PROJECT BASED LEARNING RECORD

On

UCS4001

DATABASE MANAGEMENT SYSTEM

SCHOOL OF COMPUTER SCIENCE AND ENGINERING

IILM UNIVERSITY

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SECTION: 2CSE10

EMPLOYEE MANAGEMENT SYSTEM

1. Entity: DEPARTMENT

Primary Key:

- DEPTNO

Attributes:

- DEPT_NAME
- CURR_PROJECTS
- POSITIONS
- BUDGET

Description:

The Department entity stores information about different departments within the organization, including their name, number of current projects, available positions, and allocated budget.

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2. Entity: EMPLOYEE

Primary Key:

- EMPID

Attributes:

- ENAME
- E_PHONE_NO
- EDATE (Date of Joining)
- DEPTNO (Foreign Key)

Description:

The Employee entity stores details of employees working in the organization. Each employee belongs to exactly one department.

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3. Entity: SALARY

Primary Key:

- EMPID

Attributes:

- ESAL (Basic Salary)
- COMMISSION
- ANNUAL_INCREMENT_PERCENT
- TAX_DEDUCTION

Description:

The Salary entity stores salary details of employees. Each employee has exactly one salary record.

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4. Entity: PROJECTS

Primary Key:

- PID

Attributes:

- PNAME
- DEADLINE
- PROJECT_HEAD
- SUBMISSION_TYPE
- DEPTNO (Foreign Key)

Description:

The Projects entity stores details of projects handled by departments. Each project is managed by one department.

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5. Entity: ATTENDANCE

Primary Key:

- ATTEND_ID

Attributes:

- DATE_OF_ATTENDANCE
- CHECK_IN_TIME
- CHECK_OUT_TIME
- ATTENDED

- EMPID (Foreign Key)

Description:

The Attendance entity records daily attendance details of employees.

Relationships and Cardinalities

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1. Department – Employee Relationship

- One department can have many employees.
- Each employee belongs to exactly one department.

Cardinality:

One-to-Many (1 : M)

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2. Department – Projects Relationship

- One department can manage many projects.
- Each project belongs to exactly one department.

Cardinality:

One-to-Many (1 : M)

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3. Employee – Salary Relationship

- One employee has exactly one salary record.
- One salary record belongs to exactly one employee.

Cardinality:

One-to-One (1 : 1)

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4. Employee – Attendance Relationship

- One employee can have many attendance records.
- Each attendance record belongs to exactly one employee.

Cardinality:

One-to-Many (1 : M)

📌 Important Structural Notes

- All entities have primary keys to uniquely identify records.
- Foreign keys are used to maintain referential integrity.
- The database follows relational modeling principles.
- The structure supports efficient data organization and avoids unnecessary redundancy.