

Employee Check In and check out Calculation

ASSIGNMENT

To achieve this using SQL, we can follow these steps:

1. **Create the table:** Set up the table structure to store the check-in and check-out records.
2. **Insert the sample data:** Add the sample check-in and check-out records.
3. **Query the table:** Write an SQL query to compute the required fields for the output table.

Step 1: Create the Table

```
CREATE TABLE EmployeeLogins (  
    EmpID INT,  
    Name VARCHAR(50),  
    CheckInTime DATETIME,  
    CheckOutTime DATETIME  
);
```

Step 2: Insert the Sample Data

```
INSERT INTO EmployeeLogins (EmpID, Name, CheckInTime,  
CheckOutTime) VALUES  
(1, 'Him', '2024-03-01 10:08:00', '2024-03-01 12:00:00'),  
(1, 'Him', '2024-03-01 12:30:00', '2024-03-01 15:00:00'),  
(1, 'Him', '2024-03-01 15:30:00', '2024-03-01 18:08:00'),  
(2, 'Raj', '2024-03-01 10:10:00', '2024-03-01 12:00:00'),  
(2, 'Raj', '2024-03-01 13:00:00', '2024-03-01 15:12:00'),  
(3, 'Anu', '2024-03-01 10:12:00', '2024-03-01 12:00:00'),  
(3, 'Anu', '2024-03-01 13:00:00', '2024-03-01 18:35:00');
```

Step 3: Write the Query

```

SELECT
    EmpID,
    Name,
    MIN(CheckInTime) AS FirstCheckInTime,
    MAX(CheckOutTime) AS LastCheckOutTime,
    COUNT(CheckOutTime) AS TotalOutCount,
    SEC_TO_TIME(SUM(TIMESTAMPDIFF(SECOND, CheckInTime,
CheckOutTime))) AS TotalWorkHours
FROM
    EmployeeLogins
GROUP BY
    EmpID, Name;

```

TERMS

IN(CheckInTime): Finds the earliest check-in time for each employee (FirstCheckInTime).

MAX(CheckOutTime): Finds the latest check-out time for each employee (LastCheckOutTime).

COUNT(CheckOutTime): Counts the number of times each employee has checked out during the day (TotalOutCount).

SUM(TIMESTAMPDIFF(SECOND, CheckInTime, CheckOutTime)): Calculates the total work hours in seconds.

SEC_TO_TIME: Converts the total work hours from seconds to the HH:MMformat.

Adjusting to Output Format HH

```

SELECT
    EmpID,
    Name,
    DATE_FORMAT(MIN(CheckInTime), '%d-%m-%Y %H:%i') AS FirstCheckInTime,
    DATE_FORMAT(MAX(CheckOutTime), '%d-%m-%Y %H:%i') AS LastCheckOutTime,
    COUNT(CheckOutTime) AS TotalOutCount,
    CONCAT(LPAD(FLOOR(SUM(TIMESTAMPDIFF(SECOND, CheckInTime, CheckOutTime)) / 3600),
        '0'), ': ',
        LPAD(FLOOR((SUM(TIMESTAMPDIFF(SECOND, CheckInTime, CheckOutTime)) % 3600) /
60),
        2, '0')) AS TotalWorkHours
FROM
    EmployeeLogins
GROUP BY
    EmpID, Name;

```

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