

Employee Payroll Management System

1. Viewing Available Databases:

mysql> Show databases;

```
+-----+
| Database
+-----+
| 123b1b078
| assignment4
| information_schema
| institute
| mysql
| pccoe_078
| performance_schema
| studentmanagement
| sys
+-----+
9 rows in set (0.12 sec)
```

2. Creating the Employee Payroll Management System Database:

mysql> create database Employee_Payroll_Management_System;

Query OK, 1 row affected (0.01 sec)

3. Verifying Database Creation:

mysql> Show databases;

```
+-----+
| Database
+-----+
| 123b1b078
| assignment4
| employee_payroll_management_system
| information_schema
| institute
| mysql
| pccoe_078
| performance_schema
| studentmanagement
| sys
+-----+
10 rows in set (0.00 sec)
```

4. Using the Created Database:

```
mysql> use employee_payroll_management_system;
```

Database changed

5. Checking Available Tables:

```
mysql> show tables;
```

Empty set (0.00 sec)

6. Creating the Department Table:

```
mysql> create table department (
```

```
-> dept_id varchar(10) primary key,
```

```
-> dept_name char(50) unique not null,
```

```
-> manager_id int unique
```

```
-> );
```

Query OK, 0 rows affected (0.14 sec)

7. Describing the Department Table Structure:

```
mysql> desc Department;
```

Field	Type	Null	Key	Default	Extra
dept_id	varchar(10)	NO	PRI	NULL	
dept_name	char(50)	NO	UNI	NULL	
manager_id	int	YES	UNI	NULL	

3 rows in set (0.04 sec)

8. Creating the Employee Table:

```
mysql> create table Employee (
```

- > employee_id integer primary key,
- > f_name char(30) not null,
- > l_name char(30) not null,
- > Designation char(50) not null,
- > hire_date date not null,
- > Salary integer not null check (salary > 0),
- > Email varchar(40) unique not null,
- > DOB date not null,
- > gender enum('Male', 'Female') null,
- > city char(20) null,
- > Pincode int null,
- > Dept_id varchar(10),
- > foreign key(dept_id) references Department(dept_id) on delete set null
- >);

Query OK, 0 rows affected (0.10 sec)

9. Describing the Employee Table Structure:

mysql> desc Employee;

Field	Type	Null	Key	Default	Extra
employee_id	int	NO	PRI	NULL	
f_name	char(30)	NO		NULL	
l_name	char(30)	NO		NULL	
Designation	char(50)	NO		NULL	
hire_date	date	NO		NULL	
Salary	int	NO		NULL	
Email	varchar(40)	NO	UNI	NULL	
DOB	date	NO		NULL	
gender	enum('Male', 'Female')	YES		NULL	
city	char(30)	YES		NULL	
Pincode	int	YES		NULL	
Dept_id	varchar(10)	YES	MUL	NULL	

12 rows in set (0.00 sec)

10. Creating the Employee Contacts Table:

```
mysql> create table Employee_Contacts(  
    -> Employee_id integer,  
    -> Contact_no bigint not null,  
    -> primary key(employee_id, contact_no),  
    -> foreign key(Employee_id) references Employee(Employee_id) on delete cascade  
    -> );
```

Query OK, 0 rows affected (0.07 sec)

11. Describing the Employee Contacts Table Structure:

```
mysql> desc Employee_Contacts;
```

Field	Type	Null	Key	Default	Extra
Employee_id	int	NO	PRI	NULL	
Contact_no	bigint	NO	PRI	NULL	

2 rows in set (0.00 sec)

12. Creating the Payroll Table:

```
mysql> Create table Payroll(  
    -> payroll_id integer primary key,  
    -> payroll_period_start date not null,  
    -> payroll_period_end date not null,  
    -> salary_date date not null,  
    -> deduction int default 0,  
    -> Employee_id integer,  
    -> foreign key(Employee_id) references Employee(Employee_id)
```

->);

Query OK, 0 rows affected (0.10 sec)

13. Describing the Payroll Table Structure:

mysql> desc Payroll;

Field	Type	Null	Key	Default	Extra
payroll_id	int	NO	PRI	NULL	
payroll_period_start	date	NO		NULL	
payroll_period_end	date	NO		NULL	
salary_date	date	NO		NULL	
deduction	int	YES		0	
Employee_id	int	YES	MUL	NULL	

6 rows in set (0.00 sec)

14. Creating the Attendance Table:

mysql> create table Attendance(

-> attendance_id int primary key,

-> attend_date date not null,

-> Status enum('Present', 'Absent', 'Holiday', 'Leave') not null,

-> Check_in_time time default null,

-> check_out_time time default null,

-> leave_type varchar(100) default null,

-> leave_status enum('Pending', 'Approved', 'Rejected') default null,

-> Employee_id int not null,

-> foreign key(Employee_id) references Employee(Employee_id) on delete cascade

->);

Query OK, 0 rows affected (0.08 sec)

15. Describing the Attendance Table Structure:

```
mysql> desc Attendance;
```

Field	Type	Null	Key	Default	Extra
attendance_id	int	NO	PRI	NULL	
attend_date	date	NO		NULL	
Status	enum('Present', 'Absent', 'Holiday', 'Leave')	NO		NULL	
Check_in_time	time	YES		NULL	
check_out_time	time	YES		NULL	
leave_type	varchar(100)	YES		NULL	
leave_status	enum('Pending', 'Approved', 'Rejected')	YES		NULL	
Employee_id	int	NO	MUL	NULL	

8 rows in set (0.00 sec)

16. Verifying the List of Tables:

```
mysql> show tables;
```

Tables_in_employee_payroll_management_system
attendance
department
employee
employee_contacts
payroll

5 rows in set (0.01 sec)

17. Inserting Data into the Department Table:

```
mysql> insert into Department values
```

- > ('D101', 'Human Resources', 201),
- > ('D102', 'Finance', 202),
- > ('D103', 'Information Technology', 203),
- > ('D104', 'Sales and Marketing', 204),
- > ('D105', 'Research and Development', 205),
- > ('D106', 'Customer Support', 206),
- > ('D107', 'Operations and Logistics', 207);

Query OK, 7 rows affected (0.05 sec)

Records: 7 Duplicates: 0 Warnings: 0

18. Viewing Data from the Department Table:

```
mysql> select * from Department;
```

dept_id	dept_name	manager_id
D101	Human Resources	201
D102	Finance	202
D103	Information Technology	203
D104	Sales and Marketing	204
D105	Research and Development	205
D106	Customer Support	206
D107	Operations and Logistics	207

7 rows in set (0.00 sec)

19. Inserting Data into the Employee Table:

```
mysql> insert into Employee values
```

```
-> (101, 'Amit', 'Sharma', 'HR Manager', '2020-01-15', 75000, 'amit.sharma@email.com',  
'1985-05-10', 'Male', 'Delhi', 110001, 'D101'),
```

```
-> (102, 'Priya', 'Iyer', 'Finance Manager', '2019-03-12', 80000, 'priya.iyer@email.com',  
'1987-09-20', 'Female', 'Mumbai', 400001, 'D102'),
```

```
-> (103, 'Rajesh', 'Verma', 'IT Head', '2018-07-25', 95000, 'rajesh.verma@email.com',  
'1982-11-05', 'Male', 'Bengaluru', 560001, 'D103'),
```

```
-> (104, 'Meera', 'Nair', 'Marketing Head', '2021-05-30', 72000, 'meera.nair@email.com',  
'1990-02-14', 'Female', 'Pune', 411000, 'D104'),
```

```
-> (105, 'Suresh', 'Patil', 'Research Scientist', '2017-09-10', 88000,  
'suresh.patil@email.com', '1984-07-18', 'Male', 'Pune', NULL, 'D105'),
```

```
-> (106, 'Ananya', 'Rao', 'Customer Support Lead', '2022-06-20', 58000,  
'ananya.rao@email.com', '1992-03-25', NULL, 'Hyderabad', 500001, 'D106'),
```

```
-> (107, 'Vikram', 'Desai', 'Operations Manager', '2020-12-10', 73000,  
'vikram.desai@email.com', '1988-08-12', 'Male', 'Jaipur', 302002, 'D107'),
```

```
-> (108, 'Neha', 'Gupta', 'HR Executive', '2023-02-01', 45000, 'neha.gupta@email.com',
```

'1995-10-20', 'Female', 'Jaipur', 302001, 'D101'),

-> (109, 'Arjun', 'Singh', 'Finance Analyst', '2022-09-15', 50000, 'arjun.singh@email.com',
'1994-12-05', 'Male', 'Lucknow', 226001, 'D102'),

-> (110, 'Swati', 'Joshi', 'Software Engineer', '2021-08-20', 60000, 'swati.joshi@email.com',
'1996-06-10', 'Female', 'Ahmedabad', 380001, 'D103'),

-> (111, 'Ravi', 'Kumar', 'Sales Executive', '2020-07-05', 47000, 'ravi.kumar@email.com',
'1993-04-18', 'Male', 'Surat', 395001, 'D104'),

-> (112, 'Divya', 'Mehta', 'Research Associate', '2022-11-11', 55000,
'divya.mehta@email.com', '1997-01-30', 'Female', 'Kolkata', 700001, 'D105'),

-> (113, 'Karan', 'Malhotra', 'Customer Support Executive', '2023-04-15', 42000,
'karan.malhotra@email.com', '1998-09-15', 'Male', 'Chandigarh', 160001, 'D106'),

-> (114, 'Sunita', 'Kapoor', 'Logistics Coordinator', '2019-06-25', 52000,
'sunita.kapoor@email.com', '1989-05-22', 'Female', 'Nagpur', NULL, 'D107'),

-> (115, 'Manish', 'Bansal', 'Finance Consultant', '2018-10-10', 78000,
'manish.bansal@email.com', '1983-11-02', NULL, 'Indore', 452001, 'D102');

Query OK, 15 rows affected (0.01 sec)

Records: 15 Duplicates: 0 Warnings: 0

20. Viewing Data from the Employee Table:

mysql> select * from Employee;

employee_id	f_name	l_name	Designation	hire_date	Salary	Email	DOB	gender	city	Pincode	Dept_id
101	Amit	Sharma	HR Manager	2020-01-15	75000	amit.sharma@email.com	1985-05-10	Male	Delhi	110001	D101
102	Priya	Iyer	Finance Manager	2019-03-12	80000	priya.iyer@email.com	1987-09-20	Female	Mumbai	400001	D102
103	Rajesh	Verma	IT Head	2018-07-25	95000	rajesh.verma@email.com	1982-11-05	Male	Bengaluru	560001	D103
104	Meera	Nair	Marketing Head	2021-05-30	72000	meera.nair@email.com	1990-02-14	Female	Pune	411000	D104
105	Suresh	Patil	Research Scientist	2017-09-10	88000	suresh.patil@email.com	1984-07-18	Male	Pune	NULL	D105
106	Ananya	Rao	Customer Support Lead	2022-06-20	58000	ananya.rao@email.com	1992-03-25	NULL	Hyderabad	500001	D106
107	Vikram	Desai	Operations Manager	2020-12-10	73000	vikram.desai@email.com	1988-08-12	Male	Jaipur	302002	D107
108	Neha	Gupta	HR Executive	2023-02-01	45000	neha.gupta@email.com	1995-10-20	Female	Jaipur	302001	D101
109	Arjun	Singh	Finance Analyst	2022-09-15	50000	arjun.singh@email.com	1994-12-05	Male	Lucknow	226001	D102
110	Swati	Joshi	Software Engineer	2021-08-20	60000	swati.joshi@email.com	1996-06-10	Female	Ahmedabad	380001	D103
111	Ravi	Kumar	Sales Executive	2020-07-05	47000	ravi.kumar@email.com	1993-04-18	Male	Surat	395001	D104
112	Divya	Mehta	Research Associate	2022-11-11	55000	divya.mehta@email.com	1997-01-30	Female	Kolkata	700001	D105
113	Karan	Malhotra	Customer Support Executive	2023-04-15	42000	karan.malhotra@email.com	1998-09-15	Male	Chandigarh	160001	D106
114	Sunita	Kapoor	Logistics Coordinator	2019-06-25	52000	sunita.kapoor@email.com	1989-05-22	Female	Nagpur	NULL	D107
115	Manish	Bansal	Finance Consultant	2018-10-10	78000	manish.bansal@email.com	1983-11-02	NULL	Indore	452001	D102

15 rows in set (0.00 sec)

21. Inserting Data into the Employee Contacts Table:

mysql> insert into Employee_Contacts values

-> (101, 9876543210),


```

-> (101, 9123456789),
-> (102, 9898989898),
-> (103, 9988776655),
-> (104, 9556677889),
-> (105, 9001234567),
-> (106, 9111223344),
-> (107, 9223344556),
-> (108, 9445566778),
-> (109, 9557788996);

```

Query OK, 10 rows affected (0.04 sec)

Records: 10 Duplicates: 0 Warnings: 0

22. Viewing Data from the Employee Contacts Table:

```
mysql> select * from Employee_Contacts;
```

Employee_id	Contact_no
101	9123456789
101	9876543210
102	9898989898
103	9988776655
104	9556677889
105	9001234567
106	9111223344
107	9223344556
108	9445566778
109	9557788996

10 rows in set (0.00 sec)

23. Inserting Data into the Attendance Table:

```
mysql> insert into Attendance values
```

```

-> (1, '2024-02-01', 'Present', '09:00:00', '17:00:00', NULL, NULL, 101),
-> (2, '2024-02-01', 'Present', '09:15:00', '17:30:00', NULL, NULL, 102),
-> (3, '2024-02-01', 'Absent', NULL, NULL, NULL, NULL, 103),
-> (4, '2024-02-01', 'Holiday', NULL, NULL, NULL, NULL, 104),
-> (5, '2024-02-02', 'Leave', NULL, NULL, 'Sick Leave', 'Approved', 105),
-> (6, '2024-02-02', 'Present', '08:50:00', '16:45:00', NULL, NULL, 106),
-> (7, '2024-02-02', 'Present', '09:10:00', '17:20:00', NULL, NULL, 107),
-> (8, '2024-02-02', 'Leave', NULL, NULL, 'Casual Leave', 'Pending', 108),
-> (9, '2024-02-02', 'Absent', NULL, NULL, NULL, NULL, 109),
-> (10, '2024-02-02', 'Holiday', NULL, NULL, NULL, NULL, 110),
-> (11, '2024-02-03', 'Present', '09:05:00', '17:10:00', NULL, NULL, 111),
-> (12, '2024-02-03', 'Leave', NULL, NULL, 'Maternity Leave', 'Approved', 112);

```

Query OK, 12 rows affected (0.04 sec)

Records: 12 Duplicates: 0 Warnings: 0

24. Viewing Data from the Attendance Table:

```
mysql> select * from Attendance;
```

attendance_id	attend_date	Status	Check_in_time	check_out_time	leave_type	leave_status	Employee_id
1	2024-02-01	Present	09:00:00	17:00:00	NULL	NULL	101
2	2024-02-01	Present	09:15:00	17:30:00	NULL	NULL	102
3	2024-02-01	Absent	NULL	NULL	NULL	NULL	103
4	2024-02-01	Holiday	NULL	NULL	NULL	NULL	104
5	2024-02-02	Leave	NULL	NULL	Sick Leave	Approved	105
6	2024-02-02	Present	08:50:00	16:45:00	NULL	NULL	106
7	2024-02-02	Present	09:10:00	17:20:00	NULL	NULL	107
8	2024-02-02	Leave	NULL	NULL	Casual Leave	Pending	108
9	2024-02-02	Absent	NULL	NULL	NULL	NULL	109
10	2024-02-02	Holiday	NULL	NULL	NULL	NULL	110
11	2024-02-03	Present	09:05:00	17:10:00	NULL	NULL	111
12	2024-02-03	Leave	NULL	NULL	Maternity Leave	Approved	112

12 rows in set (0.00 sec)

25. Inserting Data into the Payroll Table:

```
mysql> insert into Payroll values
```

```
-> (1, '2024-01-01', '2024-01-31', '2024-02-01', 2000, 101),
-> (2, '2024-01-01', '2024-01-31', '2024-02-01', 1500, 102),
-> (3, '2024-01-01', '2024-01-31', '2024-02-01', DEFAULT, 103),
-> (4, '2024-01-01', '2024-01-31', '2024-02-01', 1200, 104),
-> (5, '2024-02-01', '2024-02-28', '2024-03-01', 2500, 105),
-> (6, '2024-02-01', '2024-02-28', '2024-03-01', 1000, 106),
-> (7, '2024-02-01', '2024-02-28', '2024-03-01', DEFAULT, 107),
-> (8, '2024-02-01', '2024-02-28', '2024-03-01', 500, 108),
-> (9, '2024-03-01', '2024-03-31', '2024-04-01', 2200, 109),
-> (10, '2024-03-01', '2024-03-31', '2024-04-01', DEFAULT, 110),
-> (11, '2024-03-01', '2024-03-31', '2024-04-01', 1600, 111),
-> (12, '2024-03-01', '2024-03-31', '2024-04-01', 1300, 112),
-> (13, '2024-04-01', '2024-04-30', '2024-05-01', 1800, 113),
-> (14, '2024-04-01', '2024-04-30', '2024-05-01', 900, 114),
-> (15, '2024-04-01', '2024-04-30', '2024-05-01', 2500, 115),
-> (16, '2024-04-01', '2024-04-30', '2024-05-01', DEFAULT, 101),
-> (17, '2024-05-01', '2024-05-31', '2024-06-01', 700, 102),
-> (18, '2024-05-01', '2024-05-31', '2024-06-01', 1900, 103),
-> (19, '2024-05-01', '2024-05-31', '2024-06-01', DEFAULT, 104),
-> (20, '2024-05-01', '2024-05-31', '2024-06-01', 1450, 105);
```

Query OK, 20 rows affected (0.04 sec)

Records: 20 Duplicates: 0 Warnings: 0

26. Viewing Data from the Payroll Table:

```
mysql> select * from Payroll;
```

payroll_id	payroll_period_start	payroll_period_end	salary_date	deduction	Employee_id
1	2024-01-01	2024-01-31	2024-02-01	2000	101
2	2024-01-01	2024-01-31	2024-02-01	1500	102
3	2024-01-01	2024-01-31	2024-02-01	0	103
4	2024-01-01	2024-01-31	2024-02-01	1200	104
5	2024-02-01	2024-02-28	2024-03-01	2500	105
6	2024-02-01	2024-02-28	2024-03-01	1000	106
7	2024-02-01	2024-02-28	2024-03-01	0	107
8	2024-02-01	2024-02-28	2024-03-01	500	108
9	2024-03-01	2024-03-31	2024-04-01	2200	109
10	2024-03-01	2024-03-31	2024-04-01	0	110
11	2024-03-01	2024-03-31	2024-04-01	1600	111
12	2024-03-01	2024-03-31	2024-04-01	1300	112
13	2024-04-01	2024-04-30	2024-05-01	1800	113
14	2024-04-01	2024-04-30	2024-05-01	900	114
15	2024-04-01	2024-04-30	2024-05-01	2500	115
16	2024-04-01	2024-04-30	2024-05-01	0	101
17	2024-05-01	2024-05-31	2024-06-01	700	102
18	2024-05-01	2024-05-31	2024-06-01	1900	103
19	2024-05-01	2024-05-31	2024-06-01	0	104
20	2024-05-01	2024-05-31	2024-06-01	1450	105

20 rows in set (0.00 sec)

27. *Verify Data Integrity:*

Select * from Department;

Select * from Employee;

Select * from Employee_Contacts;

Select * from Payroll;

Select * from Attendance;

28. *Inserting Data into Employee Contacts Table:*

mysql> insert into employee_contacts values (108, 9562398120);

Query OK, 1 row affected (0.04 sec)

```
mysql> select * from employee_contacts;
+-----+-----+
| Employee_id | Contact_no |
+-----+-----+
| 101 | 9123456789 |
| 101 | 9876543210 |
| 102 | 9898989898 |
| 103 | 9988776655 |
| 104 | 9556677889 |
| 105 | 9001234567 |
| 106 | 9111223344 |
| 107 | 9223344556 |
| 108 | 9445566778 |
| 108 | 9562398120 |
| 109 | 9557788996 |
+-----+-----+
11 rows in set (0.00 sec)
```

29.Updating Employee Salary:

```
mysql> update employee set salary = 90000 where Employee_id = 105;
```

Query OK, 1 row affected (0.04 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> select * from employee;
```

employee_id	f_name	l_name	Designation	hire_date	Salary
101	Amit	Sharma	HR Manager	2020-01-15	75000
102	Priya	Iyer	Finance Manager	2019-03-12	80000
103	Rajesh	Verma	IT Head	2018-07-25	95000
104	Meera	Nair	Marketing Head	2021-05-30	72000
105	Suresh	Patil	Research Scientist	2017-09-10	90000
106	Ananya	Rao	Customer Support Lead	2022-06-20	58000
107	Vikram	Desai	Operations Manager	2020-12-10	73000

30.Deleting an Employee Contact:

```
mysql> delete from employee_contacts where employee_id = 109;
```

Query OK, 1 row affected (0.01 sec)

```
mysql> select * from employee_contacts;
```

Employee_id	Contact_no
101	9123456789
101	9876543210
102	9898989898
103	9988776655
104	9556677889
105	9001234567
106	9111223344
107	9223344556
108	9445566778
108	9562398120

10 rows in set (0.00 sec)

31.Retrieving All Employees with 'Manager' in Designation:

mysql> select * from employee where designation like '%manager%';

employee_id	f_name	l_name	Designation	hire_date	Salary	Email	DOB	gender	city	Pincode	Dept_id
101	Amit	Sharma	HR Manager	2020-01-15	75000	amit.sharma@email.com	1985-05-10	Male	Delhi	110001	D101
102	Priya	Iyer	Finance Manager	2019-03-12	80000	priya.iyer@email.com	1987-09-20	Female	Mumbai	400001	D102
107	Vikram	Desai	Operations Manager	2020-12-10	73000	vikram.desai@email.com	1988-08-12	Male	Jaipur	302002	D107

3 rows in set (0.03 sec)

32.Retrieving Employees with Salary Between 50,000 and 75,000:

mysql> select employee_id, f_name from employee where salary between 50000 and 75000;

employee_id	f_name
101	Amit
104	Meera
106	Ananya
107	Vikram
109	Arjun
110	Swati
112	Divya
114	Sunita

8 rows in set (0.03 sec)

33.Ensuring Data Integrity & Validation:

```
mysql> select * from employee where dept_id is null;
```

Empty set (0.04 sec)

```
mysql> select * from payroll where employee_id not in (select employee_id from employee);
```

Empty set (0.00 sec)

34. Checking for Employees Earning More Than a Certain Amount:

```
mysql> select * from employee where salary > 90000;
```

employee_id	f_name	l_name	Designation	hire_date	Salary	Email	DOB	gender	city	Pincode	Dept_id
103	Rajesh	Verma	IT Head	2018-07-25	95000	rajesh.verma@email.com	1982-11-05	Male	Bengaluru	560001	D103
1 row in set (0.00 sec)											

35. Retrieving Employees from a Specific City:

```
mysql> select * from employee where city = 'Pune';
```

employee_id	f_name	l_name	Designation	hire_date	Salary	Email	DOB	gender	city	Pincode	Dept_id
104	Meera	Nair	Marketing Head	2021-05-30	72000	meera.nair@email.com	1990-02-14	Female	Pune	411000	D104
105	Suresh	Patil	Research Scientist	2017-09-10	90000	suresh.patil@email.com	1984-07-18	Male	Pune	NULL	D105
2 rows in set (0.03 sec)											

36. Displaying Employees Ordered by Salary (Highest First):

```
mysql> select employee_id, salary from employee order by salary desc;
```

employee_id	salary
103	95000
105	90000
102	80000
115	78000
101	75000
107	73000
104	72000
110	60000
106	58000
112	55000
114	52000
109	50000
111	47000
108	45000
113	42000

15 rows in set (0.00 sec)

37.Counting the Total Number of Employees:

mysql> select count(*) from employee;

count(*)
15

1 row in set (0.04 sec)

38.Checking for Employees Who Have Not Provided Their Pincode:

mysql> select employee_id from employee where pincode is null;

employee_id
105
114

2 rows in set (0.00 sec)

39.Delete a Specific Row from a Table:

mysql> delete from Employee where employee_id = 119;

Query OK, 0 rows affected (0.00 sec)

40.Delete a Table completely:

```
mysql> Drop table Employee;
```

Query OK, 18 rows affected (0.02 sec)

41.Delete the entire Database:

```
mysql> drop database Employee_Payroll_Management_System;
```