**SQL Workshop-4: DDL and DML in Depth**

**Introduction**

This document serves as a comprehensive guide for the workshop module covering Data Definition Language (DDL) and Data Manipulation Language (DML) statements. It provides practical examples to illustrate the application of these SQL statements.

**Workshop Organization**

The workshop is organized into distinct sections, detailing SQL statements for creating user access, databases, and associated tables relevant to the HireMeNow Job Portal Application.

**Data Control Language (DCL)**

**Create User Access**

CREATE LOGIN test WITH PASSWORD = 'root';

CREATE USER test FOR LOGIN test;

**Data Definition Language (DDL)**

**Create Database**

CREATE DATABASE HireMeNowDB;

USE HireMeNowDB;

**Users Table**

CREATE TABLE [dbo].[Users](

Id UNIQUEIDENTIFIER DEFAULT NEWID() PRIMARY KEY,

[FirstName] [varchar](50) NULL,

[MiddleName] [varchar](50) NULL,

[LastName] [varchar](50) NULL,

[Email] [varchar](50) NOT NULL UNIQUE,

[Gender] [varchar](50) NULL,

[Location] [varchar](50) NULL,

[Phone] [varchar](50) NULL,

[Password] [varchar](50) NULL,

[Role] [varchar](50) NULL,

[About] [varchar](50) NULL,

[Designation] [varchar](50) NULL,

[CompanyId] [uniqueidentifier] NULL,

[Image] [varchar](50) NULL,

[Status] [varchar](50) NULL

);

ALTER TABLE Users ADD CONSTRAINT email\_unique UNIQUE (Email);

**Jobs Table**

CREATE TABLE Job (

Id UNIQUEIDENTIFIER DEFAULT NEWID() PRIMARY KEY,

[Title] [varchar](50) NULL,

[Description] [varchar](50) NULL,

[Location] [varchar](50) NULL,

[Experience] [varchar](50) NULL,

[TypeOfWorkPlace] [varchar](50) NULL,

[Salary] [varchar](50) NULL,

[Responsibilities] [varchar](50) NULL,

[JobType] [varchar](50) NULL,

[VacanciesCount] [int] NULL,

[AppliedCount] [int] NULL,

[Status] [varchar](50) NULL,

[CompanyId] [uniqueidentifier] NULL,

[CreatedBy] [uniqueidentifier] REFERENCES Users (Id)

);

**Applications Table**

CREATE TABLE Applications (

Id UNIQUEIDENTIFIER DEFAULT NEWID() PRIMARY KEY,

[UserId] [uniqueidentifier] NULL,

[JobId] [uniqueidentifier] NULL,

[AppliedDate] [Date] NULL,

[Status] [varchar](50) NULL,

FOREIGN KEY (UserId) REFERENCES Users(Id),

FOREIGN KEY (JobId) REFERENCES Jobs(Id)

);

**Data Manipulation Language (DML)**

**Users Table**

-- Add Users

INSERT INTO users VALUES

('9b80c5d4-5de6-4f16-acd5-26f7d392b8b9','Soudha', 'AM', 'soudha.aitrich@gmail.com','Female', 'Thrissur', NULL, '123', 'Jobprovider', NULL, NULL, NULL, 'Active', NULL),

('6fa50404-3754-4062-a4b0-ca333468e69a', 'yadhu', 'krishna', 'yadhu.aitrich@gmail.com', NULL, 'Thrissur', NULL, '123', 'Jobseeker', NULL, NULL, NULL, 'Active', NULL);

-- Update Jobseeker details

UPDATE Users SET

Phone = '8085499250',

Location='Kochi',

About='Experienced .NET developer with 5+ years of experience in building Enterprise applications'

WHERE email = 'yadhu.aitrich@gmail.com';

-- List all users

SELECT \* FROM users;

-- List Jobseekers

SELECT \* FROM users WHERE Role='Jobseeker';

-- List Jobproviders

SELECT \* FROM users WHERE Role='Jobprovider';

-- Remove a User

DELETE FROM Users WHERE Email='shini@gmail.com';

**Jobs Table**

-- Add Job

INSERT INTO job VALUES ('aab8c9ab-a8d4-47e8-8098-a412a4ccdc79', 'Dotnet Developer', 'need a senior dotnet lead developer', 'thrissur', '2', 'WFH', '500000-800000', 'need to lead a team ', 'FullTime', 50, 14, 'Active', 'ab5f391e-d83e-4eae-87cd-bca23175cf22', 'a33a76cb-d35c-45ce-9458-8a9e6d9f84a7');

-- List all jobs

SELECT \* FROM job;

-- List jobs added by user 'soudha.aitrich@gmail.com'

SELECT j.Title, j.Description, j.Responsibilities, j.Experience, j.Location FROM job j, users u WHERE u.Email='soudha.aitrich@gmail.com' AND j.CreatedBy=u.Id;

-- List jobs with title containing 'Dotnet'

SELECT \* FROM job WHERE Title LIKE '%Dotnet%';

-- List jobs in Thrissur

SELECT \* FROM job WHERE Location='thrissur';

-- List all job details with JobProvider info

SELECT j.Title, j.Description, j.Responsibilities, j.Experience, j.Location, u.FirstName FROM job j INNER JOIN users u ON u.Id = j.CreatedBy;

**Applications Table**

-- Add Application

INSERT INTO Applications (UserId, JobId, Status, AppliedDate) VALUES ('a33a76cb-d35c-45ce-9458-8a9e6d9f84a7', 'aab8c9ab-a8d4-47e8-8098-a412a4ccdc79', 'Pending', '2023-10-11');

-- List applications of jobseeker 'yadhu.aitrich@gmail.com'

SELECT \* FROM Applications a, users u WHERE a.UserId=u.Id AND u.Email='yadhu.aitrich@gmail.com';

-- List applications with Job Title, Applied User’s FirstName, User’s Location

SELECT j.Title, u.FirstName, u.Location FROM Applications a INNER JOIN users u ON u.Id = a.UserId INNER JOIN job j ON j.Id = a.JobId;

-- Update Application status to Cancelled

UPDATE Applications SET Status='Cancelled' WHERE JobId='aab8c9ab-a8d4-47e8-8098-a412a4ccdc79';

-- Remove All Applications

DELETE FROM Applications WHERE JobId='aab8c9ab-a8d4-47e8-8098-a412a4ccdc79';

**Conclusion**

Congratulations! You've successfully completed the SQL workshop on DDL and DML. Explore and apply these concepts to enhance your database management skills.

**Happy coding!**