SLIIT BUSINESS SCHOOL

1. Course: **Bachelor of Business Administration**
2. Year: **2**
3. Semester: **2**
4. Module code: **IM2675**
5. Module Name: **Database Management System**
6. Lecture-in-charge: **Ms.Thisuru**
7. Title of assignement: **"Employee Management System"**

Submitted by: **BM22503732 M.R.A.Malik**

BM22144508 M.N.M.Anshaf

Contents

Hypothetical Scenario of an Employee management system

In today's world human resource is a most powerful weapon in the corporate world. So, it's essential to manage effectively and efficiently. To increase the organization efficiency Employee management system, which is a software component that helps to manage employee-based activities such as employee hiring, leaving, and retiring. This will enhance the employee experience, makes organization better decisions and improve the accuracy and security of data.

In our Employee Management System, we can identify several key features. That are,

1. **Tracking employee private details**

   The system stores and manages extensive employee data, including personal information. The centralized strong of employee information guarantees that all important facts are immediately accessible, allowing for more efficient staff administration.

2. **Communication Hierarchy (Employee-Manager relationship)**

   The system facilitates the assignement of department managers, attaching employees to department based on department managers. This guarantees that each department has a designated manager, and the system can maintain historical data on changes in department leadership. It allows employees to be assigned to a specific management, making reporting hierarchies easier to mange and employee-manager relationships more effective.

3. **Training and development**

   Employee management systems are commonly utilized for training and development inside organization. This allows employees to readily access training materials and monitor their progress through the system. This tool allows HR to monitor workers career growth inside the organization and helps managers allocate positions and responsibilities depending on their employment history.

Main Requirements of Employee Management System

1. Employee
   *Emp_no
   *Birth_date
   *First_name
   *Last_name
   *Gender
   *Hire_date
   *Phone_num
   *e-mail
2. Department
   *Dept_no
   *Dept_name
3. Department_managers
   *Emp_no
   *Dept_no
   *From_date
   *To_date
4. Employee Managers
   *Emp_no
   *Dept_no
   *Manager_no
5. Job_title
   *Emp_no
   *Title
   *From_date
   *To_date

6. CSR_Project

    *Project_ID

    *Project_name

    *Project_Description

    *Start_date

    *End_date

7. Payroll

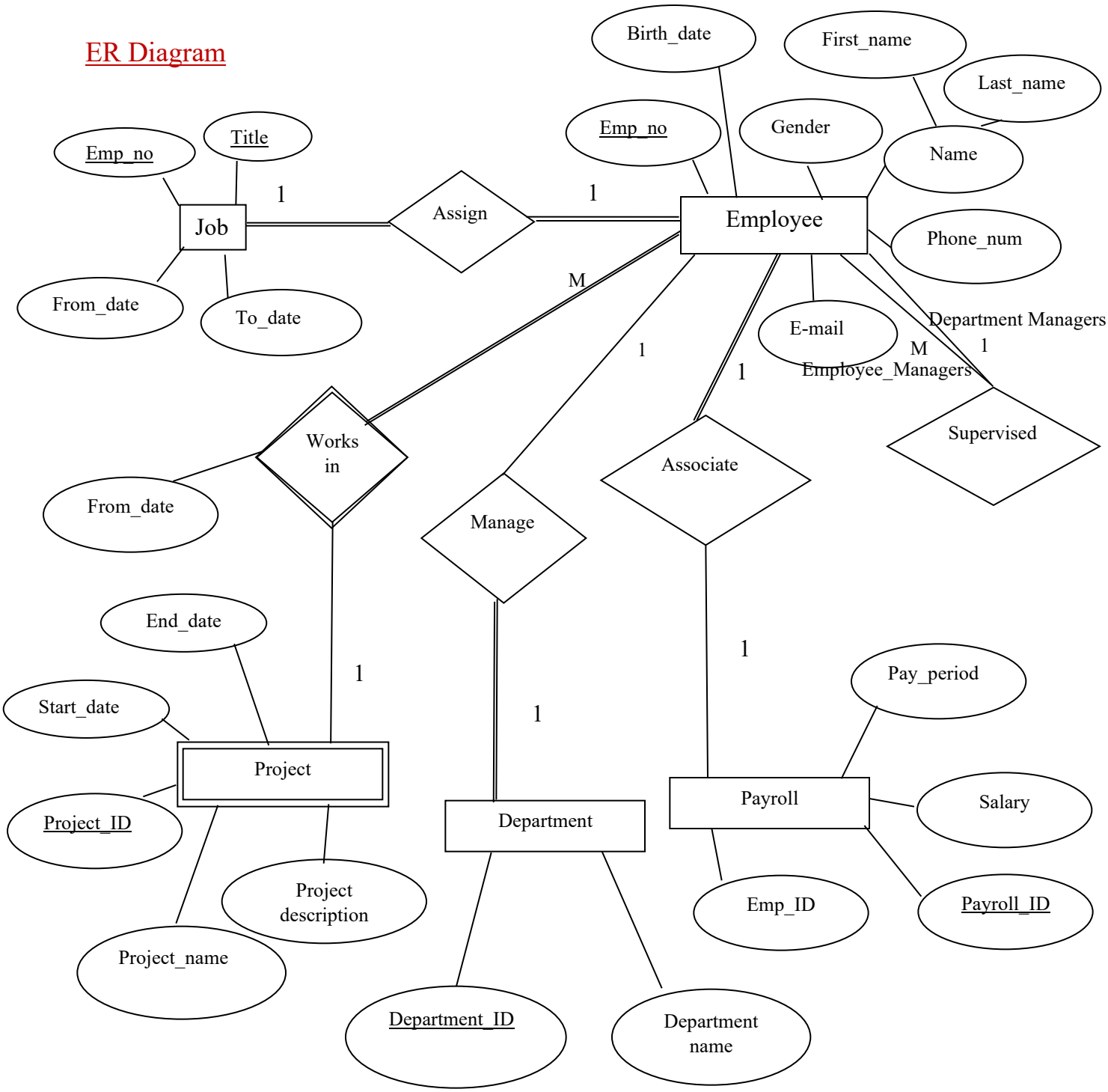
    *Emp_ID

    *Payroll_ID

    *Pay_Period

    *Salary

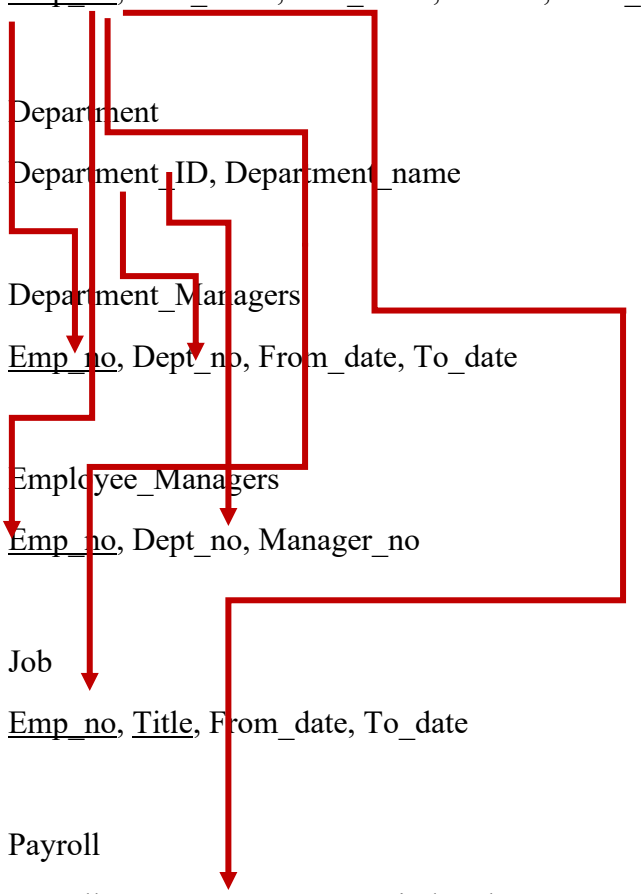
ER Diagram


Birth_date
First_name
Last_name
Emp_no
Gender
Name
Title
Emp_no
1
1
Job
Assign
Employee
Phone_num
From_date
To_date
M
E-mail
Department Managers
1
M
Employee_Managers
1
1
Works in
Associate
Supervised
From_date
Manage
End_date
1
1
Start_date
Pay_period
Project
Payroll
Salary
Project_ID
Department
Emp_ID
Payroll_ID
Project description
Project_name
Department_ID
Department name

Relational Schema

Employee

Emp_no, First_name, Last_name, Gender, Birth_date, Phone_num, E-mail



Department

Department_ID, Department_name

Department_Managers

Emp_no, Dept_no, From_date, To_date

Employee_Managers

Emp_no, Dept_no, Manager_no

Job

Emp_no, Title, From_date, To_date

Payroll

Payroll_ID, Emp_ID, Pay_period, Salary

Project

Project_ID, Project_name, Project_description, Start_date, End_date

Creating of Database table

Relation-1

Create Employee table

```
CREATE TABLE Employee (
  Emp_no char(5),
  Birth_date datetime,
  First_name varchar(10),
  Last_name varchar(10),
  Gender char(1),
  Hire_date datetime,
  Phone_Num varchar(15),
  E_mail varchar(50),
  Constraint pk_employee Primary key (Emp_no));
```

Insert Employee table

```
INSERT INTO Employee (Emp_no, Birth_date, First_Name, Last_Name, Gender, Hire_Date, Phone_num, E_mail)
VALUES
(10000, '2001-09-11', 'David', 'Brown', 'M', '2019-12-14', '2616515426', 'davidbrown2149@example.com'),
(10001, '1983-07-12', 'Laurence', 'Smith', 'F', '2017-11-24', '5914872280', 'laurencesmith6534@example.com'),
(10002, '1986-12-27', 'Lucas', 'Jackson', 'M', '2018-02-03', '1726060078', 'lucasjackson7609@example.com'),
(10003, '2004-12-25', 'James', 'Smith', 'F', '2024-12-07', '7100277860', 'jamessmith5439@example.com'),
(10004, '1986-03-13', 'Mia', 'Anderson', 'F', '2022-11-25', '3459701474', 'miaanderson6844@example.com'),
(10005, '1996-10-12', 'Emily', 'Anderson', 'F', '2023-09-28', '2031890094', 'emilyanderson6562@example.com'),
(10006, '1989-05-28', 'Ben', 'Taylor', 'F', '2014-02-12', '7398786658', 'bentaylor9806@example.com'),
(10007, '1987-10-28', 'Liam', 'Brown', 'M', '2015-11-06', '8664109058', 'liambrown1140@example.com'),
(10008, '1984-03-07', 'Ella', 'Anderson', 'M', '2016-06-06', '1728753807', 'ellaanderson1354@example.com'),
(10009, '1991-02-04', 'Olivia', 'Brown', 'F', '2020-06-03', '8181133235', 'oliviabrown5152@example.com'),
(10010, '2005-06-23', 'James', 'Will', 'M', '2017-10-05', '3156563732', 'jameswill4755@example.com'),
(10011, '1983-11-09', 'Sophia', 'White', 'F', '2020-12-15', '5110150218', 'sophiawhite8683@example.com'),
(10012, '2001-08-02', 'Ben', 'Anderson', 'F', '2022-01-16', '9469121928', 'benanderson9566@example.com'),
(10013, '1983-09-10', 'Mia', 'Will', 'F', '2018-05-27', '6543998533', 'miawill9092@example.com'),
(10014, '1992-09-10', 'James', 'White', 'F', '2019-01-11', '2536209331', 'jameswhite1951@example.com'),
(10015, '2004-11-18', 'Emma', 'Taylor', 'F', '2017-04-25', '4450575103', 'emmataylor8618@example.com'),
(10016, '1997-05-09', 'Laurence', 'Taylor', 'M', '2016-12-03', '5667810072', 'laurencetaylor8012@example.com'),
(10017, '1985-10-16', 'Liam', 'Stokes', 'M', '2014-02-28', '2635083161', 'liamstokes1068@example.com'),
(10018, '1997-07-14', 'Sophia', 'Jackson', 'F', '2017-08-21', '7464334352', 'sophiajackson4722@example.com'),
(10019, '1990-08-09', 'James', 'Will', 'F', '2021-01-18', '9284131364', 'jameswill4054@example.com'),
(10020, '1992-07-27', 'Ben', 'Anderson', 'M', '2014-01-10', '2932237467', 'benanderson1059@example.com'),
(10021, '1998-08-15', 'James', 'Johnson', 'F', '2016-02-21', '8811158182', 'jamesjohnson7034@example.com'),
(10022, '2003-03-24', 'Ben', 'Davis', 'M', '2018-02-04', '2969649891', 'bendavis8526@example.com'),
(10023, '1985-02-09', 'Lucas', 'Davis', 'M', '2022-03-07', '4231166923', 'lucasdavis9740@example.com'),
(10024, '1997-02-05', 'John', 'Brown', 'M', '2020-08-07', '8488363712', 'johnbrown8151@example.com'),
(10025, '2000-12-30', 'Lucas', 'Stokes', 'M', '2022-04-26', '5366962420', 'lucasstokes2973@example.com'),
(10026, '1995-11-23', 'Olivia', 'Johnson', 'F', '2016-03-09', '2059395749', 'oliviajohnson2354@example.com'),
(10027, '1985-12-07', 'William', 'Garcia', 'F', '2018-10-26', '9730067219', 'williamgarcia8906@example.com'),
(10028, '1989-06-03', 'Mia', 'Garcia', 'F', '2015-01-26', '2014387331', 'miagarcia4397@example.com'),
(10029, '1992-07-29', 'Liam', 'Martinez', 'M', '2016-07-18', '8627300639', 'liammartinez3510@example.com'),
(10030, '1997-10-07', 'David', 'Stokes', 'M', '2020-10-24', '9909494427', 'davidstokes8245@example.com');
```

Employee table

Emp_no	Birth_date	First_name	Last_name	Gender	Hire_date	Phone_Num	E_mail
10000	2001-09-11 00:00:00	David	Brown	M	2019-12-14 00:00:00	2616515426	davidbrown2149@example.com
10001	1983-07-12 00:00:00	Laurence	Smith	F	2017-11-24 00:00:00	5914872280	laurencesmith6534@example.com
10002	1986-12-27 00:00:00	Lucas	Jackson	M	2018-02-03 00:00:00	1726060078	lucasjackson7609@example.com
10003	2004-12-25 00:00:00	James	Smith	F	2024-12-07 00:00:00	7100277860	jamessmith5439@example.com
10004	1986-03-13 00:00:00	Mia	Anderson	F	2022-11-25 00:00:00	3459701474	miaanderson6844@example.com
10005	1996-10-12 00:00:00	Emily	Anderson	F	2023-09-28 00:00:00	2031890094	emilyanderson6562@example.com
10006	1989-05-28 00:00:00	Ben	Taylor	F	2014-02-12 00:00:00	7398786658	bentaylor9806@example.com
10007	1987-10-28 00:00:00	Liam	Brown	M	2015-11-06 00:00:00	8664109058	liambrown1140@example.com
10008	1984-03-07 00:00:00	Ella	Anderson	M	2016-06-06 00:00:00	1728753807	ellaanderson1354@example.com
10009	1991-02-04 00:00:00	Olivia	Brown	F	2020-06-03 00:00:00	8181133235	oliviabrown5152@example.com
10010	2005-06-23 00:00:00	James	Will	M	2017-10-05 00:00:00	3156563732	jameswill4755@example.com
10011	1983-11-09 00:00:00	Sophia	White	F	2020-12-15 00:00:00	5110150218	sophiawhite8683@example.com
10012	2001-08-02 00:00:00	Ben	Anderson	F	2022-01-16 00:00:00	9469121928	benanderson9566@example.com
10013	1983-09-10 00:00:00	Mia	Will	F	2018-05-27 00:00:00	6543998533	miawill9092@example.com
10014	1992-09-10 00:00:00	James	White	F	2019-01-11 00:00:00	2536209331	jameswhite1951@example.com

Emp_no	Birth_date	First_name	Last_name	Gender	Hire_date	Phone_Num	E_mail
10014	1992-09-10 00:00:00	James	White	F	2019-01-11 00:00:00	2536209331	jameswhite1951@example.com
10015	2004-11-18 00:00:00	Emma	Taylor	F	2017-04-25 00:00:00	4450575103	emmataylor8618@example.com
10016	1997-05-09 00:00:00	Laurence	Taylor	M	2016-12-03 00:00:00	5667810072	laurencetaylor8012@example.com
10017	1985-10-16 00:00:00	Liam	Stokes	M	2014-02-28 00:00:00	2635083161	liamstokes1068@example.com
10018	1997-07-14 00:00:00	Sophia	Jackson	F	2017-08-21 00:00:00	7464334352	sophiajackson4722@example.com
10019	1990-08-09 00:00:00	James	Will	F	2021-01-18 00:00:00	9284131364	jameswill4054@example.com
10020	1992-07-27 00:00:00	Ben	Anderson	M	2014-01-10 00:00:00	2932237467	benanderson1059@example.com
10021	1998-08-15 00:00:00	James	Johnson	F	2016-02-21 00:00:00	8811158182	jamesjohnson7034@example.com
10022	2003-03-24 00:00:00	Ben	Davis	M	2018-02-04 00:00:00	2969649891	bendavis8526@example.com
10023	1985-02-09 00:00:00	Lucas	Davis	M	2022-03-07 00:00:00	4231166923	lucasdavis9740@example.com
10024	1997-02-05 00:00:00	John	Brown	M	2020-08-07 00:00:00	8488363712	johnbrown8151@example.com
10025	2000-12-30 00:00:00	Lucas	Stokes	M	2022-04-26 00:00:00	5366962420	lucasstokes2973@example.com
10026	1995-11-23 00:00:00	Olivia	Johnson	F	2016-03-09 00:00:00	2059395749	oliviajohnson2354@example.com
10027	1985-12-07 00:00:00	William	Garcia	F	2018-10-26 00:00:00	9730067219	williamgarcia8906@example.com
10028	1989-06-03 00:00:00	Mia	Garcia	F	2015-01-26 00:00:00	2014387331	miagarcia4397@example.com
10029	1992-07-29 00:00:00	Liam	Martinez	M	2016-07-18 00:00:00	8627300639	liammartinez3510@example.com
10030	1997-10-07 00:00:00	David	Stokes	M	2020-10-24 00:00:00	9909494427	davidstokes8245@example.com

Relation 02

Create Department table

```
49 • CREATE TABLE Department (
50     Dept_no Char(04),
51     Dept_name Varchar(20),
52     Constraint pk_Department Primary key(Dept_no));
53
```

Insert Values to Department table

```
56 • INSERT INTO Department (Dept_no, Dept_name)
57   VALUES
58   ('0001', 'Finance'),
59   ('0002', 'HR'),
60   ('0003', 'Marketing'),
61   ('0004', 'Operation'),
62   ('0005', 'Customer Service'),
63   ('0006', 'Sales'),
64   ('0007', 'IT');
```

Department table

Dept_no	Dept_name
0001	Finance
0002	HR
0003	Marketing
0004	Operation
0005	Customer Service
0006	Sales
0007	IT
NULL	NULL

Relation 3

Create Department managers' table

```
66 • CREATE TABLE Department_manager(
67     Emp_no char(05),
68     Dept_no char(04),
69     From_date datetime,
70     To_date datetime,
71     Constraint pk_dept_man Primary key (Emp_no),
72     Constraint fk_deptman1 Foreign key (Emp_no) References Employee (Emp_no),
73     Constraint fk_deptman2 Foreign key (Dept_no) References Department (Dept_no));
74
```

Insert Department mangers' table

```
75 • INSERT INTO Department_manager (Emp_no, Dept_no, From_date, To_date)
76   VALUES
77   ('10012', '0001', '2021-03-15', '2026-08-21'),
78   ('10005', '0002', '2022-01-10', '2025-05-19'),
79   ('10018', '0003', '2020-06-07', '2027-09-30'),
80   ('10007', '0004', '2023-04-23', '2025-11-11'),
81   ('10025', '0005', '2020-09-09', '2026-02-14'),
82   ('10016', '0006', '2022-07-01', '2027-04-17'),
83   ('10021', '0007', '2021-12-01', '2026-10-25');
84
```

Department managers table

Emp_no	Dept_no	From_date	To_date
10003	0001	2021-03-15	2026-08-21
10005	0002	2022-01-10	2025-05-19
10007	0003	2020-06-07	2027-09-30
10025	0004	2023-04-23	2025-11-11
10016	0005	2020-09-09	2026-02-14
10021	0006	2022-07-01	2027-04-17
10018	0007	2021-12-01	2026-10-25

Relations 4

Create Employee managers' table

```
84
85 • CREATE TABLE Employee_Manager (
86                          Emp_no char (05),
87                          Dept_no char (04),
88                          Manager_no char (05),
89                          Constraint pk_dept_man Primary key (Emp_no, Dept_no, Manager_no),
90                          Constraint fk_deptman3 Foreign key (Emp_no) References Employee (Emp_no),
91                          Constraint fk_deptman4 Foreign key (Dept_no) References Department (Dept_no),
92                          Constraint fk_deptman5 Foreign key (Manager_no) References Employee (Emp_no));
```

Insert Employee managers' table

```
93 • INSERT INTO Employee_Manager (Emp_no, Dept_no, Manager_no) VALUES
94    ('10003', '0001', '10012'),
95    ('10004', '0001', '10012'),
96    ('10006', '0001', '10012'),
97    ('10008', '0002', '10005'),
98    ('10009', '0002', '10005'),
99    ('10010', '0002', '10005'),
100   ('10011', '0003', '10018'),
101   ('10012', '0003', '10018'),
102   ('10013', '0003', '10018'),
103   ('10014', '0004', '10007'),
104   ('10015', '0004', '10007'),
105   ('10017', '0004', '10007'),
106   ('10019', '0005', '10025'),
107   ('10020', '0005', '10025'),
108   ('10022', '0005', '10025'),
109   ('10023', '0006', '10016'),
110   ('10024', '0006', '10016'),
111   ('10026', '0006', '10016'),
112   ('10027', '0007', '10021'),
113   ('10028', '0007', '10021'),
114   ('10029', '0007', '10021'),
115   ('10030', '0007', '10021');
```

Employee managers' table

Emp_no	Dept_no	Manager_no
10003	0001	10012
10004	0001	10012
10006	0001	10012
10008	0002	10005
10009	0002	10005
10010	0002	10005
10011	0003	10018
10012	0003	10018
10013	0003	10018
10014	0004	10007
10015	0004	10007
10017	0004	10007
10019	0005	10025
10020	0005	10025
10022	0005	10025
10023	0006	10016
10024	0006	10016
10026	0006	10016
10027	0007	10021
10028	0007	10021
10029	0007	10021
10030	0007	10021

Relations 5

Create Job table

```
CREATE TABLE Job (
    Emp_no char (05),
    Title varchar (50),
    From_date datetime,
    To_date datetime,
    Constraint pk_job Primary key (Emp_no),
    Constraint fk_job Foreign key (Emp_no) References Employee (Emp_no));
```

Insert Job table

```
INSERT INTO Job (Emp_no, Title, From_date, To_date) VALUES
('10003', 'Accountant', '2020-01-15', '2025-01-15'), -- Finance Manager
('10004', 'Financial Analyst', '2020-02-01', '2025-02-01'), -- Finance Employee
('10005', 'HR Manager', '2020-03-10', '2025-03-10'), -- HR Manager
('10006', 'Recruiter', '2020-04-05', '2025-04-05'), -- HR Employee
('10007', 'Marketing Manager', '2020-05-01', '2025-05-01'), -- Marketing Manager
('10008', 'Social Media Specialist', '2020-06-01', '2025-06-01'), -- Marketing Employee
('10009', 'Operations Manager', '2020-07-01', '2025-07-01'), -- Operation Manager
('10010', 'Quality Assurance', '2020-08-01', '2025-08-01'), -- Operation Employee
('10011', 'Customer Service Manager', '2020-09-01', '2025-09-01'), -- Customer Service Manager
('10012', 'Support Agent', '2020-10-01', '2025-10-01'), -- Customer Service Employee
('10013', 'Sales Manager', '2020-11-01', '2025-11-01'), -- Sales Manager
('10014', 'Sales Associate', '2020-12-01', '2025-12-01'), -- Sales Employee
('10015', 'IT Manager', '2020-01-15', '2025-01-15'), -- IT Manager
('10016', 'Software Developer', '2020-02-01', '2025-02-01'), -- IT Employee
('10017', 'Accountant', '2020-01-15', '2025-01-15'), -- Finance Employee
('10018', 'Financial Analyst', '2020-02-01', '2025-02-01'), -- Finance Employee
('10019', 'HR Manager', '2020-03-10', '2025-03-10'), -- HR Employee
('10020', 'Recruiter', '2020-04-05', '2025-04-05'), -- HR Employee
('10021', 'Marketing Manager', '2020-05-01', '2025-05-01'), -- Marketing Employee
('10022', 'Social Media Specialist', '2020-06-01', '2025-06-01'), -- Marketing Employee
('10023', 'Operations Manager', '2020-07-01', '2025-07-01'), -- Operation Employee
('10024', 'Quality Assurance', '2020-08-01', '2025-08-01'), -- Operation Employee
('10025', 'Customer Service Manager', '2020-09-01', '2025-09-01'), -- Customer Service Employee
('10026', 'Support Agent', '2020-10-01', '2025-10-01'), -- Customer Service Employee
('10027', 'Sales Manager', '2020-11-01', '2025-11-01'), -- Sales Employee
('10028', 'Sales Associate', '2020-12-01', '2025-12-01'), -- Sales Employee
('10029', 'IT Manager', '2020-01-15', '2025-01-15'), -- IT Employee
('10030', 'Software Developer', '2020-02-01', '2025-02-01'); -- IT Employee
```

Job table

Emp_no	Title	From_date	To_date
10003	Accountant	2020-01-15 00:00:00	2025-01-15 00:00:00
10004	Financial Analyst	2020-02-01 00:00:00	2025-02-01 00:00:00
10005	HR Manager	2020-03-10 00:00:00	2025-03-10 00:00:00
10006	Recruiter	2020-04-05 00:00:00	2025-04-05 00:00:00
10007	Marketing Manager	2020-05-01 00:00:00	2025-05-01 00:00:00
10008	Social Media Specialist	2020-06-01 00:00:00	2025-06-01 00:00:00
10009	Operations Manager	2020-07-01 00:00:00	2025-07-01 00:00:00
10010	Quality Assurance	2020-08-01 00:00:00	2025-08-01 00:00:00
10011	Customer Service Manager	2020-09-01 00:00:00	2025-09-01 00:00:00
10012	Support Agent	2020-10-01 00:00:00	2025-10-01 00:00:00
10013	Sales Manager	2020-11-01 00:00:00	2025-11-01 00:00:00
10014	Sales Associate	2020-12-01 00:00:00	2025-12-01 00:00:00
10015	IT Manager	2020-01-15 00:00:00	2025-01-15 00:00:00
10016	Software Developer	2020-02-01 00:00:00	2025-02-01 00:00:00
10017	Accountant	2020-01-15 00:00:00	2025-01-15 00:00:00
10018	Financial Analyst	2020-02-01 00:00:00	2025-02-01 00:00:00
10019	HR Manager	2020-03-10 00:00:00	2025-03-10 00:00:00
10020	Recruiter	2020-04-05 00:00:00	2025-04-05 00:00:00
10021	Marketing Manager	2020-05-01 00:00:00	2025-05-01 00:00:00
10022	Social Media Specialist	2020-06-01 00:00:00	2025-06-01 00:00:00
10023	Operations Manager	2020-07-01 00:00:00	2025-07-01 00:00:00
10024	Quality Assurance	2020-08-01 00:00:00	2025-08-01 00:00:00
10025	Customer Service Manager	2020-09-01 00:00:00	2025-09-01 00:00:00
10026	Support Agent	2020-10-01 00:00:00	2025-10-01 00:00:00
10027	Sales Manager	2020-11-01 00:00:00	2025-11-01 00:00:00
10028	Sales Associate	2020-12-01 00:00:00	2025-12-01 00:00:00
10029	IT Manager	2020-01-15 00:00:00	2025-01-15 00:00:00
10030	Software Developer	2020-02-01 00:00:00	2025-02-01 00:00:00

Relations 6

Create Payroll Table

```
CREATE TABLE Payroll (
    Emp_ID char (05),
    Payroll_ID char(03),
    By_period varchar(20),
    Salary int,
    Constraint pk_job Primary key (Emp_ID, Payroll_ID),
    Constraint fk_job1 Foreign key (Emp_ID) References Employee (Emp_no));
```

Insert payroll table

```
INSERT INTO Payroll (Emp_ID, Payroll_ID, By_period, Salary) VALUES
('10003', '001', 'Semi-Annually', 700000),
('10005', '002', 'Semi-Annually', 800000),
('10007', '003', 'Semi-Annually', 900000),
('10025', '004', 'Semi-Annually', 750000),
('10016', '005', 'Semi-Annually', 850000),
('10021', '006', 'Semi-Annually', 600000),
('10018', '007', 'Semi-Annually', 950000),
('10000', '008', 'Monthly', 400000),
('10001', '009', 'Weekly', 350000),
('10002', '010', 'Monthly', 300000),
('10004', '011', 'Weekly', 380000),
('10006', '012', 'Monthly', 410000),
('10008', '013', 'Weekly', 370000),
('10009', '014', 'Monthly', 330000),
('10010', '015', 'Weekly', 360000),
('10011', '016', 'Monthly', 390000),
('10012', '017', 'Weekly', 420000),
('10013', '018', 'Monthly', 340000),
('10014', '019', 'Weekly', 450000),
('10015', '020', 'Monthly', 480000),
('10017', '021', 'Weekly', 460000),
('10019', '022', 'Monthly', 430000),
('10020', '023', 'Weekly', 470000),
('10022', '024', 'Monthly', 490000),
('10023', '025', 'Weekly', 500000),
('10024', '026', 'Monthly', 520000),
('10026', '027', 'Weekly', 510000),
('10027', '028', 'Monthly', 530000),
('10028', '029', 'Weekly', 540000),
('10029', '030', 'Monthly', 550000),
('10030', '031', 'Weekly', 560000);
```

Payroll table

Emp_ID	Payroll_ID	By_period	Salary
10000	008	Monthly	400000
10001	009	Weekly	350000
10002	010	Monthly	300000
10003	001	Semi-Annually	700000
10004	011	Weekly	380000
10005	002	Semi-Annually	800000
10006	012	Monthly	410000
10007	003	Semi-Annually	900000
10008	013	Weekly	370000
10009	014	Monthly	330000
10010	015	Weekly	360000
10011	016	Monthly	390000
10012	017	Weekly	420000
10013	018	Monthly	340000
10014	019	Weekly	450000
10015	020	Monthly	480000
10016	005	Semi-Annually	850000
10017	021	Weekly	460000
10018	007	Semi-Annually	950000
10019	022	Monthly	430000
10020	023	Weekly	470000
10021	006	Semi-Annually	600000
10022	024	Monthly	490000
10023	025	Weekly	500000
10024	026	Monthly	520000
10025	004	Semi-Annually	750000
10026	027	Weekly	510000
10027	028	Monthly	530000
10028	029	Weekly	540000
10029	030	Monthly	550000
10030	031	Weekly	560000

Relation 07

Create Project table

```
CREATE TABLE Project (
    Project_ID char (6),
    Dept_name varchar (20),

    Project_name varchar(20),
    Project_Description varchar (25),
    Start_date datetime,
    End_date datetime,
    Constraint pk_project Primary key (Project_ID),
    Constraint fk_project1 Foreign key (Dept_name) References department(Dept_name));
```

Insert Project Table

```
INSERT INTO Project (Project_ID, Dept_name, Project_name, Project_Description, Start_date, End_date) VALUES
('P0001', 'Finance', 'Budget Planning', 'Annual Budget Review', '2024-01-15', '2024-06-15'),
('P0002', 'Finance', 'Financial Audit', 'Internal Financial Audit', '2024-03-01', '2024-12-01'),
('P0003', 'HR', 'Employee Onboarding', 'New Hire Orientation', '2024-02-15', '2024-04-15'),
('P0004', 'HR', 'Performance Review', 'Annual Employee Reviews', '2024-05-01', '2024-09-01'),
('P0005', 'Marketing', 'Social Media Campaign', 'Q2 Marketing Strategy', '2024-01-10', '2024-03-10'),
('P0006', 'Marketing', 'Product Launch', 'New Product Introduction', '2024-07-01', '2024-11-01'),
('P0007', 'Operation', 'Process Optimization', 'Improving Operational Efficiency', '2024-02-01', '2024-08-01'),
('P0008', 'Operation', 'Supply Chain Management', 'Streamlining Supply Chain', '2024-03-15', '2024-09-15'),
('P0009', 'Sales', 'Market Research', 'Identifying New Opportunities', '2024-01-05', '2024-04-05'),
('P0010', 'IT', 'System Upgrade', 'Upgrading IT Infrastructure', '2024-05-15', '2024-10-15');
```

Create Project Table

Poject_ID	Dept_name	Project_name	Project_Description	Start_date	End_date
P0001	Finance	Budget Planning	Annual Budget Review	2024-02-15	2024-04-15
P0002	Finance	Financial Audit	Internal Financial Audit	2024-05-01	2024-09-01
P0003	HR	Employee Onboarding	New hire Orientation	2024-01-10	2024-03-10
P0004	HR	Performance Review	Annual employee reviews	2024-07-01	2024-11-01
P0005	Marketing	Social Media campaign	Q2 Marketing strategy	2024-02-01	2024-08-01
P0006	Marketing	Product Launch	New Product Introduction	2024-07-01	2024-11-01
P0007	Operation	Process Optimization	Improving operational efficiency	2024-02-01	2024-08-01
P0008	Operation	Supply chain management	Streamlining supply chain	2024-03-15	2024-09-15
P0009	Sales	Market Research	Identifying New Opportunities	2024-01-05	2024-04-05
P0010	IT	System Upgrade	Upgrading IT Infrastructure	2024-05-15	2024-10-15

SQL Queries and commands

01. Retrieve the names and phone number of employees whose last names start with ‘A’;

```
SELECT  First_name, Last_name, Phone_Num, E_mail
FROM Employee
WHERE Last_name
LIKE ‘A%’;
```

02. Retrieve the names and e-mail addresses of employees hired in 2023;

```
SELECT First_name, Last_name, E_mail
FROM Employee
WHERE Hire_date IN (‘2023’);
```

03. Retrieve the names and descriptions of projects:

```
Select Project_name, Project_Description
FROM Project;
```

04. Retrieve the name and email address of employee hired after ‘2020-01-01’;

```
SELECT First_name, Last_name, E_mail
FROM Employees
WHERE Hire_date >’2020-01-01’;
```

05. Retrieve the payroll id and employee number with a salary between 30,000 and 60,000;

```
SELECT Emp_ID, Payroll_ID
FROM Payroll
WHERE Salary Between ’30,000’ AND ’60,000’;
```

06. Delete the Project table from relational schema

```
DROP TABLE Project
```

07. Change the hire date “2019-02-30” for employee num 10005

```
UPDATE Employee
SET Hire_date = ‘2019-02-30’
WHERE Emp_no = 10005;
```

08. Create a Dependency table that have to include these relational schemas, Dependents name, gender, relationship and make a relationship with employee table.

```
CREATE TABLE Dependency (
    Emp_no char (05),
    Deps_name varchar(20),
    Gender char (01),
    Relationship varchar(10),
    Constraint pk_deps Primary key (Emp_no, Deps_name)
    Constraint fk_deps01 Foreign key Emp_no references Employee(Emp_no));
```

09. Remove the employee number 10021 from department manager table

```
DELETE FROM Department_manger WHERE emp_no = '10021';
```

10. Make a list of female customer;

```
SELECT * FROM Employees
WHERE Gender = 'F';
```

Implementation

DBMS SQL Queries are Implement in here,

https://drive.google.com/file/d/1srctp31YlaDI3zssu61p34qYpr7V4Bdv/view?usp=drive_link

Conclusion

We successfully built a relational database management system to streamline employee data administration. Employee ID's, name, emails, phone numbers, department, job titles, description, and pay ranges are all conveniently stored, retrieved, and altered by the system, which serves as a central hub. This centralized method transform HR Procedures, promoting greater data accuracy and providing HR staffs with faster access to critical information. The system's functions provide a smooth flow of information, making it easier to maintain personnel records, mange projects. Furthermore, the system creates a comprehensive picture of remuneration is provided by the system, which also improves process of payroll processing.

In summary, this project demonstrates how the planned database may serve as fundamental element for enhanced HR productivity, optimized processes, a comprehensive perspective on worker payments, and finally a more satisfying work environment.