Attendance Table (from 18/12/2022 to 29/12/2022)

```
mysql> select * from Attendance;
+-------------+-----------+------------+-------------+--------------+----------------+
| AttendanceID | EmpDeptID | Date       | CheckInTime | CheckOutTime | NoOfHoursWorked |
+-------------+-----------+------------+-------------+--------------+----------------+
| A001        | ED001     | 2022-12-18 | 09:00:00    | 18:00:00     | 09:00:00        |
| A002        | ED004     | 2022-12-18 | 09:00:00    | 18:00:00     | 09:00:00        |
| A003        | ED005     | 2022-12-18 | 09:00:00    | 18:00:00     | 09:00:00        |
| A004        | ED003     | 2022-12-18 | 09:00:00    | 18:00:00     | 09:00:00        |
| A005        | ED008     | 2022-12-18 | 09:00:00    | 18:00:00     | 09:00:00        |
| A006        | ED010     | 2022-12-18 | 09:00:00    | 18:00:00     | 09:00:00        |
| A007        | ED002     | 2022-12-19 | 09:00:00    | 18:00:00     | 09:00:00        |
| A008        | ED005     | 2022-12-19 | 09:00:00    | 18:00:00     | 09:00:00        |
| A009        | ED007     | 2022-12-19 | 09:00:00    | 18:00:00     | 09:00:00        |
| A010        | ED008     | 2022-12-19 | 09:00:00    | 18:00:00     | 09:00:00        |
| A011        | ED001     | 2022-12-20 | 09:00:00    | 18:00:00     | 09:00:00        |
| A012        | ED002     | 2022-12-20 | 09:00:00    | 18:00:00     | 09:00:00        |
| A013        | ED003     | 2022-12-20 | 09:00:00    | 18:00:00     | 09:00:00        |
| A014        | ED004     | 2022-12-20 | 09:00:00    | 18:00:00     | 09:00:00        |
| A015        | ED005     | 2022-12-20 | 09:00:00    | 18:00:00     | 09:00:00        |
| A016        | ED001     | 2022-12-21 | 09:00:00    | 18:00:00     | 09:00:00        |
| A017        | ED003     | 2022-12-21 | 09:00:00    | 18:00:00     | 09:00:00        |
| A018        | ED004     | 2022-12-21 | 09:00:00    | 18:00:00     | 09:00:00        |
| A019        | ED008     | 2022-12-21 | 09:00:00    | 18:00:00     | 09:00:00        |
| A020        | ED010     | 2022-12-21 | 09:00:00    | 18:00:00     | 09:00:00        |
| A021        | ED005     | 2022-12-21 | 09:00:00    | 18:00:00     | 09:00:00        |
| A022        | ED007     | 2022-12-21 | 09:00:00    | 18:00:00     | 09:00:00        |
| A023        | ED006     | 2022-12-21 | 09:00:00    | 18:00:00     | 09:00:00        |
| A024        | ED002     | 2022-12-22 | 09:00:00    | 18:00:00     | 09:00:00        |
| A025        | ED003     | 2022-12-22 | 09:00:00    | 18:00:00     | 09:00:00        |
| A026        | ED006     | 2022-12-22 | 09:00:00    | 18:00:00     | 09:00:00        |
| A027        | ED008     | 2022-12-22 | 09:00:00    | 18:00:00     | 09:00:00        |
| A028        | ED010     | 2022-12-22 | 09:00:00    | 18:00:00     | 09:00:00        |
| A029        | ED007     | 2022-12-22 | 09:00:00    | 18:00:00     | 09:00:00        |
| A030        | ED005     | 2022-12-22 | 09:00:00    | 18:00:00     | 09:00:00        |
| A031        | ED004     | 2022-12-26 | 09:00:00    | 18:00:00     | 09:00:00        |
| A032        | ED005     | 2022-12-26 | 09:00:00    | 18:00:00     | 09:00:00        |
| A033        | ED007     | 2022-12-26 | 09:00:00    | 18:00:00     | 09:00:00        |
| A034        | ED006     | 2022-12-26 | 09:00:00    | 18:00:00     | 09:00:00        |
| A035        | ED001     | 2022-12-27 | 09:00:00    | 18:00:00     | 09:00:00        |
| A036        | ED003     | 2022-12-27 | 09:00:00    | 18:00:00     | 09:00:00        |
| A037        | ED007     | 2022-12-27 | 09:00:00    | 18:00:00     | 09:00:00        |
| A038        | ED004     | 2022-12-27 | 09:00:00    | 18:00:00     | 09:00:00        |
| A039        | ED005     | 2022-12-27 | 09:00:00    | 18:00:00     | 09:00:00        |
| A040        | ED005     | 2022-12-28 | 09:00:00    | 18:00:00     | 09:00:00        |
| A041        | ED001     | 2022-12-28 | 09:00:00    | 18:00:00     | 09:00:00        |
| A042        | ED002     | 2022-12-28 | 09:00:00    | 18:00:00     | 09:00:00        |
| A043        | ED008     | 2022-12-28 | 09:00:00    | 18:00:00     | 09:00:00        |
| A044        | ED007     | 2022-12-28 | 09:00:00    | 18:00:00     | 09:00:00        |
| A045        | ED003     | 2022-12-28 | 09:00:00    | 18:00:00     | 09:00:00        |
| A046        | ED005     | 2022-12-29 | 09:00:00    | 18:00:00     | 09:00:00        |
| A047        | ED002     | 2022-12-29 | 09:00:00    | 18:00:00     | 09:00:00        |
| A048        | ED003     | 2022-12-29 | 09:00:00    | 18:00:00     | 09:00:00        |
| A049        | ED007     | 2022-12-29 | 09:00:00    | 18:00:00     | 09:00:00        |
| A050        | ED008     | 2022-12-29 | 09:00:00    | 18:00:00     | 09:00:00        |
+-------------+-----------+------------+-------------+--------------+----------------+
```

Employee Table

```
mysql> select * from employee;
+------------+----------------+---------------------------+----------+----------------------------+
| EmployeeID | Name           | Address                   | Phone    | Email                      |
+------------+----------------+---------------------------+----------+----------------------------+
| E001       | John Doe       | 123 Main St, City         | 555-1234 | john.doe@email.com         |
| E002       | Jane Smith     | 456 Oak Ave, Town         | 555-5678 | jane.smith@email.com       |
| E003       | Robert Johnson | 789 Pine Rd, Village      | 555-9876 | robert.j@email.com         |
| E004       | Sarah Brown    | 101 Elm Blvd, Metropolis  | 555-4321 | sarah.brown@email.com      |
| E005       | Alex Turner    | 202 Cedar Lane, Suburb    | 555-8765 | alex.turner@email.com      |
| E006       | Emma White     | 555 Birch Street, Town    | 555-3456 | emma.white@email.com       |
| E007       | David Miller   | 789 Oakwood Drive, City   | 555-7890 | david.miller@email.com     |
| E008       | Olivia Lee     | 321 Maple Ave, Suburb     | 555-2345 | olivia.lee@email.com       |
| E009       | Michael Wilson | 456 Pine Street, Village  | 555-6789 | michael.wilson@email.com   |
| E010       | Sophia Davis   | 987 Cedar Lane, Town      | 555-1236 | sophia.davis@email.com     |
+------------+----------------+---------------------------+----------+----------------------------+
```

Employee Department Mapping Table

```
mysql> select * from `Employee-Department Mapping`;
+-----------+------------+--------------+----------------------+-------------+
| EmpDeptID | EmployeeID | DepartmentID | JobTitle             | JoiningDate |
+-----------+------------+--------------+----------------------+-------------+
| ED001     | E001       | D001         | Software Engineer    | 2021-07-15  |
| ED002     | E002       | D002         | HR Specialist        | 2022-04-02  |
| ED003     | E003       | D004         | Marketing Manager    | 2023-11-20  |
| ED004     | E004       | D004         | Sales Executive      | 2020-09-08  |
| ED005     | E005       | D001         | IT Manager           | 2021-12-30  |
| ED006     | E006       | D003         | Accountant           | 2022-06-18  |
| ED007     | E007       | D005         | Project Manager      | 2020-03-12  |
| ED008     | E008       | D004         | Marketing Specialist | 2023-02-25  |
| ED009     | E009       | D002         | Data Analyst         | 2021-08-04  |
| ED010     | E010       | D001         | Software Developer   | 2022-10-14  |
+-----------+------------+--------------+----------------------+-------------+
```

Number of Leaves taken by employees

```
mysql> select `Employee-Department Mapping`.EmpDeptID,Employee.Name,
    -> count(distinct DateList.Date) as NumberOfLeaves
    -> from `Employee-Department Mapping` inner join Employee on
    -> `Employee-Department Mapping`.EmployeeID = Employee.EmployeeID
    -> cross join (select distinct date from attendance) DateList
    -> left join Attendance on
    -> `Employee-Department Mapping`.EmpDeptID = Attendance.EmpDeptID
    -> and DateList.Date = Attendance.Date
    -> where Attendance.EmpdeptID is NULL
    -> group by `Employee-Department Mapping`.EmpDeptID,Employee.Name
    -> order by `Employee-Department Mapping`.EmpDeptID;
+-----------+----------------+----------------+
| EmpDeptID | Name           | NumberOfLeaves |
+-----------+----------------+----------------+
| ED001     | John Doe       |              4 |
| ED002     | Jane Smith     |              4 |
| ED003     | Robert Johnson |              2 |
| ED004     | Sarah Brown    |              4 |
| ED006     | Emma White     |              6 |
| ED007     | David Miller   |              2 |
| ED008     | Olivia Lee     |              3 |
| ED009     | Michael Wilson |              9 |
| ED010     | Sophia Davis   |              6 |
+-----------+----------------+----------------+
```

1. List the employees who were not present during 21-12-2022 to 27-12-2022

```
mysql> select `Employee-Department Mapping`.EmpDeptId,Employee.Name,SearchDate.Date
    -> from `Employee-Department Mapping` inner join Employee on
    -> `Employee-Department Mapping`.EmployeeID = Employee.EmployeeID inner join (
    -> select distinct Date from Attendance where Date between '2022-12-21' and '2022-12-27') SearchDate
    -> where not exists(
    -> select 1 from Attendance where `Employee-Department Mapping`.EmpDeptID = Attendance.EmpDeptID and
    -> SearchDate.Date = Attendance.Date)
    -> order by SearchDate.Date;
+-----------+----------------+------------+
| EmpDeptId | Name           | Date       |
+-----------+----------------+------------+
| ED009     | Michael Wilson | 2022-12-21 |
| ED002     | Jane Smith     | 2022-12-21 |
| ED009     | Michael Wilson | 2022-12-22 |
| ED004     | Sarah Brown    | 2022-12-22 |
| ED001     | John Doe       | 2022-12-22 |
| ED010     | Sophia Davis   | 2022-12-26 |
| ED009     | Michael Wilson | 2022-12-26 |
| ED008     | Olivia Lee     | 2022-12-26 |
| ED003     | Robert Johnson | 2022-12-26 |
| ED002     | Jane Smith     | 2022-12-26 |
| ED001     | John Doe       | 2022-12-26 |
| ED010     | Sophia Davis   | 2022-12-27 |
| ED009     | Michael Wilson | 2022-12-27 |
| ED008     | Olivia Lee     | 2022-12-27 |
| ED006     | Emma White     | 2022-12-27 |
| ED002     | Jane Smith     | 2022-12-27 |
+-----------+----------------+------------+
```

2. List all the employees who have loss of pay (Assumed loss of pay occurs when number of leaves is greater than 5)

```
mysql> select `Employee-Department Mapping`.EmpDeptID,Employee.Name,
    -> count(distinct DateList.Date) as NumberOfLeaves
    -> from `Employee-Department Mapping` inner join Employee on
    -> `Employee-Department Mapping`.EmployeeID = Employee.EmployeeID
    -> cross join (select distinct date from attendance) DateList
    -> left join Attendance on
    -> `Employee-Department Mapping`.EmpDeptID = Attendance.EmpDeptID
    -> and DateList.Date = Attendance.Date
    -> where Attendance.EmpdeptID is NULL
    -> group by `Employee-Department Mapping`.EmpDeptID,Employee.Name
    -> having NumberOfLeaves > 5
    -> order by `Employee-Department Mapping`.EmpDeptID;
+-----------+----------------+----------------+
| EmpDeptID | Name           | NumberOfLeaves |
+-----------+----------------+----------------+
| ED006     | Emma White     |              6 |
| ED009     | Michael Wilson |              9 |
| ED010     | Sophia Davis   |              6 |
+-----------+----------------+----------------+
```