PayXpert, The Payroll Management System

Creating database named "PayrollManagement"

```
mysql> create database PayrollManagement;
Query OK, 1 row affected (0.52 sec)
```

Creating employee table

```
mysql> create table employee(
    -> employee_id varchar(10) primary key,
    -> first_name varchar(30),
    -> last_name varchar(30),
    -> Date_of_birth date,
    -> gender varchar(10),
    -> email varchar(50),
    -> phone_number varchar(15),
    -> address varchar(50),
    -> position varchar(30),
    -> joining_date date,
    -> termination_date date
    -> );
Query OK, 0 rows affected (2.55 sec)
```

```
mysql> desc employee;
+------------------+-------------+------+-----+---------+-------+
| Field            | Type        | Null | Key | Default | Extra |
+------------------+-------------+------+-----+---------+-------+
| employee_id      | varchar(10) | NO   | PRI | NULL    |       |
| first_name       | varchar(30) | YES  |     | NULL    |       |
| last_name        | varchar(30) | YES  |     | NULL    |       |
| Date_of_birth    | date        | YES  |     | NULL    |       |
| gender           | varchar(10) | YES  |     | NULL    |       |
| email            | varchar(50) | YES  |     | NULL    |       |
| phone_number     | varchar(15) | YES  |     | NULL    |       |
| address          | varchar(50) | YES  |     | NULL    |       |
| position         | varchar(30) | YES  |     | NULL    |       |
| joining_date     | date        | YES  |     | NULL    |       |
| termination_date | date        | YES  |     | NULL    |       |
+------------------+-------------+------+-----+---------+-------+
11 rows in set (0.31 sec)
```

Creating payroll table

```
mysql> create table payroll(
    -> payroll_id varchar(10) primary key,
    -> employee_id varchar(10),
    -> payperiod_startdate date,
    -> payperiod_enddate date,
    -> basic_salary int,
    -> overtime_pay int,
    -> deductions int,
    -> net_salary int
    -> );
Query OK, 0 rows affected (1.36 sec)
```

```
mysql> desc payroll;
+---------------------+-------------+------+-----+---------+-------+
| Field               | Type        | Null | Key | Default | Extra |
+---------------------+-------------+------+-----+---------+-------+
| payroll_id          | varchar(10) | NO   | PRI | NULL    |       |
| employee_id         | varchar(10) | YES  |     | NULL    |       |
| payperiod_startdate | date        | YES  |     | NULL    |       |
| payperiod_enddate   | date        | YES  |     | NULL    |       |
| basic_salary        | int         | YES  |     | NULL    |       |
| overtime_pay        | int         | YES  |     | NULL    |       |
| deductions          | int         | YES  |     | NULL    |       |
| net_salary          | int         | YES  |     | NULL    |       |
+---------------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

Creating tax table

```
mysql> create table tax(
    -> tax_id varchar(10) primary key,
    -> employee_id varchar(10),
    -> tax_year year,
    -> taxable_income int,
    -> tax_amount int
    -> );
Query OK, 0 rows affected (0.59 sec)
```

```
mysql> desc tax;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| tax_id         | varchar(10) | NO   | PRI | NULL    |       |
| employee_id    | varchar(10) | YES  |     | NULL    |       |
| tax_year       | year        | YES  |     | NULL    |       |
| taxable_income | int         | YES  |     | NULL    |       |
| tax_amount     | int         | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
5 rows in set (0.06 sec)
```

Creating financial_record table

```
mysql> create table financial_record(
    -> record_id varchar(10) primary key,
    -> employee_id varchar(10),
    -> record_date date,
    -> description varchar(50),
    -> amount int,
    -> record_type varchar(25)
    -> );
Query OK, 0 rows affected (0.41 sec)
```

```
mysql> desc  financial_record;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| record_id   | varchar(10) | NO   | PRI | NULL    |       |
| employee_id | varchar(10) | YES  |     | NULL    |       |
| record_date | date        | YES  |     | NULL    |       |
| description | varchar(50) | YES  |     | NULL    |       |
| amount      | int         | YES  |     | NULL    |       |
| record_type | varchar(25) | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)
```

Inserting values into employee table

```
mysql> insert into employee values
    -> ('e1','Santhiya','Nataraj','2002-08-18','Female','santhiya3@gmail.com','9988776655','Dindigul','frontend developer','2024-08-10',null),
    -> ('e2','Sandhiya','Veerasamy','2002-07-02','Female','sandhiya1@gmail.com','9888573600','Dindigul','backend developer','2024-06-15',null),
    -> ('e3','Vinothini','Ramasamy','2003-07-13','Female','vinothini7@gmail.com','8988776600','Dindigul','software engineer','2024-06-15',null),
    -> ('e4','Raja','Ram','2000-09-19','Male','raja45@gmail.com','9911223344','Trichy','web designer','2025-07-08',null),
    -> ('e5','Chandru','sadayapasamy','1999-05-27','Male','chandru8@gmail.com','5908706650','Erode','Tester','2024-12-02',null),
    -> ('e6','Roshini','Manikandan','2002-10-08','Female','roshini9@gmail.com','9907862071','Coimbatore','software engineer','2024-07-04',null),
    -> ('e7','Sanjay','Nataraj','2001-05-09','Male','sanjay77@gmail.com','9943772655','Banglore','web designer','2025-02-20',null),
    -> ('e8','Saran','Murugan','1998-04-12','Male','saranmurugan@gmail.com','8534279100','Delhi','software engineer','2024-05-24',null),
    -> ('e9','Abimathi','Thirumoorthi','2002-06-13','Female','Abimathi1@gmail.com','9007834210','Mumbai','prompt engineer','2024-11-03',null),
    -> ('e10','Arun','Kumar','2003-03-13','Male','arun8@gmail.com','8009567890','Hyderabad','frontend developer','2025-01-09',null);
Query OK, 10 rows affected (0.43 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

employee_id	first_name	last_name	Date_of_birth	gender	email	phone_number	address	position	joining_date	termination_date
e1	Santhiya	Nataraj	2002-08-18	Female	santhiya3@gmail.com	9988776655	Dindigul	frontend developer	2024-08-10	NULL
e10	Arun	Kumar	2003-03-13	Male	arun8@gmail.com	8009567890	Hyderabad	frontend developer	2025-01-09	NULL
e2	Sandhiya	Veerasamy	2002-07-02	Female	sandhiya1@gmail.com	9888573600	Dindigul	backend developer	2024-06-15	NULL
e3	Vinothini	Ramasamy	2003-07-13	Female	vinothini7@gmail.com	8988776600	Dindigul	software engineer	2024-06-15	NULL
e4	Raja	Ram	2000-09-19	Male	raja45@gmail.com	9911223344	Trichy	web designer	2025-07-08	NULL
e5	Chandru	sadayapasamy	1999-05-27	Male	chandru8@gmail.com	5908706650	Erode	Tester	2024-12-02	NULL
e6	Roshini	Manikandan	2002-10-08	Female	roshini9@gmail.com	9907862071	Coimbatore	software engineer	2024-07-04	NULL
e7	Sanjay	Nataraj	2001-05-09	Male	sanjay77@gmail.com	9943772655	Banglore	web designer	2025-02-20	NULL
e8	Saran	Murugan	1998-04-12	Male	saranmurugan@gmail.com	8534279100	Delhi	software engineer	2024-05-24	NULL
e9	Abimathi	Thirumoorthi	2002-06-13	Female	Abimathi1@gmail.com	9007834210	Mumbai	prompt engineer	2024-11-03	NULL

Inserting into payroll table

```
mysql> insert into payroll values
    -> ('p1','e3','2024-12-15','2025-02-15',10000,3000,6000,7000),
    -> ('p2','e4','2025-07-08','2026-01-08',15000,4000,5000,14000),
    -> ('p3','e3','2025-11-13','2025-12-13',12000,3000,4000,11000),
    -> ('p4','e2','2024-06-15','2025-06-15',11000,5000,3000,13000),
    -> ('p5','e1','2024-08-10','2025-06-10',16000,3000,7000,12000),
    -> ('p6','e5','2025-07-08','2025-05-08',13000,2000,2000,13000),
    -> ('p7','e10','2025-01-09','2025-12-09',14000,3000,4000,15000),
    -> ('p8','e8','2024-05-24','2026-05-24',18000,1000,2000,19000),
    -> ('p9','e7','2025-02-20','2025-12-20',19000,3000,2000,20000),
    -> ('p10','e6','2024-07-04','2025-07-04',20000,5000,6000,19000);
Query OK, 10 rows affected (0.10 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
+------------+-------------+-------------------+-----------------+--------------+--------------+------------+------------+
| payroll_id | employee_id | payperiod_startdate | payperiod_enddate | basic_salary | overtime_pay | deductions | net_salary |
+------------+-------------+-------------------+-----------------+--------------+--------------+------------+------------+
| p1         | e3          | 2024-12-15        | 2025-02-15      |        10000 |         3000 |       6000 |       7000 |
| p10        | e6          | 2024-07-04        | 2025-07-04      |        20000 |         5000 |       6000 |      19000 |
| p2         | e4          | 2025-07-08        | 2026-01-08      |        15000 |         4000 |       5000 |      14000 |
| p3         | e3          | 2025-11-13        | 2025-12-13      |        12000 |         3000 |       4000 |      11000 |
| p4         | e2          | 2024-06-15        | 2025-06-15      |        11000 |         5000 |       3000 |      13000 |
| p5         | e1          | 2024-08-10        | 2025-06-10      |        16000 |         3000 |       7000 |      12000 |
| p6         | e5          | 2025-07-08        | 2025-05-08      |        13000 |         2000 |       2000 |      13000 |
| p7         | e10         | 2025-01-09        | 2025-12-09      |        14000 |         3000 |       4000 |      15000 |
| p8         | e8          | 2024-05-24        | 2026-05-24      |        18000 |         1000 |       2000 |      19000 |
| p9         | e7          | 2025-02-20        | 2025-12-20      |        19000 |         3000 |       2000 |      20000 |
+------------+-------------+-------------------+-----------------+--------------+--------------+------------+------------+
10 rows in set (0.00 sec)
```

Inserting into tax table

```
mysql> insert into tax values
    -> ('t1','e2','2024',10000,2000),
    -> ('t2','e1','2024',15000,3000),
    -> ('t3','e3','2024',8000,1000),
    -> ('t4','e8','2024',17000,4000),
    -> ('t5','e3','2025',11000,2200),
    -> ('t6','e2','2026',9000,1000),
    -> ('t7','e4','2025',14000,2500),
    -> ('t8','e9','2024',30000,12000),
    -> ('t9','e5','2025',12000,2300),
    -> ('t10','e7','2025',18000,5000);
Query OK, 10 rows affected (0.09 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
mysql> select * from tax;
+--------+-------------+----------+----------------+------------+
| tax_id | employee_id | tax_year | taxable_income | tax_amount |
+--------+-------------+----------+----------------+------------+
| t1     | e2          |     2024 |          10000 |       2000 |
| t10    | e7          |     2025 |          18000 |       5000 |
| t2     | e1          |     2024 |          15000 |       3000 |
| t3     | e3          |     2024 |           8000 |       1000 |
| t4     | e8          |     2024 |          17000 |       4000 |
| t5     | e3          |     2025 |          11000 |       2200 |
| t6     | e2          |     2026 |           9000 |       1000 |
| t7     | e4          |     2025 |          14000 |       2500 |
| t8     | e9          |     2024 |          30000 |      12000 |
| t9     | e5          |     2025 |          12000 |       2300 |
+--------+-------------+----------+----------------+------------+
10 rows in set (0.00 sec)
```

Inserting into financial_record table

```
mysql> insert into financial_record values
    -> ('r1','e4','2025-08-08','income',15000,'income'),
    -> ('r2','e3','2025-01-15','tax payment',1000,'tax payment'),
    -> ('r3','e1','2025-05-10','expense',4000,'expense'),
    -> ('r4','e5','2025-04-08','expense',5000,'expense'),
    -> ('r5','e7','2025-03-20','tax payment',5000,'tax payment'),
    -> ('r6','e3','2025-11-13','income',12000,'income'),
    -> ('r7','e6','2024-12-12','expense',2000,'expense'),
    -> ('r8','e8','2024-05-24','income',19000,'income'),
    -> ('r9','e2','2025-05-15','tax payment',1000,'tax payment'),
    -> ('r10','e10','2025-11-09','expense',6000,'expense');
Query OK, 10 rows affected (0.11 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
+-----------+-------------+-------------+-------------+--------+-------------+
| record_id | employee_id | record_date | description | amount | record_type |
+-----------+-------------+-------------+-------------+--------+-------------+
| r1        | e4          | 2025-08-08  | income      |  15000 | income      |
| r10       | e10         | 2025-11-09  | expense     |   6000 | expense     |
| r2        | e3          | 2025-01-15  | tax payment |   1000 | tax payment |
| r3        | e1          | 2025-05-10  | expense     |   4000 | expense     |
| r4        | e5          | 2025-04-08  | expense     |   5000 | expense     |
| r5        | e7          | 2025-03-20  | tax payment |   5000 | tax payment |
| r6        | e3          | 2025-11-13  | income      |  12000 | income      |
| r7        | e6          | 2024-12-12  | expense     |   2000 | expense     |
| r8        | e8          | 2024-05-24  | income      |  19000 | income      |
| r9        | e2          | 2025-05-15  | tax payment |   1000 | tax payment |
+-----------+-------------+-------------+-------------+--------+-------------+
10 rows in set (0.00 sec)
```

Adding foreign key constraint

```
mysql> alter table payroll add constraint foreign key(employee_id) references employee(employee_id);
Query OK, 10 rows affected (1.85 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> alter table tax add constraint foreign key(employee_id) references employee(employee_id);
Query OK, 10 rows affected (1.15 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> alter table financial_record add constraint foreign key(employee_id) references employee(employee_id);
Query OK, 10 rows affected (2.02 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
mysql> desc payroll;
+---------------------+-------------+------+-----+---------+-------+
| Field               | Type        | Null | Key | Default | Extra |
+---------------------+-------------+------+-----+---------+-------+
| payroll_id          | varchar(10) | NO   | PRI | NULL    |       |
| employee_id         | varchar(10) | YES  | MUL | NULL    |       |
| payperiod_startdate | date        | YES  |     | NULL    |       |
| payperiod_enddate   | date        | YES  |     | NULL    |       |
| basic_salary        | int         | YES  |     | NULL    |       |
| overtime_pay        | int         | YES  |     | NULL    |       |
| deductions          | int         | YES  |     | NULL    |       |
| net_salary          | int         | YES  |     | NULL    |       |
+---------------------+-------------+------+-----+---------+-------+
8 rows in set (0.05 sec)
```

```
mysql> desc tax;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| tax_id         | varchar(10) | NO   | PRI | NULL    |       |
| employee_id    | varchar(10) | YES  | MUL | NULL    |       |
| tax_year       | year        | YES  |     | NULL    |       |
| taxable_income | int         | YES  |     | NULL    |       |
| tax_amount     | int         | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

```
mysql> desc financial_record;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| record_id   | varchar(10) | NO   | PRI | NULL    |       |
| employee_id | varchar(10) | YES  | MUL | NULL    |       |
| record_date | date        | YES  |     | NULL    |       |
| description | varchar(50) | YES  |     | NULL    |       |
| amount      | int         | YES  |     | NULL    |       |
| record_type | varchar(25) | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)
```