Creating the Tables and Insert Sample Data in MySQL

**Copy-Paste the Command One by One into the MySQL Workbench

CREATE DATABASE HRMS;

USE HRMS;

User Table:

```
CREATE TABLE User (
    user_id CHAR(36) PRIMARY KEY DEFAULT (UUID()),
    role_id INT NOT NULL,
    username VARCHAR(50) NOT NULL UNIQUE,
    email VARCHAR(100) NOT NULL UNIQUE,
    password VARCHAR(255) NOT NULL,
    created_at DATETIME DEFAULT CURRENT_TIMESTAMP,
    updated_at DATETIME DEFAULT CURRENT_TIMESTAMP
);
```

Role Table:

```
CREATE TABLE Role (
    role_id INT PRIMARY KEY AUTO_INCREMENT,
    role_name VARCHAR(50) UNIQUE NOT NULL,
    description VARCHAR(255) NULL
);
```

Department Table:

```
CREATE TABLE Department (
    department_id INT PRIMARY KEY AUTO_INCREMENT,
    manager_id INT NULL,
    department_name VARCHAR(50) NOT NULL UNIQUE,
    created_at DATETIME DEFAULT CURRENT_TIMESTAMP,
```

```
   updated_at DATETIME DEFAULT CURRENT_TIMESTAMP
);
```

JobTitle Table:

```
CREATE TABLE JobTitle (
   job_title_id INT PRIMARY KEY AUTO_INCREMENT,
   job_title_name VARCHAR(50) NOT NULL UNIQUE
);
```

AuditAction Table:

```
CREATE TABLE AuditAction (
   action_id INT PRIMARY KEY AUTO_INCREMENT,
   action_name VARCHAR(50) NOT NULL UNIQUE,
   description VARCHAR(255) NULL
);
```

AuditLog Table:

```
CREATE TABLE AuditLog (
   log_id INT PRIMARY KEY AUTO_INCREMENT,
   user_id CHAR(36) NULL,
   action_id INT NOT NULL,
   status_message VARCHAR(20) NOT NULL,
   details VARCHAR(255) NULL,
   ip_address VARCHAR(45) NULL,
   timestamp DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP,
   FOREIGN KEY (user_id) REFERENCES User(user_id),
   FOREIGN KEY (action_id) REFERENCES AuditAction(action_id)
);
```

EmploymentStatus Table:

```
CREATE TABLE EmploymentStatus (
    employment_status_id INT PRIMARY KEY AUTO_INCREMENT,
    employment_status_name VARCHAR(20) NOT NULL UNIQUE
);
```

Employee Table:

```
CREATE TABLE Employee (
    employee_id INT PRIMARY KEY AUTO_INCREMENT,
    user_id CHAR(36) NOT NULL,
    department_id INT NOT NULL,
    employment_status_id INT NOT NULL,
    job_title_id INT NOT NULL,
    first_name VARCHAR(100) NOT NULL,
    last_name VARCHAR(100) NOT NULL,
    date_of_birth DATE NOT NULL,
    country_of_birth VARCHAR(50) NOT NULL,
    gender VARCHAR(10) NOT NULL CHECK (gender IN ('Male', 'Female', 'Others')),
    contact_info VARCHAR(50) NOT NULL,
    emergency_contact VARCHAR(50) NOT NULL,
    address VARCHAR(255) NOT NULL,
    joined_date DATE NOT NULL,
    created_at DATETIME DEFAULT CURRENT_TIMESTAMP,
    updated_at DATETIME DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (user_id) REFERENCES User(user_id),
    FOREIGN KEY (department_id) REFERENCES Department(department_id),
    FOREIGN KEY (employment_status_id) REFERENCES EmploymentStatus(employment_status_id),
    FOREIGN KEY (job_title_id) REFERENCES JobTitle(job_title_id)
);
```

Manager Table:

```
CREATE TABLE Manager (
    manager_id INT PRIMARY KEY,
    start_date DATE NOT NULL,
    end_date DATE NULL,
    FOREIGN KEY (manager_id) REFERENCES Employee(employee_id)
);
```

After All Tables:

```
ALTER TABLE User ADD FOREIGN KEY (role_id) REFERENCES Role(role_id);
ALTER TABLE Department ADD FOREIGN KEY (manager_id) REFERENCES Manager(manager_id);
```

Inserting Sample Data

Role Table:

```
INSERT INTO Role (role_name, description) VALUES
('HR Admin', 'Full access to all system operations'),
('Manager', 'Access to manage team members in their department'),
('Employee', 'Access to view and manage personal information');
```

AuditAction Table:

```
INSERT INTO AuditAction (action_name, description) VALUES
('Login', 'User logged into the system'),
('Logout', 'User logged out of the system'),
('Update Profile', 'User updated their profile'),
('Create Employee', 'HR Admin added a new employee'),
('Delete Employee', 'HR Admin deleted an employee record');
```

User Table:

INSERT INTO User (role_id, username, email, password) VALUES

(1, 'johnsmith', 'johnsmith@hradmin.hrms.com', 'Str0ngPassw0rd'),

(3, 'janedoe', 'janedoe@employee.hrms.com', 'Str0ngPassw0rd'),

(3, 'janierose', 'janierose@employee.hrms.com', 'Str0ngPassw0rd'),

(2, 'johnwick', 'johnwick@manager.hrms.com', 'Str0ngPassw0rd'),

(3, 'mikejohnson', 'mikejohnson@employee.hrms.com', 'Str0ngPassw0rd'),

(3, 'miketyson', 'miketyson@employee.hrms.com', 'Str0ngPassw0rd'),

(2, 'jimmykudo', 'jimmykudo@manager.hrms.com', 'Str0ngPassw0rd'),

(3, 'ranmouri', 'ranmouri@employee.hrms.com', 'Str0ngPassw0rd'),

(3, 'richardmoore', 'richardmoore@employee.hrms.com', 'Str0ngPassw0rd'),

(2, 'shuichiakai', 'shuichiakai@manager.hrms.com', 'Str0ngPassw0rd'),

(3, 'hermionegranger', 'hermionegranger@employee.hrms.com', 'Str0ngPassw0rd'),

(3, 'ryanreynolds', 'ryanreynolds@employee.hrms.com', 'Str0ngPassw0rd'),

(2, 'robertdowney', 'robertdowney@manager.hrms.com', 'Str0ngPassw0rd');

EmploymentStatus Table:

INSERT INTO EmploymentStatus (employment_status_name) VALUES ('Full-Time'), ('Part-Time'), ('Intern');
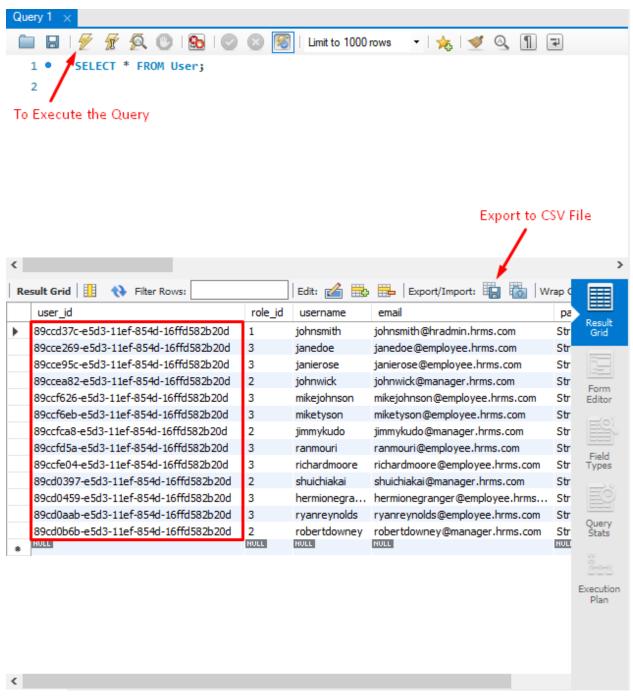
Department Table:

INSERT INTO Department (department_name) VALUES ('Human Resources'), ('Finance'), ('Sales'), ('IT');

JobTitle Table:

INSERT INTO JobTitle (job_title_name) VALUES ('HR Administrator'), ('HR Analyst'), ('HR Assistant'), ('HR Manager'), ('Auditor'), ('Financial Analyst'), ('Finance Manager'), ('Collection Agent'), ('Sales Consultant'), ('Sales Manager'), ('Cloud Computing Engineer'), ('Computer Network Specialist'), ('IT Manager');

*Note: 4, 7, 10, 13 are the managers.

Take note of the "user_id" in the User table by using the query "SELECT * FROM User". You can export the data into csv file if easier for you to copy paste.

Employee Table:

INSERT INTO Employee (user_id, department_id, employment_status_id, job_title_id, first_name, last_name, date_of_birth, country_of_birth, gender, contact_info, emergency_contact, address, joined_date)

VALUES

('<user_id>', 1, 1, 1, 'John', 'Smith', '1990-05-01', 'United States', 'Male', '018-3588313', '012-3588339', 'Jln 45A/26, Taman Sri Rampai', '2024-01-01'),

('<user_id>', 1, 1, 2, 'Jane', 'Doe', '1985-03-22', 'United Kingdom', 'Female', '017-9549357', '016-9549987', 'No. 73, M Jln SS21/37 SS21 Petaling Jaya', '2024-01-01'),

('<user_id>', 1, 3, 3, 'Janie', 'Rose', '1995-04-22', 'United Kingdom', 'Female', '012-3456789', '018-3396787', 'No. 1, Jln Tun Ismail', '2024-03-07'),

('<user_id>', 1, 1, 4, 'John', 'Wick', '1989-04-22', 'United States', 'Male', '012-4025268', '018-4025269', 'Jalan Permatang Pauh', '2024-01-01'),

('<user_id>', 2, 1, 5, 'Mike', 'Johnson', '1995-11-15', 'Canada', 'Male', '017-6538366', '019-6538399', '4A Jln Mawar 2', '2024-01-01'),

('<user_id>', 2, 2, 6, 'Mike', 'Tyson', '1966-06-30', 'United States', 'Male', '017-1868984', '018-1868984', 'No. 257, Jln Pahang', '2024-03-10'),

('<user_id>', 2, 1, 7, 'Jimmy', 'Kudo', '1990-05-04', 'Japan', 'Male', '013-5672634', '017-5672635', '202, 2, Jln Kulas Kuching', '2024-01-01'),

('<user_id>', 3, 1, 8, 'Ran', 'Mouri', '1990-10-01', 'Japan', 'Female', '019-6466083', '018-8886083', '14, Jln 19/3, Seksyen 19 Petaling Jaya', '2024-06-01'),

('<user_id>', 3, 2, 9, 'Richard', 'Moore', '1999-05-22', 'United States', 'Male', '017-8598872', '017-8598899', 'No. 178 2Nd Floor Jln NyiurSarawak', '2024-05-05'),

('<user_id>', 3, 1, 10, 'Shuichi', 'Akai', '1981-09-02', 'Japan', 'Male', '018-7679904', '019-7679904', 'No. 149 Tingkat 1, Jalan Pasar Baru', '2024-01-01'),

('<user_id>', 4, 1, 11, 'Hermione', 'Granger', '1979-09-19', 'United States', 'Female', '018-7183908', '019-7793908', '16, Jln 2/98, Taman Supreme', '2024-07-01'),

('<user_id>', 4, 1, 12, 'Ryan', 'Reynolds', '1976-10-23', 'United States', 'Male', '013-6430714', '016-3080714', '63 Jalan U Thant', '2024-02-12'),

('<user_id>', 4, 1, 13, 'Robert', 'Downey', '1965-04-04', 'United States', 'Male', '013-7477709', '013-7827709', '8, Jln Pandan Indah 1/20, Taman Pandan Indah', '2024-01-01');

**For Me (Different For Everyone): **

INSERT INTO Employee (user_id, department_id, employment_status_id, job_title_id, first_name, last_name, date_of_birth, country_of_birth, gender, contact_info, emergency_contact, address, joined_date)

VALUES

('1299dfbd-e784-11ef-a8c7-16ffe118615d', 1, 1, 1, 'John', 'Smith', '1990-05-01', 'United States', 'Male', '018-3588313', '012-3588339', 'Jln 45A/26, Taman Sri Rampai', '2024-01-01'),

('1299ff40-e784-11ef-a8c7-16ffe118615d', 1, 1, 2, 'Jane', 'Doe', '1985-03-22', 'United Kingdom', 'Female', '017-9549357', '016-9549987', 'No. 73, M Jln SS21/37 SS21 Petaling Jaya', '2024-01-01'),

('129a0201-e784-11ef-a8c7-16ffe118615d', 1, 3, 3, 'Janie', 'Rose', '1995-04-22', 'United Kingdom', 'Female', '012-3456789', '018-3396787', 'No. 1, Jln Tun Ismail', '2024-03-07'),

('129a031f-e784-11ef-a8c7-16ffe118615d', 1, 1, 4, 'John', 'Wick', '1989-04-22', 'United States', 'Male', '012-4025268', '018-4025269', 'Jalan Permatang Pauh', '2024-01-01'),

('129a03d9-e784-11ef-a8c7-16ffe118615d', 2, 1, 5, 'Mike', 'Johnson', '1995-11-15', 'Canada', 'Male', '017-6538366', '019-6538399', '4A Jln Mawar 2', '2024-01-01'),

('129a0472-e784-11ef-a8c7-16ffe118615d', 2, 2, 6, 'Mike', 'Tyson', '1966-06-30', 'United States', 'Male', '017-1868984', '018-1868984', 'No. 257, Jln Pahang', '2024-03-10'),

('129a0553-e784-11ef-a8c7-16ffe118615d', 2, 1, 7, 'Jimmy', 'Kudo', '1990-05-04', 'Japan', 'Male', '013-5672634', '017-5672635', '202, 2, Jln Kulas Kuching', '2024-01-01'),

('129a05de-e784-11ef-a8c7-16ffe118615d', 3, 1, 8, 'Ran', 'Mouri', '1990-10-01', 'Japan', 'Female', '019-6466083', '018-8886083', '14, Jln 19/3, Seksyen 19 Petaling Jaya', '2024-06-01'),

('129a067c-e784-11ef-a8c7-16ffe118615d', 3, 2, 9, 'Richard', 'Moore', '1999-05-22', 'United States', 'Male', '017-8598872', '017-8598899', 'No. 178 2Nd Floor Jln NyiurSarawak', '2024-05-05'),

('129a0712-e784-11ef-a8c7-16ffe118615d', 3, 1, 10, 'Shuichi', 'Akai', '1981-09-02', 'Japan', 'Male', '018-7679904', '019-7679904', 'No. 149 Tingkat 1, Jalan Pasar Baru', '2024-01-01'),

('129a07b2-e784-11ef-a8c7-16ffe118615d', 4, 1, 11, 'Hermione', 'Granger', '1979-09-19', 'United States', 'Female', '018-7183908', '019-7793908', '16, Jln 2/98, Taman Supreme', '2024-07-01'),

('129a083c-e784-11ef-a8c7-16ffe118615d', 4, 1, 12, 'Ryan', 'Reynolds', '1976-10-23', 'United States', 'Male', '013-6430714', '016-3080714', '63 Jalan U Thant', '2024-02-12'),

('129a08d0-e784-11ef-a8c7-16ffe118615d', 4, 1, 13, 'Robert', 'Downey', '1965-04-04', 'United States', 'Male', '013-7477709', '013-7827709', '8, Jln Pandan Indah 1/20, Taman Pandan Indah', '2024-01-01');

Manager Table:

INSERT INTO Manager (manager_id, start_date, end_date) VALUES

(4, '2024-01-01', NULL),

(7, '2024-01-01', NULL),

(10, '2024-01-01', NULL),

(13, '2024-01-01', NULL);

Department Table:

UPDATE Department SET manager_id = 4 WHERE department_id = 1;

UPDATE Department SET manager_id = 7 WHERE department_id = 2;

UPDATE Department SET manager_id = 10 WHERE department_id = 3;

UPDATE Department SET manager_id = 13 WHERE department_id = 4;

GetUserForLogin Procedure:

```
DELIMITER //

CREATE PROCEDURE GetUserForLogin(
    IN p_Email VARCHAR(100)
)
BEGIN
    SELECT user_id, email, role_id, password
    FROM `User`
    WHERE email = p_Email;
END //

DELIMITER ;
```

Adding New Columns to JobTitle Table

ALTER TABLE JobTitle ADD role_id INT NULL;

UPDATE JobTitle SET role_id = 1 WHERE job_title_id = 1;

UPDATE JobTitle SET role_id = 3 WHERE job_title_id = 2;

UPDATE JobTitle SET role_id = 3 WHERE job_title_id = 3;

UPDATE JobTitle SET role_id = 2 WHERE job_title_id = 4;

UPDATE JobTitle SET role_id = 3 WHERE job_title_id = 5;

UPDATE JobTitle SET role_id = 3 WHERE job_title_id = 6;

UPDATE JobTitle SET role_id = 2 WHERE job_title_id = 7;

UPDATE JobTitle SET role_id = 3 WHERE job_title_id = 8;

UPDATE JobTitle SET role_id = 3 WHERE job_title_id = 9;

UPDATE JobTitle SET role_id = 2 WHERE job_title_id = 10;

UPDATE JobTitle SET role_id = 3 WHERE job_title_id = 11;

UPDATE JobTitle SET role_id = 3 WHERE job_title_id = 12;

UPDATE JobTitle SET role_id = 2 WHERE job_title_id = 13;

ALTER TABLE JobTitle ADD department_id INT NULL;

UPDATE JobTitle SET department_id = 1 WHERE job_title_id = 1;

UPDATE JobTitle SET department_id = 1 WHERE job_title_id = 2;

UPDATE JobTitle SET department_id = 1 WHERE job_title_id = 3;

UPDATE JobTitle SET department_id = 1 WHERE job_title_id = 4;

UPDATE JobTitle SET department_id = 2 WHERE job_title_id = 5;

UPDATE JobTitle SET department_id = 2 WHERE job_title_id = 6;

UPDATE JobTitle SET department_id = 2 WHERE job_title_id = 7;

UPDATE JobTitle SET department_id = 3 WHERE job_title_id = 8;

UPDATE JobTitle SET department_id = 3 WHERE job_title_id = 9;

UPDATE JobTitle SET department_id = 3 WHERE job_title_id = 10;

UPDATE JobTitle SET department_id = 4 WHERE job_title_id = 11;

UPDATE JobTitle SET department_id = 4 WHERE job_title_id = 12;

UPDATE JobTitle SET department_id = 4 WHERE job_title_id = 13;

ALTER TABLE JobTitle MODIFY COLUMN role_id INT NOT NULL;

ALTER TABLE JobTitle MODIFY COLUMN department_id INT NOT NULL;

ALTER TABLE JobTitle ADD FOREIGN KEY (role_id) REFERENCES Role(role_id);

ALTER TABLE JobTitle ADD FOREIGN KEY (department_id) REFERENCES Department(department_id);

Step 5: Rehash the Password

Open up VSCode, click on .env file, and copy your Endpoint from the Amazon RDS and paste it to the DB_HOST.

Open up your XAMPP and click on "Start" on the Apache. After that, run the rehash_password.php code by typing http://localhost/CCS6344-Assignment-2-Group-5/src/rehash_password.php in your browser, remember to uncomment the code beforehand (if commented). Wait for awhile for password migration to happen and you should see this message:

Password migration completed! 13 passwords updated.

You can run the query "SELECT * FROM User" in the MySQL Workbench to see if the password has been hashed or not. Remember to comment the code afterwards.

Once done, you can stop Apache and exit XAMPP, as well as close the browser tab, proceed to EC2 Instance Setup.