Group 13- Employee Resource Management

Project Group 13:

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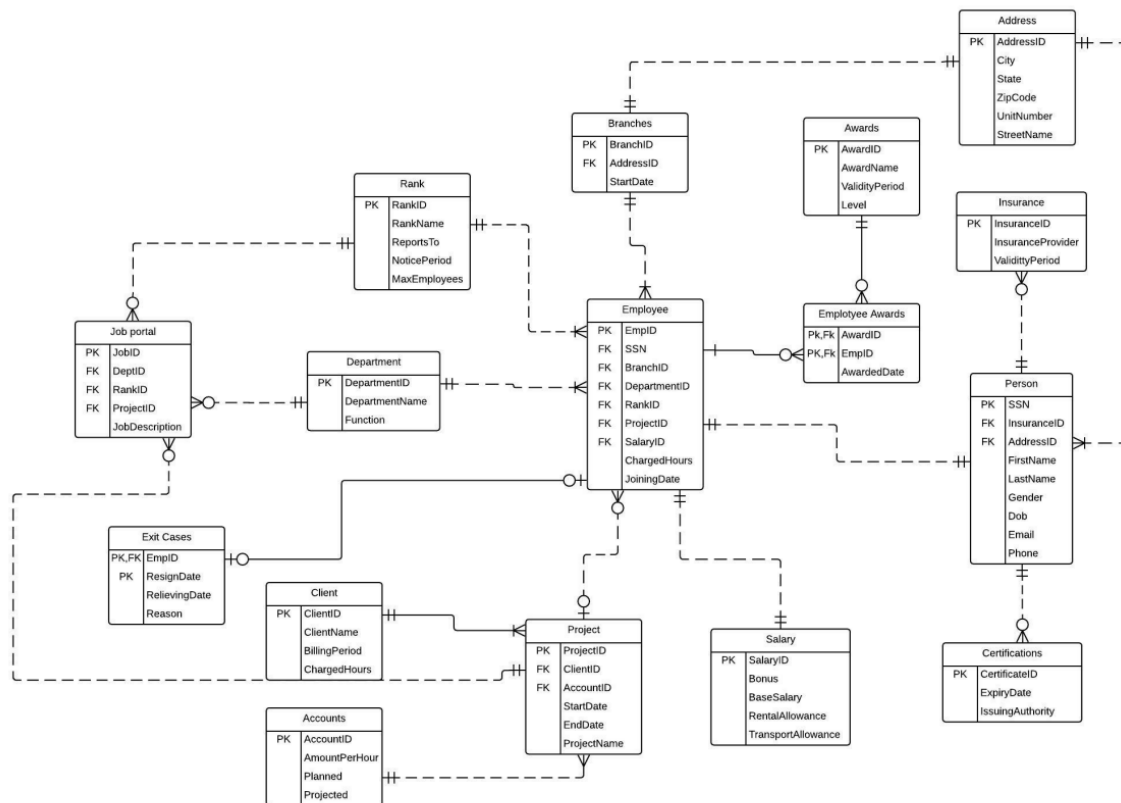
Sai Charan Reddy Maila - 002923445

Sai Ritvik Paramkusham – 002742704

 Shubham Rajan Patil - 002928545

Sreyoshi Ghosh – 002924715

Updated ERD:

SQL Queries

USE EmployeeManagementSystem_G13;

```sql
-- TABLES CREATION


-- Address
CREATE TABLE Address (
AddressID VARCHAR(20) NOT NULL PRIMARY KEY,
City VARCHAR(20) NOT NULL,
State VARCHAR(20) NOT NULL,
ZipCode VARCHAR(20) NOT NULL,
StreetName VARCHAR(30) NOT NULL,
);


-- Department
-- changed DeptName to DepartmentName
CREATE TABLE Department (
DepartmentID VARCHAR(20) NOT NULL PRIMARY KEY,
DepartmentName VARCHAR(40) NOT NULL,
DepartmentFunction VARCHAR(40) NOT NULL
);


-- Client
-- Created ClientName column
CREATE TABLE Client (
ClientID VARCHAR(20) NOT NULL PRIMARY KEY,
ClientName VARCHAR(40) NOT NULL,
BillingPeriod INT NOT NULL,
ChargedHours FLOAT NOT NULL
);


-- Rank
CREATE TABLE Rank (
RankID VARCHAR(20) NOT NULL PRIMARY KEY,
RankName VARCHAR(40) NOT NULL,
ReportsTo VARCHAR(20) NOT NULL,
```

```sql
NoticePeriod INT NOT NULL,

MaxEmployees INT NOT NULL

);


-- Accounts

CREATE TABLE Accounts (

AccountID VARCHAR(20) NOT NULL PRIMARY KEY,

AmountPerHour FLOAT NOT NULL,

PlannedHours FLOAT NOT NULL,

ProjectedHours FLOAT NOT NULL

);


-- Project

CREATE TABLE Project (

ProjectID VARCHAR(20) NOT NULL PRIMARY KEY,

ProjectName VARCHAR(40) NOT NULL,

StartDate DATE NOT NULL,

EndDate DATE,

ClientID varchar(20) NOT NULL REFERENCES Client(ClientID)

);


ALTER TABLE Project ADD AccountID VARCHAR(20) NOT NULL;

ALTER TABLE Project ADD CONSTRAINT fk_account_id FOREIGN KEY (AccountID) REFERENCES
Accounts(AccountID);


-- JobPortal

CREATE TABLE JobPortal (

JobID VARCHAR(20) NOT NULL PRIMARY KEY,

JobDescription VARCHAR(80) NOT NULL,

DepartmentID VARCHAR(20) NOT NULL REFERENCES Department (DepartmentID),

RankID VARCHAR(20) NOT NULL REFERENCES Rank (RankID),

ProjectID VARCHAR(20) NOT NULL REFERENCES Project (ProjectID)

);
```

```sql
-- Branch
CREATE TABLE Branch (
BranchID VARCHAR(20) NOT NULL PRIMARY KEY,
StartDate DATE NOT NULL,
AddressID VARCHAR(20) NOT NULL REFERENCES Address (AddressID)
);


-- Salary
CREATE TABLE Salary (
SalaryID VARCHAR(20) NOT NULL PRIMARY KEY,
Bonus FLOAT,
BaseSalary FLOAT NOT NULL,
RentalAllowance FLOAT,
TransportAllowance FLOAT
);


-- Awards
CREATE TABLE Awards (
AwardID VARCHAR(20) NOT NULL PRIMARY KEY,
AwardName VARCHAR(40) NOT NULL,
ValidityPeriod DATE,
Level INT NOT NULL
);


-- Insurance
CREATE TABLE Insurance (
InsuranceID VARCHAR(20) NOT NULL PRIMARY KEY,
InsuranceProvider VARCHAR(40) NOT NULL,
ValidityPeriod DATE NOT NULL
);


-- Certifications
```

```sql
CREATE TABLE Certifications (

CertificateID VARCHAR(20) NOT NULL PRIMARY KEY,

IssuingAuthority VARCHAR(40) NOT NULL,

ExpiryDate DATE NOT NULL

);


-- Person

CREATE TABLE Person (

SSN VARCHAR(20) NOT NULL PRIMARY KEY,

InsuranceID VARCHAR(20) NOT NULL REFERENCES Insurance (InsuranceID),

AddressID VARCHAR(20) NOT NULL REFERENCES Address (AddressID),

FirstName VARCHAR(40) NOT NULL,

DOB DATE NOT NULL,

LastName VARCHAR(40) NOT NULL,

Gender VARCHAR(20) NOT NULL,

Email VARCHAR(40) NOT NULL,

Phone VARCHAR(30) NOT NULL,

);


-- Employee

CREATE TABLE Employee (

EmployeeID VARCHAR(20) NOT NULL PRIMARY KEY,

SSN VARCHAR(20) NOT NULL REFERENCES Person (SSN),

BranchID VARCHAR(20) NOT NULL REFERENCES Branch (BranchID),

DepartmentID VARCHAR(20) NOT NULL REFERENCES Department (DepartmentID),

RankID VARCHAR(20) NOT NULL REFERENCES Rank (RankID),

ProjectID VARCHAR(20) NOT NULL REFERENCES Project (ProjectID),

SalaryID VARCHAR(20) NOT NULL REFERENCES Salary (SalaryID),

ChargedHours FLOAT NOT NULL,

JoiningDate DATE NOT NULL,

);


-- ExitCases
```

```sql
CREATE TABLE ExitCases (

EmployeeID VARCHAR(20) NOT NULL REFERENCES Employee(EmployeeID),

ResignDate DATE NOT NULL,

RelievingDate DATE NOT NULL,

Reason VARCHAR(40) NOT NULL

CONSTRAINT PKExit PRIMARY KEY CLUSTERED

 (EmployeeID, ResignDate)

)


-- EmployeeAwards

CREATE TABLE EmployeeAwards (

AwardID VARCHAR(20) NOT NULL REFERENCES Awards(AwardID),

EmployeeID VARCHAR(20) NOT NULL REFERENCES Employee(EmployeeID),

AwardedDate DATE NOT NULL,

CONSTRAINT PKEmpAward PRIMARY KEY CLUSTERED

 (EmployeeID, AwardID)

)




/*GO
CREATE PROCEDURE clientProdecure
        AS
        DECLARE @val INT; DECLARE @id INT; DECLARE @chp float; DECLARE @exist float;
        SET @id = 1;
        SET @val = (select count(*) FROM Client);
        WHILE @id < @val + 1
        BEGIN
        SET @chp = (select SUM(ChargedHours) FROM Employee WHERE ProjectID=(CONCAT('Project',@id)));
        SET @exist = (select ChargedHours FROM Client WHERE ClientID =(SELECT ClientID from Project
where ProjectID = (CONCAT('Project',@id))));
        UPDATE Client
        SET ChargedHours = @chp+@exist
```

```
                WHERE ClientID = (SELECT ClientID from Project where ProjectID = (CONCAT('Project',@id)));

                SET @id = @id + 1;

                END;


go

CREATE TRIGGER populateClient ON dbo.Client

AFTER UPDATE AS

BEGIN

 exec clientProdecure

END;*/


-- INSERT STATEMENTS


-- Insurance


INSERT INTO dbo.Insurance VALUES ('INS1','Boston Insurance Company', '2028-12-31');

INSERT INTO dbo.Insurance VALUES ('INS2','Blue Cross', '2030-10-05');

INSERT INTO dbo.Insurance VALUES ('INS3','United Health Care', '2027-01-01');

INSERT INTO dbo.Insurance VALUES ('INS4','aiser Permanente', '2035-01-01');

INSERT INTO dbo.Insurance VALUES ('INS5','Aetna Healthcare', '2030-05-05');

INSERT INTO dbo.Insurance VALUES ('INS6','Life Insurance Corporation', '2032-07-05');

INSERT INTO dbo.Insurance VALUES ('INS7','Evergreen Healthcare', '2029-01-01');

INSERT INTO dbo.Insurance VALUES ('INS8','Oscar Healthcare', '2023-01-01');

INSERT INTO dbo.Insurance VALUES ('INS9','Bright Healthcare', '2028-01-01');

INSERT INTO dbo.Insurance VALUES ('INS10','NYC Healthcare', '2031-01-01');


-- Certifications

INSERT INTO dbo.Certifications VALUES ('CERT1','Amazon', '2025-01-01');

INSERT INTO dbo.Certifications VALUES ('CERT2','IBM', '2025-07-07');

INSERT INTO dbo.Certifications VALUES ('CERT3','Oracle', '2027-01-01');

INSERT INTO dbo.Certifications VALUES ('CERT4','Google', '2028-01-01');

INSERT INTO dbo.Certifications VALUES ('CERT5','Coursera', '2028-05-01');

INSERT INTO dbo.Certifications VALUES ('CERT6','Oxford Business School', '2030-01-01');
```

```sql
INSERT INTO dbo.Certifications VALUES ('CERT7','Cisco', '2029-08-01');

INSERT INTO dbo.Certifications VALUES ('CERT8','PMI-Agile', '2035-01-01');

INSERT INTO dbo.Certifications VALUES ('CERT10','Salesforce', '2032-01-01');

INSERT INTO dbo.Certifications VALUES ('CERT10','Udemy', '2031-01-31');


--Client Table
insert into dbo.Client
(ClientID,ClientName,BillingPeriod,ChargedHours)
values
('Client1','Northeastern',8,0),
('Client2','Columbia',7,0),
('Client3','Gap',12,0),
('Client4','Nokia',5,0),
('Client5','Tommy',8,0),
('Client6','Nike',7,0),
('Client7','Addidas',12,0),
('Client8','Reebok',11,0),
('Client9','UnderArmour',9,0),
('Client10','Puma',4,0);


--Account table
insert into dbo.Accounts
(AccountID,AmountPerHour,PlannedHours,ProjectedHours)
values
('Account1',13,1200,0),
('Account2',17,1600,0),
('Account3',7,700,0),
('Account4',9,1100,0),
('Account5',11,1500,0),
('Account6',10,700,0),
('Account7',10,1000,0),
('Account8',9,1240,0),
('Account9',14,1800,0),
```

```sql
('Account10',19,2050,0),

('Account11',20,2500,0),

('Account12',22,1200,0),

('Account13',5,330,0),

('Account14',6,500,0);


drop table  dbo.Rank;

--Rank

insert into  dbo.Rank Values

('R4','Management Employee','R5',30,160),

('R3','Executive Employee','R4',45,300),

('R2','Employee','R3',60,200),

('R1','Entry-Level Employee','R2',90,0),

('R0', 'Non Administrative Employees', 'R2',90,0),

('R5','Senior Employees','R7',30,120),

('R6','Senior Executive Employee','R7',45,80),

('R7','Senior Management Employee','R8',60,20),

('R8','Product Manager','R9',90,10),

('R9', 'Senoir Product Manager','',90,10)


--Projects table

insert into dbo.Project

(ProjectID,ProjectName,StartDate,EndDate,ClientID,AccountID)

values

('Project1','Square','11/20/2021','12/31/2021','Client7','Account3'),

('Project2','Rhombus','10/03/2022','12/31/2022','Client4','Account2'),

('Project3','Rectangle','09/27/2022','01/30/2023','Client7','Account3'),

('Project4','Rhombus','03/22/2021','05/09/2022','Client1','Account7'),

('Project5','Parallelogram','02/01/2021','01/01/2022','Client3','Account5'),

('Project6','Triangle','01/01/2020','12/01/2022','Client5','Account8'),

('Project7','Trapezium','10/15/2020','03/15/2021','Client2','Account12'),

('Project8','Heptagon','12/25/2022','04/30/2023','Client7','Account5'),

('Project9','Nanogon','01/01/2022','12/30/2022','Client4','Account4'),
```

('Project10','Ellipse','01/01/2023','05/01/2023','Client5','Account11'),

('Project11','Pentagon','05/01/2020','06/01/2021','Client7','Account7');

-- Awards

INSERT INTO dbo.Awards VALUES('AW1', 'Q1-Stand-OutPerformer','2027-01-19','Silver');

INSERT INTO dbo.Awards VALUES('AW2', 'Q1-GameChanger', '2029-02-27', 'Bronze');

INSERT INTO dbo.Awards VALUES('AW3', 'Q1-ShiningStar', '2030-03-10', 'Silver');

INSERT INTO dbo.Awards VALUES('AW4', 'Q2-NewBieChamp', '2029-04-06', 'Bronze');

INSERT INTO dbo.Awards VALUES('AW5', 'Q2-SuperstarAward', '2031-05-16', 'Gold');

INSERT INTO dbo.Awards VALUES('AW6', 'Q2-AceofInitiative', '2032-06-25', 'Gold');

INSERT INTO dbo.Awards VALUES('AW7', 'Q2-TheIdeaGenerator', '2031-08-21', 'Platinum');

INSERT INTO dbo.Awards VALUES('AW8', 'Q3-TheBrainiac', '2034-12-06', 'Diamond');

INSERT INTO dbo.Awards VALUES('AW9', 'Q3-CapitalAcheivement', '2023-08-18', 'Platinum');

INSERT INTO dbo.Awards VALUES('AW10','Q3-ExpertAccuracy', '2035-09-10', 'Diamond');

--Job Portal

insert into dbo.JobPortal

Values

('JP101','Manage Cloud and IT Infrastructure','DPT7','R2','Project7'),

('JP102','Manage Cloud and IT Infrastructure','DPT7','R1','Project7'),

('JP103','Product Research','DPT8','R1','Project6'),

('JP104','Product Research','DPT8','R2','Project8'),

('JP105','HR','DPT3','R2','Project9'),

('JP106','Marketing Intern','DPT6','R1','Project10'),

('JP107','Sales Manager','DPT5','R2','Project11'),

('JP108',' Capital Sourcing and Finance Management','DPT1','R3','Project5'),

('JP109','HR Intern Compensations and Benfits','DPT2','R1','Project4'),

('JP110','Operations executive','DPT4','R4','Project3'),

('JP111','Marketing Executive','DPT6','R4','Project2'),

('JP112','Senior Software Develper','DPT8','R2','Project1')

--Departments

```sql
insert into dbo.Department

Values

('DPT1', 'Finance','Auditing'),

('DPT2', 'C&B', 'Employee Payments and Benefits'),

('DPT3', 'HR', 'Employee Management'),

('DPT4',  'Operations', 'Link b/w end-users and the firm'),

('DPT5',  'Sales', 'Managing Sales'),

('DPT6', 'Marketing', 'Market Research'),

('DPT7', 'IT', 'IT Infrastructure maintenance and set-up'),

('DPT8', ' Product R&D', 'Product Development and Research'),

('DPT9', 'Facilities', 'Provision of Facilities'),

('DPT10', 'Security', 'Security Services')


--Persons
INSERT INTO dbo.Person VALUES ('980822331','INS1', 'AD1', 'John', '1992-10-10', 'Doe', 'Male', 'doe.j@northeastern.com', '8800966522', 'CERT1' );

INSERT INTO dbo.Person VALUES ('902822332','INS2', 'AD2', 'Mike', '1985-10-10', 'Bell', 'Male', 'bell.m@northeastern.com', '8832650022', 'CERT2');

INSERT INTO dbo.Person VALUES ('902822333','INS3', 'AD3', 'Julia', '1992-01-01', 'Watson', 'Female', 'watson.j@northeastern.com', '7837652022', 'CERT3');

INSERT INTO dbo.Person VALUES ('902822334','INS4', 'AD4', 'Mary', '1995-07-05', 'Ann', 'Female', 'ann.m@northeastern.com', '6837634022', 'CERT4');

INSERT INTO dbo.Person VALUES ('902822335','INS5', 'AD5', 'Robert', '1980-03-07', 'Williams', 'Male', 'williams.r@northeastern.com', '5839635023', 'CERT5');

INSERT INTO dbo.Person VALUES ('902822336','INS6', 'AD6', 'Felicia', '1996-03-07', 'Jane', 'Female', 'jane.f@northeastern.com', '6859635099', 'CERT1=6');

INSERT INTO dbo.Person VALUES ('902822337','INS7', 'AD7', 'Mark', '1990-06-08', 'Henry', 'Male', 'henry.m@northeastern.com', '4322635096', 'CERT7');

INSERT INTO dbo.Person VALUES ('902822338','INS8', 'AD8', 'Bob', '1986-12-12', 'Peter', 'Male', 'peter.b@northeastern.com', '5322535014', 'CERT8');

INSERT INTO dbo.Person VALUES ('902822339','INS9', 'AD9', 'Melissa', '1989-11-02', 'parker', 'Female', 'parker.m@northeastern.com', '1322533016', 'CERT9');

INSERT INTO dbo.Person VALUES ('902822340','INS10', 'AD10', 'Sophie', '1993-06-12', 'Turner', 'Female', 'turner.s@northeastern.com', '8522536013', 'CERT10');

INSERT INTO dbo.Person VALUES ('909922300','INS2', 'AD11', 'Smith', '1993-08-18', 'Connor', 'Male', 'Connor.s@northeastern.com', '8010866508', 'CERT2' );
```

INSERT INTO dbo.Person VALUES ('980046830','INS6', 'AD12', 'Robert', '1990-03-08', 'Dunbar', 'Male', 'Dunbar.r@northeastern.com', '8063061020', 'CERT1');

INSERT INTO dbo.Person VALUES ('991402610','INS10', 'AD13', 'Annie', '1985-12-01', 'Martyn', 'Female', 'Martyn.a@northeastern.com', '8342861592', 'CERT5');

INSERT INTO dbo.Person VALUES ('908942994','INS9', 'AD14', 'Grayson', '1988-05-23', 'Warren', 'Female', 'Warren.g@northeastern.com', '8513832100', 'CERT7');

INSERT INTO dbo.Person VALUES ('999599301','INS3', 'AD15', 'Sadie', '1986-04-10', 'Hinton', 'Female', 'Hinton.s@northeastern.com', '8990145001', 'CERT8');

INSERT INTO dbo.Person VALUES ('964381363','INS6', 'AD16', 'Sanjay', '1996-07-07', 'Gupta', 'Male', 'gupta.s@northeastern.com', '6859635091', 'CERT1=6');

INSERT INTO dbo.Person VALUES ('964383638','INS7', 'AD17', 'Pradhan', '1990-09-08', 'Gowda', 'Male', 'gowda.p@northeastern.com', '6859635092', 'CERT7');

INSERT INTO dbo.Person VALUES ('963813638','INS8', 'AD18', 'Nagarjuna', '1986-11-12', 'Mallesh', 'Male', 'mallesh.n@northeastern.com', '6859635093', 'CERT8');

INSERT INTO dbo.Person VALUES ('943813638','INS9', 'AD19', 'Shruti', '1989-03-02', 'Mundargi', 'Female', 'mundargi.s@northeastern.com', '6859635094', 'CERT9');

INSERT INTO dbo.Person VALUES ('964313638','INS10', 'AD20', 'Mansi', '1993-01-12', 'Kapoor', 'Female', 'kapoor.m@northeastern.com', '6859635095', 'CERT10');

INSERT INTO dbo.Person VALUES ('909922301','INS2', 'AD21', 'Prashant', '1991-08-18', 'Holla', 'Male', 'holla.p@northeastern.com', '8012226508', 'CERT2');

INSERT INTO dbo.Person VALUES ('980046831','INS6', 'AD22', 'Charan', '1992-03-08', 'Patel', 'Male', 'patel.c@northeastern.com', '8063055520', 'CERT1');

INSERT INTO dbo.Person VALUES ('991402614','INS10', 'AD23', 'Hansika', '1995-12-01', 'Sharma', 'Female', 'sharma.h@northeastern.com', '8347771592', 'CERT5');

INSERT INTO dbo.Person VALUES ('908942996','INS9', 'AD24', 'Tamanna', '1998-05-23', 'Bhatia', 'Female', 'bhatia.t@northeastern.com', '8513000000', 'CERT7');

INSERT INTO dbo.Person VALUES ('999599331','INS3', 'AD25', 'Sriya', '1986-04-10', 'Saran', 'Female', 'saran.s@northeastern.com', '8991111001', 'CERT8');

INSERT INTO dbo.Person VALUES ('964381353','INS6', 'AD26', 'Vijay', '1993-07-07', 'Joseph', 'Male', 'joseph.v@northeastern.com', '6859335091', 'CERT1=6');

INSERT INTO dbo.Person VALUES ('964583638','INS7', 'AD27', 'Puneet', '1991-09-08', 'Kumar', 'Male', 'kumar.p@northeastern.com', '6844444092', 'CERT7');

INSERT INTO dbo.Person VALUES ('963213638','INS8', 'AD28', 'Yash', '1998-11-12', 'Gowda', 'Male', 'gowda.y@northeastern.com', '6859644493', 'CERT8');

INSERT INTO dbo.Person VALUES ('343813638','INS9', 'AD29', 'Shruti', '1994-03-02', 'Hassan', 'Female', 'hassan.s@northeastern.com', '6852225094', 'CERT9');

INSERT INTO dbo.Person VALUES ('564313638','INS10', 'AD30', 'Tanvi', '1998-01-12', 'Bharali', 'Female', 'bharali.t @northeastern.com', '6119635095', 'CERT10');

-- Salary

INSERT INTO dbo.Salary VALUES ('Salary1','1000', '100000','1000', '1000');

INSERT INTO dbo.Salary VALUES ('Salary2','2000', '200000','2000', '2000');

INSERT INTO dbo.Salary VALUES ('Salary3','3000', '300000','3000', '3000');

INSERT INTO dbo.Salary VALUES ('Salary4','4000', '400000','4000', '4000');

INSERT INTO dbo.Salary VALUES ('Salary5','5000', '500000','5000', '5000');

INSERT INTO dbo.Salary VALUES ('Salary6','6000', '600000','6000', '6000');

INSERT INTO dbo.Salary VALUES ('Salary7','7000', '700000','7000', '7000');

INSERT INTO dbo.Salary VALUES ('Salary8','8000', '800000','8000', '8000');

INSERT INTO dbo.Salary VALUES ('Salary9','9000', '900000','9000', '9000');

INSERT INTO dbo.Salary VALUES ('Salary10','10000', '1000000','10000', '10000');

--Employee

Insert into dbo.Employee values('EMP1','902822332','BR1','DPT1','R0','Project1','Salary1',150,'2022-10-20');

Insert into dbo.Employee values ('EMP2','902822333','BR1','DPT2','R1','Project3','Salary2',820,'2022-10-20');

Insert into dbo.Employee values ('EMP3','902822334','BR2','DPT2','R1','Project2','Salary2',120,'2021-10-20');

Insert into dbo.Employee values ('EMP4','902822335','BR4','DPT6','R1','Project2','Salary2',570,'2022-12-30');

Insert into dbo.Employee values ('EMP5','902822336','BR5','DPT1','R3','Project7','Salary4',670,'2022-04-10');

Insert into dbo.Employee values ('EMP6','902822337', 'BR6', 'DPT4', 'R5','Project6','Salary6',1100,'2020-02-28');

Insert into dbo.Employee values ('EMP7','902822338', 'BR4', 'DPT3', 'R4','Project1','Salary5','1100','2020-02-28');

Insert into dbo.Employee values ('EMP8','902822339', 'BR7', 'DPT7', 'R5','Project6','Salary6','1400','2020-01-18');

Insert into dbo.Employee values ('EMP9','902822340', 'BR8', 'DPT1', 'R2','Project7','Salary3','1800','2019-02-12');

Insert into dbo.Employee values ('EMP10','908942994', 'BR9', 'DPT8', 'R3','Project8','Salary4','1300','2019-08-23');

Insert into dbo.Employee values ('EMP11','909922300', 'BR10', 'DPT4', 'R6','Project9','Salary7','1080','2020-05-09');

Insert into dbo.Employee values ('EMP12','943813638', 'BR2', 'DPT9', 'R3','Project10','Salary4','800','2021-03-27');

Insert into dbo.Employee values ('EMP13','963813638', 'BR1', 'DPT2', 'R6','Project5','Salary7','2100','2019-08-04');

Insert into dbo.Employee values ('EMP14','964313638', 'BR5', 'DPT5', 'R7','Project8','Salary8','1200','2021-03-10');

Insert into dbo.Employee values ('EMP15','964381363', 'BR9', 'DPT10', 'R1','Project3','Salary2','1540','2021-01-01');

Insert into dbo.Employee values ('EMP16','964383638', 'BR4', 'DPT10', 'R2','Project7','Salary3','1900','2019-12-03');

Insert into dbo.Employee values ('EMP17','980046830', 'BR8', 'DPT7', 'R8','Project10','Salary9','2400','2017-09-15');

Insert into dbo.Employee values ('EMP18','980822331', 'BR3', 'DPT8', 'R9','Project2','Salary10','2200','2017-03-17');

Insert into dbo.Employee values ('EMP19','991402610', 'BR6', 'DPT2', 'R1','Project3','Salary2','700','2021-08-07') ;

Insert into dbo.Employee values ('EMP20','999599301', 'BR10', 'DPT5', 'R6','Project4','Salary7','1300','2020-07-03');

Insert into dbo.Employee values ('EMP21','343813638', 'BR4', 'DPT3', 'R4','Project1','Salary5','1300','2020-02-28');

Insert into dbo.Employee values ('EMP22','564313638', 'BR6', 'DPT8', 'R5','Project6','Salary6','1500','2020-04-07');

Insert into dbo.Employee values ('EMP23','908942996', 'BR7', 'DPT9', 'R2','Project7','Salary3','1600','2019-06-28');

Insert into dbo.Employee values ('EMP24','909922301', 'BR8', 'DPT3', 'R3','Project8','Salary4','1200','2019-02-12');

Insert into dbo.Employee values ('EMP25','963213638', 'BR9', 'DPT6', 'R6','Project9','Salary7','1280','2020-09-04');

Insert into dbo.Employee values ('EMP26','964381353', 'BR10', 'DPT2', 'R3','Project10','Salary4','1900','2021-07-17');

Insert into dbo.Employee values ('EMP27','964583638', 'BR8', 'DPT6', 'R6','Project5','Salary7','2020','2019-09-05');

Insert into dbo.Employee values ('EMP28','991402614', 'BR6', 'DPT1', 'R7','Project8','Salary8','1300','2021-12-06');

Insert into dbo.Employee values ('EMP29','999599331', 'BR9', 'DPT10', 'R1','Project3','Salary2','5540','2021-03-21');

Insert into dbo.Employee values ('EMP30','980046831', 'BR4', 'DPT5', 'R3','Project1','Salary4','2114','2019-04-01');

--Employee Awards

INSERT INTO dbo.EmployeeAwards VALUES('AW1','Emp7','2026-11-19');

INSERT INTO dbo.EmployeeAwards VALUES('AW2','Emp10','2028-06-04');

```sql
INSERT INTO dbo.EmployeeAwards VALUES('AW3','Emp2','2029-03-09');

INSERT INTO dbo.EmployeeAwards VALUES('AW4','Emp8','2026-01-23');

INSERT INTO dbo.EmployeeAwards VALUES('AW5','Emp4','2029-05-03');

INSERT INTO dbo.EmployeeAwards VALUES('AW6','Emp5','2030-08-28');

INSERT INTO dbo.EmployeeAwards VALUES('AW7','Emp1','2030-09-16');

INSERT INTO dbo.EmployeeAwards VALUES('AW8','Emp18','2033-07-06');

INSERT INTO dbo.EmployeeAwards VALUES('AW9','Emp12','2031-08-11');

INSERT INTO dbo.EmployeeAwards VALUES('AW10','Emp15','2033-09-14');



--Exitcases

INSERT INTO dbo.Exitcases VALUES ('EMP7','2022-12-10','','Better compensation');

INSERT INTO dbo.Exitcases VALUES ('EMP11','2022-05-01','','feel undervalued in current role');

INSERT INTO dbo.Exitcases VALUES ('EMP6','2022-10-10','','Better compensation');

INSERT INTO dbo.Exitcases VALUES ('EMP12','2022-03-01','','Shifting verticals');

INSERT INTO dbo.Exitcases VALUES ('EMP15','2022-11-01','','Career change to a new industry');

INSERT INTO dbo.Exitcases VALUES ('EMP18','2022-12-01','','Better compensation');

INSERT INTO dbo.Exitcases VALUES ('EMP20','2022-01-01','','feel undervalued in current role');

INSERT INTO dbo.Exitcases VALUES ('EMP3','2022-05-03','','Better Job');

INSERT INTO dbo.Exitcases VALUES ('EMP4','2022-05-13','','Better Job');

INSERT INTO dbo.Exitcases VALUES ('EMP11','2020-01-01','','Dissatisfied with growth prospect');



--Address



-- Constraint for ZipCode - 6 digits

ALTER TABLE EmployeeManagementSystem_G13.dbo.Address ADD CONSTRAINT CheckZipCode

CHECK(ZipCode LIKE '[0-9][0-9][0-9][0-9][0-9][0-9]' and LEN(ZipCode) =6);



-- Adding UnitNumber Column in table

ALTER TABLE EmployeeManagementSystem_G13.dbo.Address

ADD UnitNumber varchar(10);



-- Inserting Data into the Address table
```

```sql
INSERT INTO EmployeeManagementSystem_G13.dbo.Address

VALUES('AD1', 'Boston', 'Massachusetts', '75 Saint Alphonsus st', '102','002120'),

('AD2', 'Cambridge', 'Massachusetts', '32 MIT Street', '37', '002125'),

('AD3', 'Seattle', 'Washington','Pike Street', '809', '178920'),

('AD4', 'Belle Vue', 'Washington', 'Reet Street', '655','178078'),

('AD5', 'San Francisco', 'California', 'Peek Street', '78', '010929'),

('AD6', 'Dallas', 'Texas', 'Dark Street', '99','072303'),

('AD7', 'Arlington', 'Texas', 'Death Valley', '225', , '072453'),

('AD8', 'Miami', 'Florida', '76 Beach Road', '69', '209902'),

('AD9', 'Chicago', 'Illinois', 'North Street', '222', '088938'),

('AD10', 'NewYork', 'NewYork', 'Liberty Street', '77','000656'),

('AD11', 'Boston', 'Massachusetts', 'Dream Street', '202', '002120'),

('AD12', 'Cambridge', 'Massachusetts', '3707 Street', '337', '002125'),

('AD13', 'Seattle', 'Washington', 'Drake Street', '769', '178920'),

('AD14', 'Belle Vue', 'Washington', 'Roze Road', '705','178078'),

('AD15', 'San Francisco', 'California', 'Park Street', '107','010929'),

('AD16', 'Dallas', 'Texas', 'Night Street', '909','072303'),

('AD17', 'Arlington', 'Texas', 'Dead Valley', '25', '072453'),

('AD18', 'Miami', 'Florida', '99 Beach Street', '16','209902'),

('AD19', 'Chicago', 'Illinois', 'South Street', '12','088938'),

('AD20', 'NewYork', 'NewYork', 'Downton', '707','000656');


--Branch
-- Inserting Data into the Branch table
INSERT INTO EmployeeManagementSystem_G13.dbo.Branch

VALUES('BR1', '2000-05-12', 'AD11'),

('BR2', '2002-01-19', 'AD12'),

('BR3', '2003-06-02', 'AD13'),

('BR4', '2003-09-29', 'AD14'),

('BR5', '2004-03-22', 'AD15'),

('BR6', '2005-03-07', 'AD16'),

('BR7', '2005-02-28', 'AD17'),

('BR8', '2008-11-11', 'AD18'),
```

('BR9', '2009-05-12', 'AD19'),

('BR10', '2009-05-12', 'AD20');

-- Computed Columns and Table level checks

-- Constraint for SSN - 9 digit number

ALTER TABLE EmployeeManagementSystem_G13.dbo.Person ADD CONSTRAINT CheckSSN

CHECK(SSN LIKE '[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]' and LEN(SSN) = 9);

-- Constraint for Phone - 10 digit number

ALTER TABLE EmployeeManagementSystem_G13.dbo.Person ADD CONSTRAINT CheckPhone

CHECK(Phone LIKE '[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]' and LEN(Phone) = 10);

-- Constraint for Age - 18 or more

GO

CREATE FUNCTION validateAge (@dob DATE)

RETURNS INT

AS

BEGIN

DECLARE @val INT=0;

  SET @val = DATEDIFF(hour,@dob,GETDATE())/8766;

  RETURN @val;

  END;

ALTER TABLE EmployeeManagementSystem_G13.dbo.Person ADD CONSTRAINT CheckAge

CHECK(dbo.validateAge(DOB) >17);

-- Computed Column to calculate projected hours

go

CREATE TRIGGER calculateProjected ON dbo.Employee

AFTER INSERT AS

BEGIN

 DECLARE @projected float = 0;

```sql
DECLARE @hours int = 0;

DECLARE @pid varchar(20) = null;

SET @hours = (SELECT ChargedHours from Employee where EmployeeID = (SELECT EmployeeID FROM
Inserted));


DECLARE @Amount float = 0;

DECLARE @existing float = 0;

SET @Amount = (SELECT AmountPerHour from Accounts where AccountID = (SELECT AccountID from Project
where ProjectID = (select ProjectID FROM Inserted)));

SET @existing = (SELECT ProjectedHours from Accounts where AccountID = (SELECT AccountID from Project
where ProjectID = (select ProjectID FROM Inserted)));

SET @projected = @Amount*@hours;


UPDATE Accounts

SET ProjectedHours = @projected + @existing

WHERE AccountID = (SELECT AccountID from Project where ProjectID = (select ProjectID FROM Inserted));

END


-- Constraint for Email

ALTER TABLE EmployeeManagementSystem_G13.dbo.Person ADD CONSTRAINT CheckEmail

CHECK(Email LIKE '%_@__%.__%');


-- Computed Column RelievingDate for ExitCases

go

CREATE TRIGGER relievingDateTrigger ON dbo.ExitCases

AFTER INSERT AS

BEGIN

DECLARE @relDate DATE=GETDATE();

DECLARE @notice INT = (SELECT NoticePeriod FROM RANK r inner join Employee e on r.RankID = e.RankID

                                            inner join inserted i on i.EmployeeID = e.EmployeeID);

SET @relDate = DATEADD(day, @notice, (SELECT ResignDate FROM ExitCases WHERE EmployeeID = (SELECT
EmployeeID FROM inserted)));

UPDATE ExitCases

SET ResignDate = @relDate
```

```
    WHERE EmployeeID = (SELECT EmployeeID FROM Inserted)

END


-- Computed Column ChargedHours for Client

go

CREATE TRIGGER calculateClientCH ON dbo.Employee

AFTER INSERT AS

BEGIN

 DECLARE @chargedhours float = 0;


 SET @chargedhours = (SELECT ChargedHours from Employee where EmployeeID = (SELECT EmployeeID FROM
Inserted));


 DECLARE @existing float = 0;

 SET @existing = (SELECT ChargedHours from Client where ClientID = (SELECT ClientID from Project where
ProjectID = (select ProjectID FROM Inserted)));



 UPDATE Client

 SET ChargedHours = @chargedhours + @existing

 WHERE ClientID = (SELECT ClientID from Project where ProjectID = (select ProjectID FROM Inserted));

END




-- VIEWS

go

create view chargedHoursClient

as

select

sum(e.ChargedHours) as ChargedHours,p.ClientID,p.ProjectID

from dbo.Employee e

join  dbo.Project p
```

```sql
on e.ProjectID = p.ProjectID

join dbo.Client c

on c.ClientID = p.ClientID

group by p.ClientID,p.ProjectID

order by p.ClientID

go


go

Create view sumOfChargedforProjects

as

select sum(ChargedHours) as  ChargedHoursSum,

p.ProjectID,

p.AccountID,

a.AmountPerHour

from dbo.Employee e

join  dbo.Project p

on e.ProjectID = p.ProjectID

join dbo.Accounts a

on a.AccountID = p.AccountID

group by p.AccountID,a.AmountPerHour,p.ProjectID;

go
```