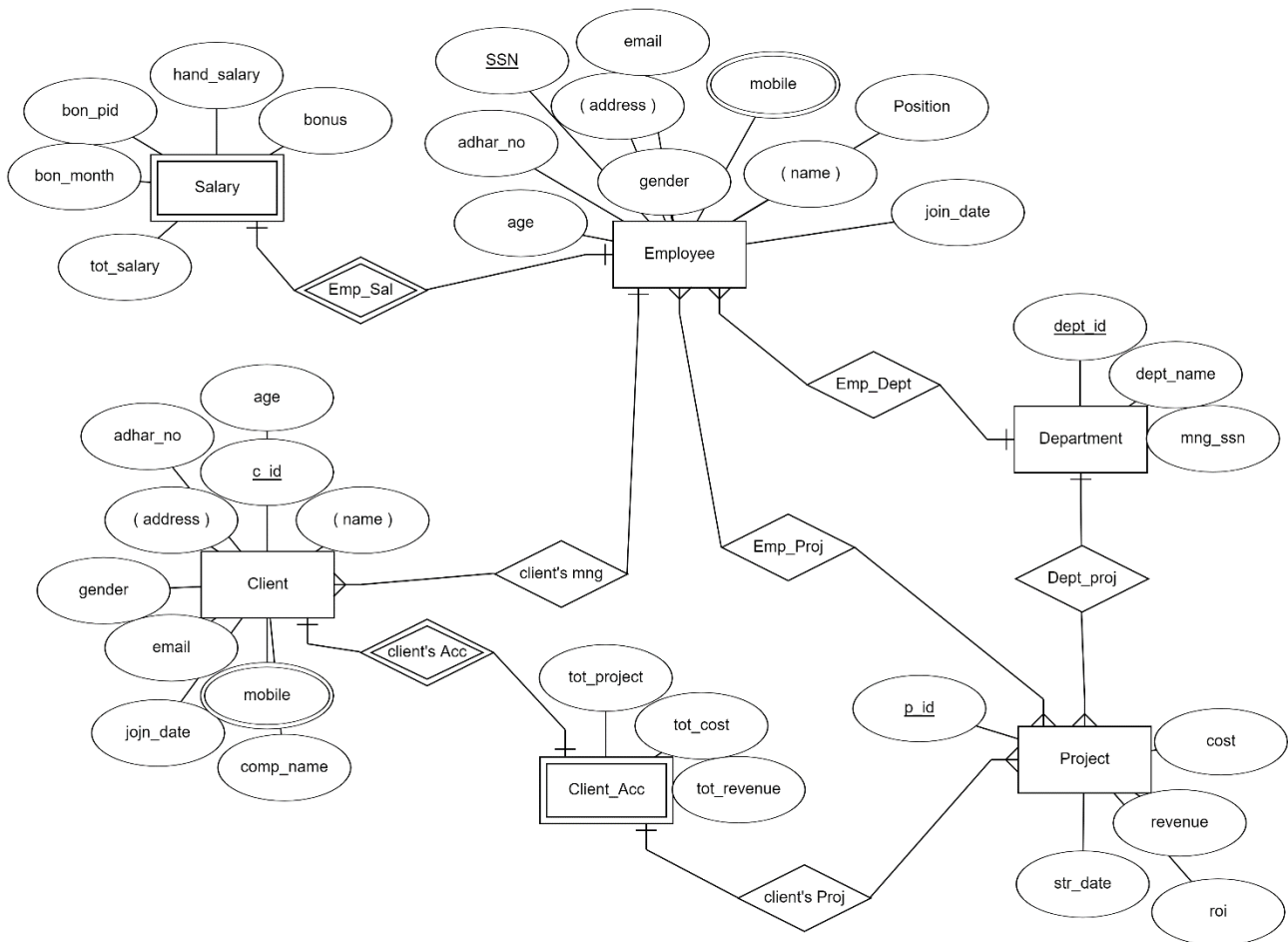
### 1) Entity sets

No.	Entity set	Attributes
1	Employee	SSN, name (fname, lname), position, join_date, Email, mobile, address (city, state, pincode), age, gender, adhar_no.
2	Salary	Hand_salary, bon_pid, bon_month, bonus, tot_salary.
3	Department	Dept_id, dept_name, mng_ssn,
4	Projects	P_id, cost, revenue, roi, str_date,
5	Client_Acc	tot_proj, tot_cost, tot_revenue,
6	Client	cid, name (fname, lname), comp_name, join_date, mobile, Email, mng_ssn, address (city, state, pincode), age, gender, adhar_no.

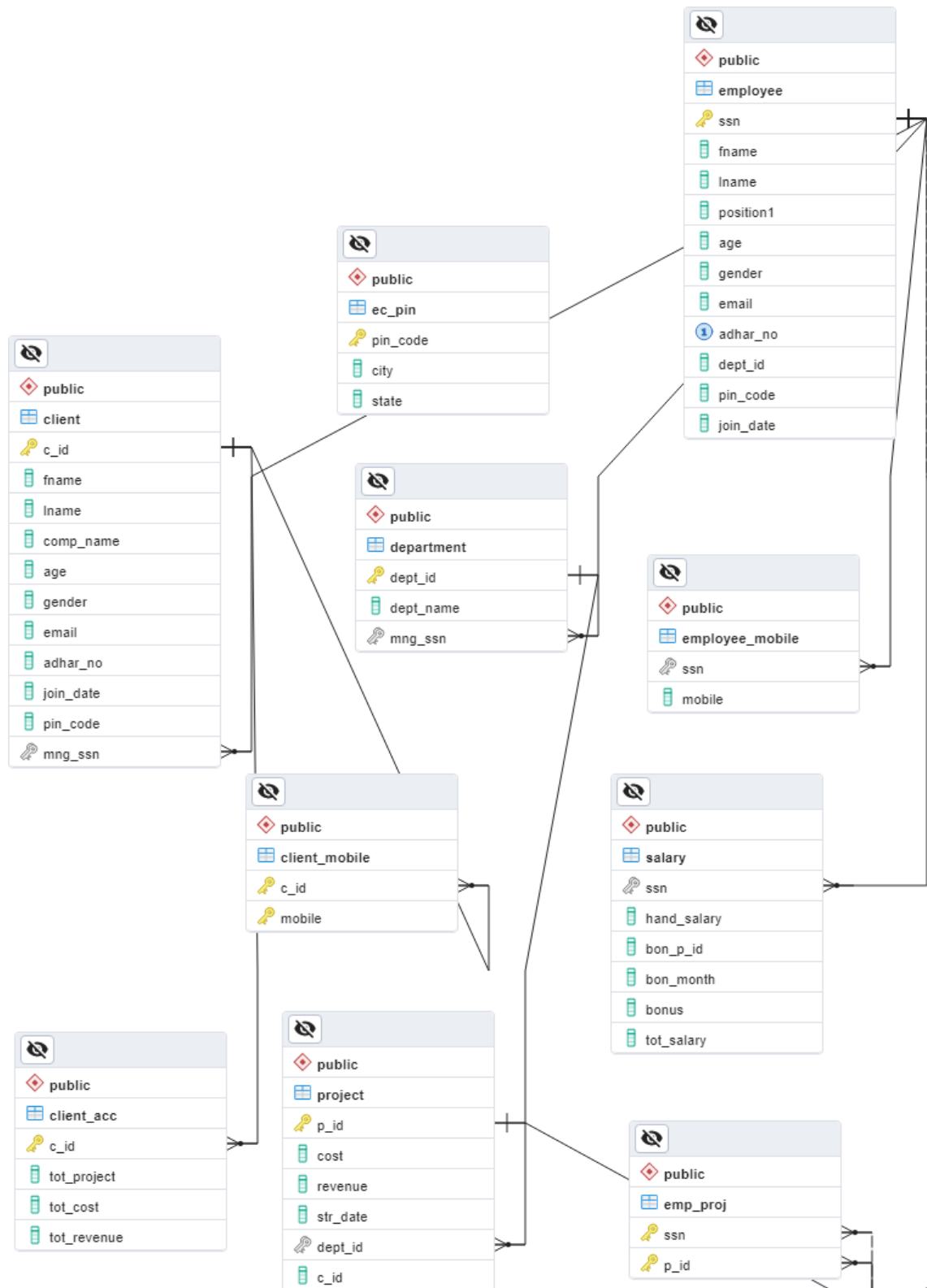
## 2) Relationship Sets

Associations	Relationship name	Mapping Cardinality
Employee & Salary	Emp_Sal	One to One
Employee & Department	Emp_Dept	Many to One
Employee & Projects	Emp_Proj	Many to Many
Department & Project	Dept_proj	One to Many
Project & Client_Acc	Client's Proj	Many to One
Client & Client_Acc	Client's Acc	One to one
Client & Employee	Client's Mng	Many to One

### 3) E-R Diagram



#### 4) Relational Model



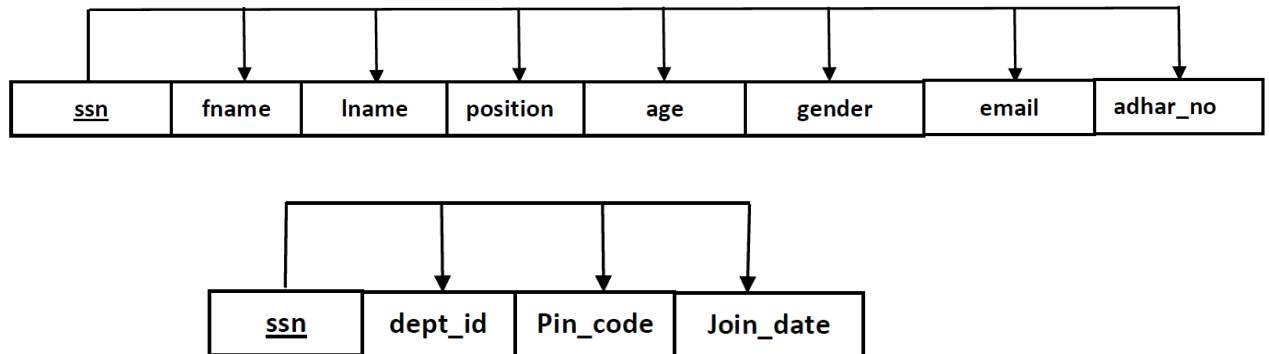


## 5) Relational Tables

No.	Entity Sets	Attributes
1	Employee	<u>Ssn</u> , fname, lname, position, age, gender, email, adhar_no, dept_id (FK), pin_code (FK), join_date
2	Employee_mobile	<u>Ssn (FK)</u> , mobile
3	Salary	<u>Ssn (FK)</u> , hand_salary, bon_p_id, bon_month, bonus, tot_salary
4	Client	<u>C_id</u> , fname, lname, comp_name, age, gender, email, adhar_no, join_date, pin_code (FK), mng_ssn
5	Client_mobile	<u>C_id (FK)</u> , mobile
6	Client_Acc	<u>C_id (FK)</u> , tot_project, tot_cost, tot_revenue,
7	project	<u>P_id</u> , cost, revenue, roi, str_date, dept_id (FK), c_id (FK)
8	Department	<u>Dept_id</u> , dept_name, mng_ssn
9	Emp_proj	<u>Ssn (FK)</u> , <u>p_id</u>
10	EC_pin	<u>Pin_code</u> , city, state

## 6) Normalization

1. Employee (ssn, fname, lname, position, age, gender, email, adhar\_no, dept\_id, pin\_code, join\_date)

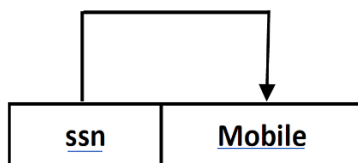


- The candidate key is SSN.

o FD1: { SSN }+ → { fname , lname , position, age, gender, email, adhar\_no, dept\_id, pin\_code, join\_date }

- 1NF: Meets the definition of a relation.
- 2NF: No partial Key dependencies.
- 3NF: No transitive dependency.
- BCNF: It is in BCNF.

2. Employee\_Mobile (ssn, mobile)

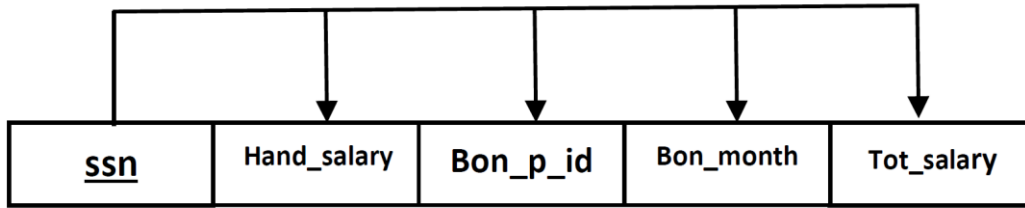


- The candidate key is { ssn, Mobile }.

o FD1: { ssn, Mobile }+ → { ssn, Mobile }

- 1NF: Meets the definition of a relation.
- 2NF: No partial Key dependencies.
- 3NF: No transitive dependency.
- BCNF: It is in BCNF.

3. Salary (ssn, hand\_salary, bon\_p\_id, bon\_month, tot\_salary)



- The candidate key is ssn.

o FD1: { ssn }+ → { hand\_salary, bon\_p\_id, bon\_month, tot\_salary }

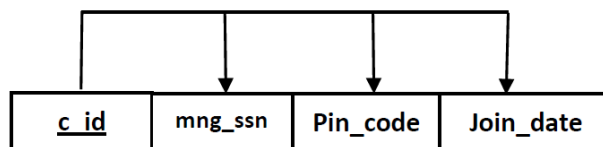
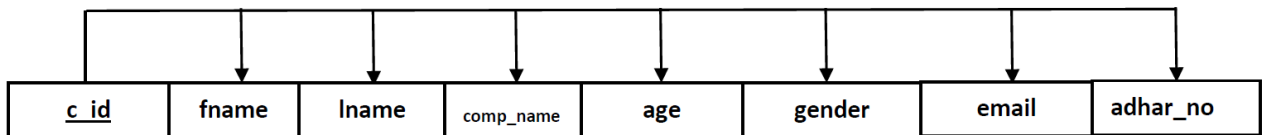
→ 1NF: Meets the definition of a relation.

→ 2NF: No partial Key dependencies.

→ 3NF: No transitive dependency.

→ BCNF: It is in BCNF.

4. Client ( c\_id, fname, lname, comp\_name, age, gender, email, adhar\_no, mng\_ssn, pin\_code, join\_date,)



- The candidate key is c\_id

o FD1: { c\_id }+ → { fname, lname, comp\_name, age, gender, email, adhar\_no, mng\_ssn, pin\_code, join\_date }

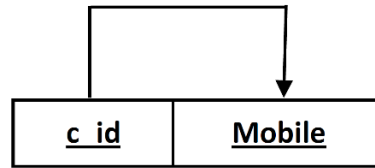
→ 1NF: Meets the definition of a relation.

→ 2NF: No partial Key dependencies.

→ 3NF: No transitive dependency.

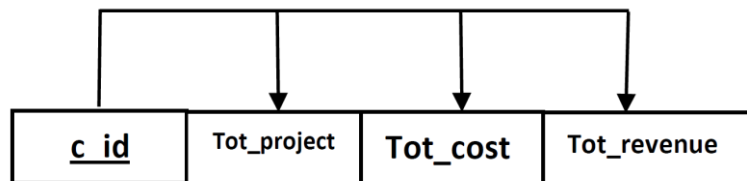
→ BCNF: It is in BCNF.

5. Client\_Mobile ( c\_id, mobile )



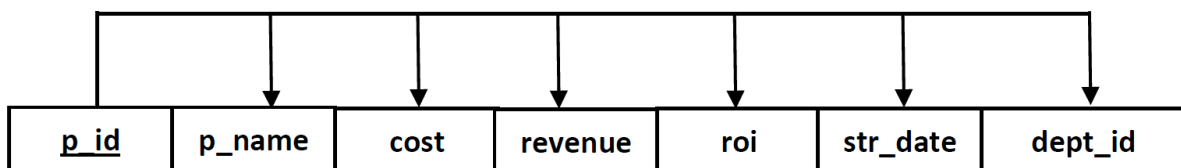
- The candidate key is { c\_id, mobile }.
- o FD1: { c\_id, mobile }<sup>+</sup> → {c\_id , mobile}
- 1NF: Meets the definition of a relation.
- 2NF: No partial Key dependencies.
- 3NF: No transitive dependency.
- BCNF: It is in BCNF.

6. Client\_Acc (c\_id, tot\_project, tot\_cost, tot\_revenue )



- The candidate key is c\_id.
- o FD1: { c\_id }<sup>+</sup> → { tot\_project, tot\_cost, tot\_revenue }
- 1NF: Meets the definition of a relation.
- 2NF: No partial Key dependencies.
- 3NF: No transitive dependency.
- BCNF: It is in BCNF.

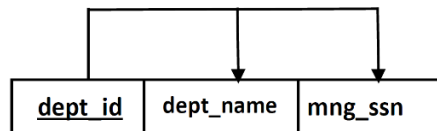
7. Project (P\_id, p\_name, cost, revenue, roi, str\_date, dept\_id)



- The candidate key is p\_id.
- o FD1: { p\_id }<sup>+</sup> → {p\_id, p\_name, cost, revenue, roi, str\_date, dept\_id }

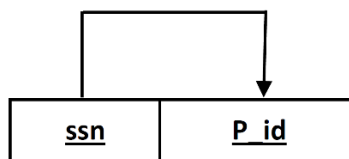
- 1NF: Meets the definition of a relation.
- 2NF: No partial Key dependencies.
- 3NF: No transitive dependency.
- BCNF: It is in BCNF.

8. Department (dept\_id , dept\_name, mng\_ssn)



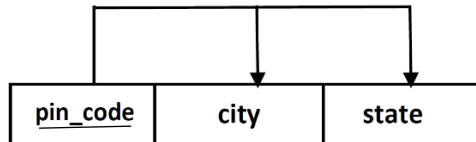
- The candidate key is dept\_id.
  - o FD1: { dept\_id }+ → { \_dept\_id, dept\_name, mng\_ssn }
  - 1NF: Meets the definition of a relation.
  - 2NF: No partial Key dependencies.
  - 3NF: No transitive dependency.
  - BCNF: It is in BCNF.

9. Emp\_proj (ssn, p\_id)



- The candidate key is ssn, p\_id.
  - o FD1: { ssn, p\_id }+ → { \_ssn, p\_id }
  - 1NF: Meets the definition of a relation.
  - 2NF: No partial Key dependencies.
  - 3NF: No transitive dependency.
  - BCNF: It is in BCNF.

10. EC\_pin (pin\_code , city, state)



- The candidate key is pin\_code.
  - o FD1: { pin\_code }<sup>+</sup> → { pin\_code, city, state }
  - 1NF: Meets the definition of a relation.
  - 2NF: No partial Key dependencies.
  - 3NF: No transitive dependency.
  - BCNF: It is in BCNF.

## Create Schema

### 1) Employee

```

postgres/postgres@PostgreSQL 12
Query History
1 create table Employee(
2     ssn        varchar(7),
3     fname      varchar(20),
4     lname      varchar(20),
5     position1  varchar(20),
6     age        int,
7     gender     varchar(6),
8     email      varchar(25),
9     adhar_no   numeric(12) unique,
10    dept_id    varchar(3),
11    pin_code   numeric(6),
12    join_date  date,
13    primary key(ssn)
14 );
15
16 Insert into Employee Values('21FB001', 'Ronak', 'patel','Manager', 27,'Male','ronakgi@gmail.com',123456789876,'A01',123456);
17 Insert into Employee Values('21FB002', 'Aman', 'patel','Data Analyst', 23,'Male','aman123@gmail.com',123456789456,'A01',123465);
18 Insert into Employee Values('21FB003', 'Meet', 'Joshi','Ads expert', 25,'Male','meet321@gmail.com',123456789123,'A01',123489);
19 Insert into Employee Values('21FB004', 'Geetanjali', 'Vekarya','Graphics Designer', 27,'Female','geetanjali@gmail.com',123456789567,'A01',123456);
20 Insert into Employee Values('21GG001', 'Rohanshu', 'Banodha','Manager', 22,'Male','rohanshu33@gmail.com',123456789753,'A02',123852);
21 Insert into Employee Values('21GG002', 'Rajesh', 'jadeja','Graphic Designer', 25,'Male','rajesh35@gmail.com',321456789876,'A02',321456);
22 Insert into Employee Values('21GG003', 'Riya', 'Sharma','Ads Expert', 23,'Female','riya52@gmail.com',123456789878,'A01',123546);
23 Insert into Employee Values('21GG004', 'kartavya', 'patel','Data Analytics', 24,'Male','pkartavya@gmail.com',123654789877,'A02',213456);
24 Insert into Employee Values('21YT001', 'Jay', 'Kalbi','Manager', 29,'Male','jay546@gmail.com',321546789876,'A03',143256);
25 Insert into Employee Values('21YT002', 'Vraj', 'prajapati','Data analysis', 23,'Male','pvraj23@gmail.com',123476589876,'A03',432156);
26 Insert into Employee Values('21YT003', 'Kavya', 'Zala','Graphic Designer', 22,'Female','kavya86@gmail.com',231456789876,'A03',215436);
27 Insert into Employee Values('21YT004', 'Sneha', 'rajput','Ads Expert', 25,'Female','sneha5632@gmail.com',564236789876,'A03',986532);
28 Insert into Employee Values('21IG001', 'Harsh', 'Raval','Manager', 27,'Male','harsh45@gmail.com',123485469876,'A04',127845);
29 Insert into Employee Values('21IG002', 'Jay', 'patel','Graphic Designer', 27,'Male','ronakgi@gmail.com',951456789876,'A04',123456);
30 Insert into Employee Values('21IG003', 'Raag', 'Prajapati','Data Analysis', 24,'Male','raag96@gmail.com',123456555576,'A04',145636);
31
32 Insert into Employee Values('21IG002', 'Jay', 'patel','Graphic Designer', 27,'Male','ronakgi@gmail.com',951456789876,'A04',123456);
33 Insert into Employee Values('21IG003', 'Raag', 'Prajapati','Data Analysis', 24,'Male','raag96@gmail.com',123456555576,'A04',145636);
34 Insert into Employee Values('21IG004', 'Hardee', 'Kalbi','Ads Expert', 23,'Female','hardee45@gmail.com',879456555576,'A04',125469);
35 Insert into Employee Values('21BG001', 'Raag', 'Joshi','Manager', 28,'Male','raagjoshi85@gmail.com',541236555576,'A05',456321);
36 Insert into Employee Values('21BG002', 'srusti','Engineer','Data Analysis', 26,'Female','esrusti85@gmail.com',854676555576,'A05',894576);
37 Insert into Employee Values('21BG003', 'Ram', 'raval','Ads Expert', 23,'Male','ramraval81@gmail.com',541236753676,'A05',354221);
38 Insert into Employee Values('21BG004', 'Beena', 'Shiddpara','Graphic Designer', 28,'Male','raagjoshi85@gmail.com',541236555585,'A05',456321);
  
```

## DIGITAL MARKETING AGENCY DATABASE

Data Output Messages Notifications											
	ssn [PK] character varying (7)	fname character varying (20)	lname character varying (20)	position1 character varying (20)	age integer	gender character varying (6)	email character varying (25)	adhar_no numeric (12)	dept_id character varying (3)	pin_code numeric (6)	join_d date
1	21FB001	Ronak	patel	Manager	27	Male	ronakgi@gmail.com	123456789876	A01	123456	2021-
2	21FB002	Aman	patel	Data Analystist	23	Male	aman123@gmail.com	123456789456	A01	123465	2021-
3	21FB003	Meet	Joshi	Ads expert	25	Male	meet321@gmail.com	123456789123	A01	123489	2021-
4	21FB004	Geetanjali	Vekarya	Graphics Designer	27	Female	geetanjaliro@gmail.com	123456789567	A01	123456	2021-
5	21GG001	Rohanshu	Banodha	Manager	22	Male	rohanshu33@gmail.com	123456789753	A02	123852	2021-
6	21GG002	Rajesh	jadeja	Graphic Designer	25	Male	rajesh35@gmail.com	321456789876	A02	321456	2021-
7	21GG004	kartavya	patel	Data Analytics	24	Male	pkartavya@gmail.com	123654789877	A02	213456	2021-
8	21YT001	Jay	Kalbi	Manager	29	Male	jay546@gmail.com	321546789876	A03	143256	2021-
9	21YT002	Vraj	prajapati	Data analysis	23	Male	pvrj23@gmail.com	123476589876	A03	432156	2021-
10	21YT003	Kavya	Zala	Graphic Designer	22	Female	kavya86@gmail.com	231456789876	A03	215436	2021-
11	21YT004	Sneha	rajput	Ads Expert	25	Female	sneha5632@gmail.com	564236789876	A03	986532	2021-
12	21IG001	Harsh	Raval	Manager	27	Male	harsh45@gmail.com	123485469876	A04	127845	2021-
13	21IG002	Jay	patel	Graphic Designer	27	Male	ronakgi@gmail.com	951456789876	A04	123456	2021-
14	21IG003	Raag	Prajapati	Data Analysis	24	Male	raag96@gmail.com	123456555576	A04	145636	2021-
15	21IG004	Hardee	Kalbi	Ads Expert	23	Female	hardee45@gmail.com	456312789875	A04	125469	2021-
16	21BG001	Raag	Joshi	Manager	28	Male	raagjoshi85@gmail.com	541236555576	A05	456321	2021-
17	21BG002	srusti	Engineer	Data Analysis	26	Female	esrusti85@gmail.com	854676555576	A05	894576	2021-
18	21BG003	Ram	raval	Ads Expert	23	Male	ramraval81@gmail.com	541236753676	A05	354221	2021-
19	21BG004	Beena	Shiddpara	Graphic Designer	28	Male	raagjoshi85@gmail.com	541236556585	A05	456321	2021-
20	21GG003	Riya	Sharma	Ads Expert	23	Female	riya52@gmail.com	123456789878	A02	123546	2021-

## 2) Employee\_Mobile

Query	Query History
1	<b>Create table</b> Employee_Mobile (
2	ssn <b>varchar</b> (7),
3	mobile <b>numeric</b> (10),
4	<b>foreign key</b> (ssn) <b>references</b> Employee(ssn)
5	);
6	
7	<b>Insert into</b> Employee_Mobile <b>values</b> ('21FB001',9824564595);
8	<b>insert into</b> Employee_Mobile <b>values</b> ('21FB001',9824564964);
9	<b>insert into</b> Employee_Mobile <b>values</b> ('21FB002',9904468639);
10	<b>insert into</b> Employee_Mobile <b>values</b> ('21FB002',9824564964);
11	<b>insert into</b> Employee_Mobile <b>values</b> ('21FB003',9904468639);
12	<b>insert into</b> Employee_Mobile <b>values</b> ('21FB003',6985456535);
13	<b>insert into</b> Employee_Mobile <b>values</b> ('21FB004',7895468935);
14	<b>insert into</b> Employee_Mobile <b>values</b> ('21GG001',4596783524);
15	<b>insert into</b> Employee_Mobile <b>values</b> ('21GG001',8545359647);
16	<b>insert into</b> Employee_Mobile <b>values</b> ('21GG002',9875123212);
17	<b>insert into</b> Employee_Mobile <b>values</b> ('21GG003',7865421396);
18	<b>insert into</b> Employee_Mobile <b>values</b> ('21GG004',7895684985);
19	<b>insert into</b> Employee_Mobile <b>values</b> ('21GG004',9948875356);
20	<b>insert into</b> Employee_Mobile <b>values</b> ('21YT001',9685724315);
21	<b>insert into</b> Employee_Mobile <b>values</b> ('21YT001',9825464964);
22	<b>insert into</b> Employee_Mobile <b>values</b> ('21YT002',9824596464);
23	<b>insert into</b> Employee_Mobile <b>values</b> ('21YT002',9824564884);
24	<b>insert into</b> Employee_Mobile <b>values</b> ('21YT003',9904565324);
25	<b>insert into</b> Employee_Mobile <b>values</b> ('21YT004',7724564964);
26	<b>insert into</b> Employee_Mobile <b>values</b> ('21YT004',9866664964);
27	<b>insert into</b> Employee_Mobile <b>values</b> ('21IG001',8544564964);
28	<b>insert into</b> Employee_Mobile <b>values</b> ('21IG001',9824568564);
29	<b>insert into</b> Employee_Mobile <b>values</b> ('21IG002',7414564964);
30	<b>insert into</b> Employee_Mobile <b>values</b> ('21IG002',9827534964);
31	<b>insert into</b> Employee_Mobile <b>values</b> ('21IG003',9791564964);
32	<b>insert into</b> Employee_Mobile <b>values</b> ('21IG004',9824568964);
33	<b>insert into</b> Employee_Mobile <b>values</b> ('21IG004',9824563333);
34	<b>insert into</b> Employee_Mobile <b>values</b> ('21BG001',9900564964);
35	<b>insert into</b> Employee_Mobile <b>values</b> ('21BG001',9828744964);
36	<b>insert into</b> Employee_Mobile <b>values</b> ('21BG002',7332564964);
37	<b>insert into</b> Employee_Mobile <b>values</b> ('21BG003',9984564964);
38	<b>insert into</b> Employee_Mobile <b>values</b> ('21BG004',9824598245);
39	<b>insert into</b> Employee_Mobile <b>values</b> ('21BG004',9904464964);

# DIGITAL MARKETING AGENCY DATABASE

Data Output Messages Notifications



	ssn character varying (7) 🔒	mobile numeric (10) 🔒
1	21FB001	9824564595
2	21FB001	9824564964
3	21FB002	9904468639
4	21FB002	9824564964
5	21FB003	9904468639
6	21FB003	6985456535
7	21FB004	7895468935
8	21GG001	4596783524
9	21GG001	8545359647
10	21GG002	9875123212
11	21GG003	7865421396
12	21GG004	7895684985
13	21GG004	9948875356
14	21YT001	9685724315
15	21YT001	9825464964
16	21YT002	9824596464
17	21YT002	9824564884
18	21YT003	9904565324
19	21YT004	7724564964
20	21YT004	9866664964
21	21IG001	8544564964

22	21IG001	9824568564
23	21IG002	7414564964
24	21IG002	9827534964
25	21IG003	9791564964
26	21IG004	9824568964
27	21IG004	9824563333
28	21BG001	9900564964
29	21BG001	9828744964
30	21BG002	7332564964
31	21BG003	9984564964
32	21BG004	9824598245
33	21BG004	9904464964



### 3) Salary

Query
Query History

```

1  create table Salary(
2      ssn          varchar(7),
3      hand_salary  varchar(10),
4      bon_p_id     varchar(5),
5      bon_month    varchar(10),
6      bonus        varchar(10),
7      tot_salary   varchar(15),
8      foreign key(ssn) references Employee(ssn)
9  );
10
11 insert into Salary Values('21FB001','90000','21F01','April','4563',94563);
12 insert into Salary Values('21FB002','52000','','','0',52000);
13 insert into Salary Values('21FB003','33000','','','0',33000);
14 insert into Salary Values('21FB004','65000','22F03','October','7895',72895);
15 insert into Salary Values('21GG001','89000','','','0',89000);
16 insert into Salary Values('21GG002','50000','','','0',50000);
17 insert into Salary Values('21GG003','35000','21G01','December','9999',44999);
18 insert into Salary Values('21GG004','68000','','','0',68000);
19 insert into Salary Values('21YT001','90000','','','0',90000);
20 insert into Salary Values('21YT002','57000','21Y04','February','9680',66680);
21 insert into Salary Values('21YT003','34000','','','0',34000);
22 insert into Salary Values('21YT004','62000','','','0',62000);
23
24 insert into Salary Values('21IG001','95000','22I02','April','8654',103654);
25 insert into Salary Values('21IG002','53000','','','0',53000);
26 insert into Salary Values('21IG003','37000','','','0',37000);
27 insert into Salary Values('21IG004','61000','','','0',61000);
28 insert into Salary Values('21BG001','91000','','','0',91000);
29 insert into Salary Values('21BG002','49000','21B01','January','7485',56485);
30 insert into Salary Values('21BG003','39000','','','0',39000);
31 insert into Salary Values('21BG004','69000','','','0',69000);

```

Data Output
Messages
Notifications

	ssn character varying (7)	hand_salary character varying (10)	bon_p_id character varying (5)	bon_month character varying (10)	bonus character varying (10)	tot_salary character varying (15)
1	21FB001	90000	21F01	April	4563	94563
2	21FB002	52000			0	52000
3	21FB003	33000			0	33000
4	21FB004	65000	22F03	October	7895	72895
5	21GG001	89000			0	89000
6	21GG002	50000			0	50000
7	21GG003	35000	21G01	December	9999	44999
8	21GG004	68000			0	68000
9	21YT001	90000			0	90000
10	21YT002	57000	21Y04	February	9680	66680
11	21YT003	34000			0	34000
12	21YT004	62000			0	62000
13	21IG001	95000	22I02	April	8654	103654
14	21IG002	53000			0	53000
15	21IG003	37000			0	37000
16	21IG004	61000				61000
17	21BG001	91000			0	91000
18	21BG002	49000	21B01	January	7485	56485
19	21BG003	39000				39000
20	21BG004	69000			0	69000

## 4) Client

```

Query Query History
1 create table Client(
2   c_id   varchar(5),
3   fname  varchar(20),
4   lname  varchar(20),
5   comp_name  varchar(25),
6   age    int,
7   gender  varchar(6),
8   email   varchar(25),
9   adhar_no numeric(12),
10  join_date date,
11  pin_code numeric(6),
12  mng_ssn  varchar(7),
13  primary key(c_id),
14  foreign key(mng_ssn) references Employee(ssn)
15 );
16
17 Insert into Client values('21011','Jaylesh','Prajapati','Donkey',45,'Male','pjaylesh2101@gmail.com',452365897845,'02/01/2021',123456,'21FB001');
18 Insert into Client values('21012','Mayur','Thakor','Thakor Enterprise',34,'Male','tmayur9865@gmail.com',456965897845,'19/01/2021',123465,'21FB002');
19 Insert into Client values('21021','Ragav','Jadav','Donkey',41,'Male','ragavjadav10@gmail.com',452399997845,'22/02/2021',213456,'21FB001');
20 Insert into Client values('21031','Priya','Dogreyal','Dogreyal & sons',27,'Female','dpriya09@gmail.com',761965897845,'11/03/2021',215436,'21GG001');
21 Insert into Client values('21041','Abhay','Raychand','McGrow',31,'Male','abhayr31@gmail.com',111365897845,'07/04/2021',127845,'21GG003');
22 Insert into Client values('21071','Arnavsinh','Raizada','ASR',29,'Male','Arnavr29@gmail.com',452365892222,'25/07/2021',123489,'21GG002');
23 Insert into Client values('21091','Priya','Thakor','Thakor & sons',23,'Female','tpriya09@gmail.com',450909897845,'09/09/2021',354221,'21GG001');
24 Insert into Client values('21111','Janki','Mazumdar','Toxtos',21,'Female','jnthakor11@gmail.com',111222197845,'11/11/2021',432156,'21YT001');
25 Insert into Client values('21121','Bhavya','Kalikalan','kalakar.com',24,'Male','bhavyak24@gmail.com',452365789545,'24/12/2021',145636,'21YT001');

26 Insert into Client values('21121','Bhavya','Kalikalan','kalakar.com',24,'Male','bhavyak24@gmail.com',452365789545,'24/12/2021',145636,'21YT001');
27 Insert into Client values('22051','Navneet','Thakor','CI Moguls',19,'Male','tnavneet8628@gmail.com',940256137894,'31/05/2022',321456,'21YT002');
28 Insert into Client values('22061','Kartavya','Patidar','Patidar complex',35,'Male','kpbhai05@gmail.com',452365899402,'23/06/2022',456321,'21IG001');
29 Insert into Client values('22081','Kuldeep','Kohli','Riders',34,'Male','vkohli18@gmail.com',452364545845,'16/08/2022',894576,'21IG003');
30 Insert into Client values('22091','Bansari','Patidar','RajBansari',27,'Female','kbansari05@gmail.com',458989897845,'24/09/2022',123546,'21IG002');
31 Insert into Client values('22101','Sandeep','Maheshwari','ImagesBazaar',41,'Male','sandeepm28@gmail.com',791355897895,'17/10/2022',986532,'21IG004');
32 Insert into Client values('22102','Vivek','Bindra','Bada Business',49,'Male','badabusiness@gmail.com',452374123645,'29/10/2022',354221,'21BG001');
33 Insert into Client values('22111','Jaylesh','Rana','Smashers',45,'Male','jrsmashers@gmail.com',452364256314,'10/11/2022',123456,'21BG002');
34 Insert into Client values('22112','Aryan','Kumavat','Marvadi Enterprise',53,'Male','karyan56@gmail.com',449267397845,'11/11/2022',986532,'21BG003');
35 Insert into Client values('22121','Lukesh','Thalaptya','Raw',47,'Male','thalaptya47@gmail.com',452367946135,'07/12/2022',432156,'21BG004');

```

Query

Query History

Data Output

Messages

Notifications

	c_id [PK] character varying (5)	fname character varying (20)	lname character varying (20)	comp_name character varying (25)	age integer	gender character varying (6)	email character varying (25)	adhar_no numeric (12)	join_date date	pin_code numeric (6)	mng_ssn character varying (7)
1	21011	Jaylesh	Prajapati	Donkey	45	Male	pjaylesh2101@gmail.com	452365897845	2021-01-02	123456	21FB001
2	21012	Mayur	Thakor	Thakor Enterprise	34	Male	tmayur9865@gmail.com	456965897845	2021-01-19	123465	21FB002
3	21021	Ragav	Jadav	Donkey	41	Male	ragavjadav10@gmail.com	452399997845	2021-02-22	213456	21FB001
4	21031	Priya	Dogreyal	Dogreyal & sons	27	Female	dpriya09@gmail.com	761965897845	2021-03-11	215436	21GG001
5	21041	Abhay	Raychand	McGrow	31	Male	abhayr31@gmail.com	111365897845	2021-04-07	127845	21GG003
6	21071	Arnavsinh	Raizada	ASR	29	Male	Arnavr29@gmail.com	452365892222	2021-07-25	123489	21GG002
7	21091	Priya	Thakor	Thakor & sons	23	Female	tpriya09@gmail.com	450909897845	2021-09-09	354221	21GG001
8	21111	Janki	Mazumdar	Toxtos	21	Female	jnthakor11@gmail.com	111222197845	2021-11-11	432156	21YT001
9	21121	Bhavya	Kalikalan	kalakar.com	24	Male	bhavyak24@gmail.com	452365789545	2021-12-24	145636	21YT001
10	22051	Navneet	Thakor	CI Moguls	19	Male	tnavneet8628@gmail.com	940256137894	2022-05-31	321456	21YT002
11	22061	Kartavya	Patidar	Patidar complex	35	Male	kpbhai05@gmail.com	452365899402	2022-06-23	456321	21IG001
12	22081	Kuldeep	Kohli	Riders	34	Male	vkohli18@gmail.com	452364545845	2022-08-16	894576	21IG003
13	22091	Bansari	Patidar	RajBansari	27	Female	kbansari05@gmail.com	458989897845	2022-09-24	123546	21IG002
14	22101	Sandeep	Maheshwari	ImagesBazaar	41	Male	sandeepm28@gmail.com	791355897895	2022-10-17	986532	21IG004
15	22102	Vivek	Bindra	Bada Business	49	Male	badabusiness@gmail.com	452374123645	2022-10-29	354221	21BG001
16	22111	Jaylesh	Rana	Smashers	45	Male	jrmashers@gmail.com	452364256314	2022-11-10	123456	21BG002
17	22112	Aryan	Kumavat	Marvadi Enterprise	53	Male	karyan56@gmail.com	449267397845	2022-11-11	986532	21BG003
18	22121	Lukesh	Thalaptya	Raw	47	Male	thalaptya47@gmail.com	452367946135	2022-12-07	432156	21BG004

## 5) Client\_Mobile

Query

Query History

1

create table Client\_Mobile(

2

c\_id  varchar(5),

3

mobile  numeric(10),

4

foreign key (c\_id) references Client(c\_id),

5

primary key(c\_id,mobile)

6

);

7

8

insert into Client\_Mobile values('22091',1234567899);

9

insert into Client\_Mobile values('22111',9876543210);

10

insert into Client\_Mobile values('21021',5432167899);

11

insert into Client\_Mobile values('22051',1234598760);

12

insert into Client\_Mobile values('22101',9904468639);

13

insert into Client\_Mobile values('22101',9904468739);

14

insert into Client\_Mobile values('21091',6353367637);

15

insert into Client\_Mobile values('21012',1324567899);

16

insert into Client\_Mobile values('21121',1234576899);

17

insert into Client\_Mobile values('22061',2134567899);

18

insert into Client\_Mobile values('21011',1234567989);

19

insert into Client\_Mobile values('22121',1239904899);

20

insert into Client\_Mobile values('21111',1010567899);

21

insert into Client\_Mobile values('21071',1234567595);

22

insert into Client\_Mobile values('22081',9824564964);

23

insert into Client\_Mobile values('22112',9824564595);

24

insert into Client\_Mobile values('21041',1234584136);

25

insert into Client\_Mobile values('21041',6353367636);

26

insert into Client\_Mobile values('21031',8780905726);

27

insert into Client\_Mobile values('22102',8790905726);

28

Data Output

Messages

Notifications

c\_id

[PK] character varying (5)

mobile

[PK] numeric (10)

1

22091

1234567899

2

22111

9876543210

3

21021

5432167899

4

22051

1234598760

5

22101

9904468639

6

22101

9904468739

7

21091

6353367637

8

21012

1324567899

9

21121

1234576899

10

22061

2134567899

11

21011

1234567989

12

22121

1239904899

13

21111

1010567899

14

21071

1234567595

15

22081

9824564964

16

22112

9824564595

17

21041

1234584136

18

21041

6353367636

19

21031

8780905726

20

22102

8790905726

## 6) Client\_acc

Query	Query History
1	<b>create table</b> Client_acc(
2	c_id varchar(5),
3	tot_project int,
4	tot_cost numeric(8,2),
5	tot_revenue numeric(8,2),
6	<b>primary key</b> (c_id),
7	<b>foreign key</b> (c_id) <b>references</b> Client(c_id)
8	);
9	
10	<b>insert into</b> Client_acc <b>values</b> ('21011',1,3500.02,5000.00);
11	<b>insert into</b> Client_acc <b>values</b> ('21012',1,6500.00,9900.33);
12	<b>insert into</b> Client_acc <b>values</b> ('21021',1,8900.00,5645.23);
13	<b>insert into</b> Client_acc <b>values</b> ('21031',1,3700.02,5500.00);
14	<b>insert into</b> Client_acc <b>values</b> ('21041',2,18800.00,18295.23);
15	<b>insert into</b> Client_acc <b>values</b> ('21071',2,15400.00,21204.01);
16	<b>insert into</b> Client_acc <b>values</b> ('21091',1,4100.02,6800.00);
17	<b>insert into</b> Client_acc <b>values</b> ('21111',1,3300.00,6500.00);
18	<b>insert into</b> Client_acc <b>values</b> ('21121',2,11600.02,15607.31);
19	<b>insert into</b> Client_acc <b>values</b> ('22051',1,16500.00,11300.39);
20	<b>insert into</b> Client_acc <b>values</b> ('22061',2,23900.00,21801.61);
21	<b>insert into</b> Client_acc <b>values</b> ('22081',1,3000.02,4700.00);
22	<b>insert into</b> Client_acc <b>values</b> ('22091',1,19700.00,27563.01);
23	<b>insert into</b> Client_acc <b>values</b> ('22101',1,9600.00,10500.33);
24	<b>insert into</b> Client_acc <b>values</b> ('22102',1,8500.00,8967.79);
25	<b>insert into</b> Client_acc <b>values</b> ('22111',1,2200.02,10000.00);
26	<b>insert into</b> Client_acc <b>values</b> ('22112',2,17800.00,11290.46);
27	<b>insert into</b> Client_acc <b>values</b> ('22121',1,11100.00,15302.17);

```

Query    Query History
262      ('0310,0309, AC', state police ,55000.00, 2019/07/21 ,4, '204030010040' );
263 CREATE TABLE STAFF_INFOS
264 (
265     staff_id integer references STAFFS(staff_id) on delete set null,
266     fname varchar(20) not null,
267     lname varchar(20) not null,
268     street varchar(20) not null,
269     city varchar(20) not null,
270     gender varchar(2) not null,
271     DOB date not null,
272     check(gender = upper(gender))
273 );
274 INSERT INTO STAFF_INFOS
275 VALUES      ('0301','Aryan','patel','Gandhinagar','Gandhinagar','M','1987/07/15'),
276 ('0302','darsh','Prajapati','Kuch','Bhuj','M','1997/07/21'),
277 ('0303','dhruv','Dalwadi','Morbi','Rajkot','M','1988/07/08'),
278 ('0304','kayaan','Kohli','Kheda','Nadiyad','M','1989/07/31'),
279 ('0305','kabil','dhoni','Finav','Khambhat','M','1989/07/15'),
280 ('0306','devansh','Modi','Chikhodara','Anand','M','1999/07/29'),
281 ('0307','prince','Chavda','Mehsana','Mehsana','M','1988/07/05'),
282 ('0308','Mitul','Thakkar','Narmada','Rajpipda','M','1979/07/04'),
283 ('0309','Akshat','Suthar','kuch','bhuj','M','1999/07/21'),
284 ('0310','Rahul','Patel','Anand','Anand','M','1992/07/19'),

```

Data Output

Messages

Notifications

	c_id [PK] character varying (5)	tot_project integer	tot_cost numeric (8,2)	tot_revenue numeric (8,2)
1	21011	1	3500.02	5000.00
2	21012	1	6500.00	9900.33
3	21021	1	8900.00	5645.23
4	21031	1	3700.02	5500.00
5	21041	2	18800.00	18295.23
6	21071	2	15400.00	21204.01
7	21091	1	4100.02	6800.00
8	21111	1	3300.00	6500.00
9	21121	2	11600.02	15607.31
10	22051	1	16500.00	11300.39
11	22061	2	23900.00	21801.61
12	22081	1	3000.02	4700.00
13	22091	1	19700.00	27563.01
14	22101	1	9600.00	10500.33
15	22102	1	8500.00	8967.79
16	22111	1	2200.02	10000.00
17	22112	2	17800.00	11290.46
18	22121	1	11100.00	15302.17

## 8) Department

Query
Query History

```

1 create table Department(
2     dept_id   varchar(3),
3     dept_name varchar(15),
4     mng_ssn   varchar(7),
5     primary key (dept_id),
6     foreign key (mng_ssn) references Employee(ssn)
7 );
8
9 insert into Department values('A01','Facebook','21FB001');
10 insert into Department values('A02','Google','21GG001');
11 insert into Department values('A03','Youtube','21YT001');
12 insert into Department values('A04','Instagram','21IG001');
13 insert into Department values('A05','Blog','21BG001');

```

Data Output
Messages
Notifications

deptId	dept_name	mng_ssn
[PK] character varying (3)	character varying (15)	character varying (7)
1 A01	Facebook	21FB001
2 A02	Google	21GG001
3 A03	Youtube	21YT001
4 A04	Instagram	21IG001
5 A05	Blog	21BG001

## 9) Emp\_Proj

Query
Query History

```

1 create table Emp_proj(
2     ssn   varchar(7),
3     p_id  varchar(5),
4     primary key (ssn,p_id),
5     foreign key (ssn) references Employee(ssn),
6     foreign key (p_id) references project(p_id)
7 );
8
9 insert into Emp_proj values('21FB001','21F01');
10 insert into Emp_proj values('21FB002','21F01');
11 insert into Emp_proj values('21FB003','21F01');
12 insert into Emp_proj values('21FB004','21F01');
13 insert into Emp_proj values('21FB001','21F02');
14 insert into Emp_proj values('21FB002','21F02');
15 insert into Emp_proj values('21FB003','21F02');
16 insert into Emp_proj values('21FB004','21F02');
17 insert into Emp_proj values('21FB001','21F03');
18 insert into Emp_proj values('21FB002','21F03');
19 insert into Emp_proj values('21FB003','21F03');
20 insert into Emp_proj values('21FB004','21F03');
21 insert into Emp_proj values('21FB001','21F04');
22 insert into Emp_proj values('21FB002','21F04');
23 insert into Emp_proj values('21FB003','21F04');
24 insert into Emp_proj values('21FB004','21F04');

```

```

23 insert into Emp_proj values('21FB003','21F04');
24 insert into Emp_proj values('21FB004','21F04');
25 insert into Emp_proj values('21FB001','21F05');
26 insert into Emp_proj values('21FB002','21F05');
27 insert into Emp_proj values('21FB003','21F05');
28 insert into Emp_proj values('21FB004','21F05');
29 insert into Emp_proj values('21FB001','21F06');
30 insert into Emp_proj values('21FB002','21F06');
31 insert into Emp_proj values('21FB003','21F06');
32 insert into Emp_proj values('21FB004','21F06');

```

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```

3 insert into Emp_proj values('21GG001','21G01');
4 insert into Emp_proj values('21GG002','21G01');
5 insert into Emp_proj values('21GG003','21G01');
6 insert into Emp_proj values('21GG004','21G01');
7 insert into Emp_proj values('21GG001','21G02');
8 insert into Emp_proj values('21GG002','21G02');
9 insert into Emp_proj values('21GG003','21G02');
10 insert into Emp_proj values('21GG004','21G02');
11 insert into Emp_proj values('21GG001','21G03');
12 insert into Emp_proj values('21GG002','21G03');
13 insert into Emp_proj values('21GG003','21G03');
14 insert into Emp_proj values('21GG004','21G03');
15 insert into Emp_proj values('21GG001','21G04');
16 insert into Emp_proj values('21GG002','21G04');
17 insert into Emp_proj values('21GG003','21G04');
18 insert into Emp_proj values('21GG004','21G04');
19 insert into Emp_proj values('21GG001','21G05');
20 insert into Emp_proj values('21GG002','21G05');
21 insert into Emp_proj values('21GG003','21G05');
22 insert into Emp_proj values('21GG004','21G05');

```

Query Query History

```

24 insert into Emp_proj values('21YT001','21Y01');
25 insert into Emp_proj values('21YT002','21Y01');
26 insert into Emp_proj values('21YT003','21Y01');
27 insert into Emp_proj values('21YT004','21Y01');
28 insert into Emp_proj values('21YT001','21Y02');
29 insert into Emp_proj values('21YT002','21Y02');
30 insert into Emp_proj values('21YT003','21Y02');
31 insert into Emp_proj values('21YT004','21Y02');
32 insert into Emp_proj values('21YT001','21Y03');
33 insert into Emp_proj values('21YT002','21Y03');
34 insert into Emp_proj values('21YT003','21Y03');
35 insert into Emp_proj values('21YT004','21Y03');
36 insert into Emp_proj values('21YT001','21Y04');
37 insert into Emp_proj values('21YT002','21Y04');
38 insert into Emp_proj values('21YT003','21Y04');
39 insert into Emp_proj values('21YT004','21Y04');




```




```




41 insert into Emp_proj values('21IG001','21I01');
42 insert into Emp_proj values('21IG002','21I01');
43 insert into Emp_proj values('21IG003','21I01');
44 insert into Emp_proj values('21IG004','21I01');
45 insert into Emp_proj values('21IG001','21I02');
46 insert into Emp_proj values('21IG002','21I02');
47 insert into Emp_proj values('21IG003','21I02');
48 insert into Emp_proj values('21IG004','21I02');
49 insert into Emp_proj values('21IG001','21I03');
50 insert into Emp_proj values('21IG002','21I03');
51 insert into Emp_proj values('21IG003','21I03');
52 insert into Emp_proj values('21IG004','21I03');
53 insert into Emp_proj values('21IG001','21I04');
54 insert into Emp_proj values('21IG002','21I04');
55 insert into Emp_proj values('21IG003','21I04');
56 insert into Emp_proj values('21IG004','21I04');
57
58 insert into Emp_proj values('21BG001','21B01');
59 insert into Emp_proj values('21BG002','21B01');
60 insert into Emp_proj values('21BG003','21B01');
61 insert into Emp_proj values('21BG004','21B01');
62 insert into Emp_proj values('21BG001','21B02');
63 insert into Emp_proj values('21BG002','21B02');
64 insert into Emp_proj values('21BG003','21B02');
65 insert into Emp_proj values('21BG004','21B02');
66 insert into Emp_proj values('21BG001','21B03');
67 insert into Emp_proj values('21BG002','21B03');
68 insert into Emp_proj values('21BG003','21B03');
69 insert into Emp_proj values('21BG004','21B03');

```

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Data Output	Messages	Notifications
		
ssn [PK] character varying (7)	p_id [PK] character varying (5)	
1	21FB001	21F01
2	21FB002	21F01
3	21FB003	21F01
4	21FB004	21F01
5	21FB001	21F02
6	21FB002	21F02
7	21FB003	21F02
8	21FB004	21F02
9	21FB001	21F03
10	21FB002	21F03
11	21FB003	21F03
12	21FB004	21F03
13	21FB001	21F04
14	21FB002	21F04
15	21FB003	21F04
16	21FB004	21F04
17	21FB001	21F05
18	21FB002	21F05
19	21FB003	21F05
20	21FB004	21F05
21	21FB001	21F06

Data Output	Messages	Notifications
		
ssn [PK] character varying (7)	p_id [PK] character varying (5)	
22	21FB002	21F06
23	21FB003	21F06
24	21FB004	21F06
25	21GG001	21G01
26	21GG002	21G01
27	21GG003	21G01
28	21GG004	21G01
29	21GG001	21G02
30	21GG002	21G02
31	21GG003	21G02
32	21GG004	21G02
33	21GG001	21G03
34	21GG002	21G03
35	21GG003	21G03
36	21GG004	21G03
37	21GG001	21G04
38	21GG002	21G04
39	21GG003	21G04
40	21GG004	21G04
41	21GG001	21G05
42	21GG002	21G05

Data Output	Messages	Notifications
		
ssn [PK] character varying (7)	p_id [PK] character varying (5)	
43	21GG003	21G05
44	21GG004	21G05
45	21YT001	21Y01
46	21YT002	21Y01
47	21YT003	21Y01
48	21YT004	21Y01
49	21YT001	21Y02
50	21YT002	21Y02
51	21YT003	21Y02
52	21YT004	21Y02
53	21YT001	21Y03
54	21YT002	21Y03
55	21YT003	21Y03
56	21YT004	21Y03
57	21YT001	21Y04
58	21YT002	21Y04
59	21YT003	21Y04
60	21YT004	21Y04
61	21IG001	21I01
62	21IG002	21I01
63	21IG003	21I01

## 10)EC\_pin

Query	Query History
1	<code>create table EC_pin(</code>
2	<code>pin_code numeric(6),</code>
3	<code>city varchar(20),</code>
4	<code>state varchar(20),</code>
5	<code>primary key (pin_code)</code>
6	<code>);</code>
7	
8	<code>insert into Department values('213456','Anand','Gujarat');</code>
9	<code>insert into Department values('123489','Nadiad','Gujarat');</code>
10	<code>insert into Department values('215436','Muzafarnagar','Uttar Pradesh');</code>
11	<code>insert into Department values('123852','Bhavnagar','Gujarat');</code>
12	<code>insert into Department values('123465','simla','Himachal Pradesh');</code>
13	<code>insert into Department values('125469','Manali','Himachal Pradesh');</code>
14	<code>insert into Department values('127845','Gandhinagar','Gujarat');</code>
15	<code>insert into Department values('432156','Ahemdabad','Gujarat');</code>
16	<code>insert into Department values('145636','Rajkot','Gujarat');</code>
17	<code>insert into Department values('354221','Bangalore','Karnataka');</code>
18	<code>insert into Department values('143256','Jamnagar','Gujarat');</code>
19	<code>insert into Department values('986532','Surat','Gujarat');</code>
20	<code>insert into Department values('123456','Vapi','Gujarat');</code>
21	<code>insert into Department values('123546','Lalen','Haryana');</code>
22	<code>insert into Department values('894576','Dhali','Madhya Pradesh');</code>
23	<code>insert into Department values('456321','telgu','Telangana');</code>
24	<code>insert into Department values('321456','Lahor','Punjab');</code>
25	



Some queries with output to retrieve vital records from the database.

Find out how many Clients has more than one projects.

Query		Query History
<pre> 1 Select client.fname,client.lname 2 from Client INNER JOIN Client_acc 3 ON client.c_id = Client_acc.c_id 4 where Client_acc.tot_project&gt;=2 5 order by Client.c_id; </pre>		
Data Output		Messages Notifications
	fname character varying (20)	lname character varying (20)
1	Abhay	Raychand
2	Arnavsinh	Raizada
3	Bhavya	Kalikalan
4	Kartavya	Patidar
5	Aryan	Kumavat

Display the detail about employees (ssn, fname, lname) who got bonus in April month

Query

Query History

```
1 Select Employee.ssn,Employee.fname,Employee.lname
2 from Employee INNER JOIN salary
3 ON Employee.ssn = salary.ssn
4 where salary.bon_month = 'April'
5 order by Employee.ssn;
```

Data Output

Messages

Notifications

	ssn [PK] character varying (7)	fname character varying (20)	lname character varying (20)
1	21FB001	Ronak	patel
2	21IG001	Harsh	Raval

List out the name of the department whose manager's first name consists letter 'r' in it.

Query Query History

```

1 Select Department.dept_name
2 from Department INNER JOIN Employee
3 ON Department.mng_ssn = Employee.ssn
4 where Employee.fname like '%r%'
5 order by Employee.ssn;

```

Data Output Messages Notifications

dept\_name  
character varying (15)

1	Instagram
---	-----------

Found out the most the name of clients who are facing loss on there investment, also find out name of his/her manager.

Query Query History

```

1 Select Client.fname || ' ' || client.lname as Client_name,
2       Employee.fname || ' ' || Employee.lname as Manager_name
3
4 from Client NATURAL JOIN Client_acc
5       INNER JOIN Employee ON Client.mng_ssn = Employee.ssn
6
7 where Client_acc.tot_cost > Client_acc.tot_revenue
8 order by Client.c_id;

```

Data Output Messages Notifications

	client_name text	manager_name text
1	Ragav Jadav	Ronak patel
2	Abhay Raychand	Riya Sharma
3	Navneet Thakor	Vraj prajapati
4	Kartavya Patidar	Harsh Raval
5	Aryan Kumavat	Ram raval

**Found out Employees who haven't got any bonus.**

Query		Query History
<pre> 1 Select Employee.ssn, Employee.fname    ' '    Employee.lname as Employee_name 2 3 from Employee NATURAL JOIN Salary 4 5 where Salary.bonus = '0' 6 order by Employee.ssn;</pre>		
Data Output		Messages Notifications
ssn	employee_name	
[PK] character varying (7)	text	
1	21BG001	Raag Joshi
2	21BG004	Beena Shiddpara
3	21FB002	Aman patel
4	21FB003	Meet Joshi
5	21GG001	Rohanshu Banodha
6	21GG002	Rajesh jadeja
7	21GG004	kartavya patel
8	21IG002	Jay patel
9	21IG003	Raag Prajapati
10	21YT001	Jay Kalbi
11	21YT003	Kavya Zala
12	21YT004	Sneha rajput

**Find out Department name who has more than 3 projects.**

Query		Query History
<pre> 1 Select Department.dept_id, Department.dept_name as Department_Name 2 3 from Department NATURAL JOIN Project 4 5 Group by (dept_id) 6 having count(*)&gt;3 7 order by Department.dept_id;</pre>		
Data Output		Messages Notifications
dept_id	department_name	
[PK] character varying (3)	character varying (15)	
1	A01	Facebook
2	A02	Google
3	A03	Youtube
4	A04	Instagram

**Found out the name of Clients who has multiple active projects or invested more than 25000 rupees in it.**

Query	Query History
1	Select Client.fname    ' '    Client.lname as Client_name
2	
3	from Client NATURAL JOIN Client_acc
4	
5	where Client_acc.tot_project > 1 OR Client_acc.tot_cost>25000
6	order by Client.c_id;

Data Output	Messages	Notifications
<div>client_name text</div> <div>1 Abhay Raychand</div> <div>2 Arnavsinh Raizada</div> <div>3 Bhavya Kalikalan</div> <div>4 Kartavya Patidar</div> <div>5 Aryan Kumavat</div>		

**Find out all the name of all the managers along with there Department name who are also managing some clients**

Query	Query History
1	Select Distinct Employee.fname as Manager_name
2	
3	from Employee INNER JOIN Department ON employee.ssn = Department.mng_ssn INNER JOIN
4	Client ON client.mng_ssn = Employee.ssn
5	
6	where 1=1;

Data Output	Messages	Notifications
<div>manager_name character varying (20)</div> <div>1 Raag</div> <div>2 Harsh</div> <div>3 Ronak</div> <div>4 Jay</div> <div>5 Rohanshu</div>		

## Found out Employees who have two mobile numbers.

Query		Query History
<pre>1 select Employee.ssn as ssn, Employee.fname as Employee_name 2 from Employee NATURAL JOIN Employee_mobile 3 Group by (ssn) 4 having count(*)&gt;1 5 ORDER BY ssn;</pre>		
Data Output		Messages Notifications
ssn	employee_name	
[PK] character varying (7)	character varying (20)	
1	21BG001	Raag
2	21BG004	Beena
3	21FB001	Ronak
4	21FB002	Aman
5	21FB003	Meet
6	21GG001	Rohanshu
7	21GG004	kartavya
8	21IG001	Harsh
9	21IG002	Jay
10	21IG004	Hardee
11	21YT001	Jay
12	21YT002	Vraj
13	21YT004	Sneha