**To create database**

CREATE DATABASE eLearningSystem;

**To create tables**

CREATE TABLE Roles (

roleID int AUTO\_INCREMENT PRIMARY KEY,

role varchar (50) NOT null UNIQUE

);

CREATE TABLE Users (

userID int AUTO\_INCREMENT PRIMARY KEY,

firstName varchar (100) not null,

lastName varchar (100) not null,

email varchar (150) UNIQUE not null,

mobile int(14),

roleID int not null,

FOREIGN key (roleID) REFERENCES Roles (roleID)

);

CREATE TABLE Logins (

userID int not null,

username varchar (20) UNIQUE NOT null,

passwordHash varchar (20) NOT null,

FOREIGN KEY (userID) REFERENCES Users (userID)

);

CREATE TABLE Instructors (

instructorID int AUTO\_INCREMENT PRIMARY key,

userID int NOT null,

bio text,

FOREIGN KEY (userID) REFERENCES Users (userID)

);

CREATE TABLE Courses (

courseID int AUTO\_INCREMENT PRIMARY KEY,

courseTitle varchar (255) not null,

courseDescription text,

instructorID int not null,

FOREIGN KEY (instructorID) REFERENCES Instructors (instructorID)

);

create table Status (

statusID int AUTO\_INCREMENT PRIMARY KEY,

status varchar (50) NOT null

);

CREATE TABLE Enrollments (

enrollmentID int AUTO\_INCREMENT PRIMARY key,

userID int not null,

courseID int not null,

enrollmentDate date not null,

statusID int not null,

FOREIGN KEY (statusID) REFERENCES Status (statusID),

FOREIGN KEY (courseID) REFERENCES Courses (courseID),

FOREIGN KEY (userID) REFERENCES Users (userID)

);

CREATE TABLE Assignments (

assignmentID int AUTO\_INCREMENT PRIMARY KEY,

courseID int not null,

title varchar (255) not null,

description text,

openDate date NOT null,

dueDate date NOT null,

FOREIGN KEY (courseID) REFERENCES Courses (courseID)

);

CREATE TABLE Submissions (

submissionID int AUTO\_INCREMENT PRIMARY key,

assignmentID int not null,

userID int not null,

submittedAt datetime DEFAULT CURRENT\_TIMESTAMP,

fileURL varchar(255),

grade decimal (5,2),

FOREIGN KEY (assignmentID) REFERENCES Assignments (assignmentID),

FOREIGN KEY (userID) REFERENCES Users (userID)

);

**To delete unnecessary tables**

delete from table\_name;

**To enter data**

INSERT INTO Roles(role) VALUES

('admin'),

('moderator'),

('instructor'),

('student'),

('guest');

INSERT INTO Users(

firstName,

lastName,

email,

mobile,

roleID

) VALUES

('Nuwna','Karunathilaka','admin@elean.abc','1234567890',1),

('Alice','Smith','mod2@elearn.abc','1234567891',2),

('Vishnuga','Kumar','Kumar@elearn.abc','1234567893',3),

('Jayarasha','Vithushan','vithushan@elearn.abc','1234567894',3),

('Thanusan','Kajani','kajani@elearn.abc','1234567895',3),

('Thavachchelvam','Nitharshani','nitharshani@elearn.abc','1234567896',3),

('Asha','Dhananjani','asha@gmail.abc','1254562541',4),

('Jayani','Abayaweera','Jayani@gmail.abc','1254562542',4),

('Vilochana','Alahendra','Vilochana@gmail.abc','1254562543',4),

('Tharsini','Arunthavam','Tharsini@gmail.abc','1254562544',4),

('Racheena','Hanshani','Racheena@gmail.abc','1254562545',4),

('Dileep','Sandaruwan','Dileep@gmail.abc','1254562546',4),

('Dolitha','Nilumina','Dolitha@gmail.abc','1254562547',4),

('Thilina','Sadaruwan','Thilina@gmail.abc','1254562548',4),

('Dilini','Prasadini','Dilini@gmail.abc','1254562549',4),

('Christhuthasan','Christina','christy@elearn.abc','1234567897',3),

('Chinthani','Vishmika','Chinthani@gmail.abc','1254562550',4),

('Vishu','Aberathna','Vishu@gmail.abc','1254562551',4),

('Ishara','Mihiran','Ishara@gmail.abc','1254562552',4),

('Maruthan','Kanesamoorthy','Maruthan@gmail.abc','1254562553',4),

('Nethmi','Ayodya','Nethmi@gmail.abc','1254562554',4),

('Upadhya','Kumarasinghe','Upadhya@gmail.abc','1254562555',4),

('Yashintha','Medagedara','Yashintha@gmail.abc','1254562556',4),

('Ishara','Amarasinghe','Isharaa@gmail.abc','1254562557',4),

('Chalani','Karunaarachchi','Chalani@gmail.abc','1254562558',4),

('Roshan','Janaka','Roshan@gmail.abc','1254562559',4),

('Bob','Johnson','mod1@elearn.abc','1234567892',2),

('Gayani','Kaushalya','Gayani@gmail.abc','1254562560',4),

('Dilesha','Erandi','Dilesha@gmail.abc','1254562561',4),

('Manthila','Wijesinghe','Manthila@gmail.abc','1254562562',4),

('Menuka','Ajantha','Menuka@gmail.abc','1254562563',4),

('Mohan','Thushanthan','Mohan@gmail.abc','1254562564',4),

('Safeeth','Mohamed','Safeeth@gmail.abc','1254562565',4);

insert into Logins(

userID,

username,

passwordHash

)VALUES

(1,'admin','root'),

(2,'mod1','mod1'),

(3,'Vishnuga','Vishnuga123'),

(4,'Jayarasha','Jayarasha123'),

(5,'Thanusan','Thanusan123'),

(6,'Thavachchelvam','Thavachchelvam123'),

(7,'Asha','Asha123'),

(8,'Jayani','Jayani123'),

(9,'Vilochana','Vilochana123'),

(10,'Tharsini','Tharsini123'),

(11,'Racheena','Racheena123'),

(12,'Dileep','Dileep123'),

(13,'Dolitha','Dolitha123'),

(14,'Thilina','Thilina123'),

(15,'Dilini','Dilini123'),

(16,'Christhuthasan','Christhuthasan123'),

(17,'Chinthani','Chinthani123'),

(18,'Vishu','Vishu123'),

(19,'Isharaa','Ishara123'),

(20,'Maruthan','Maruthan123'),

(21,'Nethmi','Nethmi123'),

(22,'Upadhya','Upadhya123'),

(23,'Yashintha','Yashintha123'),

(24,'Ishara','Ishara123'),

(25,'Chalani','Chalani123'),

(26,'Roshan','Roshan123'),

(27,'mod2','mod2'),

(28,'Gayani','Gayani123'),

(29,'Dilesha','Dilesha123'),

(30,'Manthila','Manthila123'),

(31,'Menuka','Menuka123'),

(32,'Mohan','Mohan123'),

(33,'Safeeth','Safeeth123');

INSERT into instructors(

userID,

bio

)VALUES

(3,'Senior Lecturer in AI'),

(4,'Full Stack Developer'),

(5,'Data Science Trainer'),

(6,'Admin turned Instructor'),

(16,'Expert in Computer Science');

INSERT INTO courses(

courseTitle,

courseDescription,

instructorID

)VALUES

('Intro to Python','Learn basics of Python programming',5),

('Web Development','Build modern web apps',2),

('Database','Get started with SQL and relational databases',4),

('Data Structures','Understand key data structures like arrays, lists, stacks',1),

('AI Ethics','Ethical issues in AI',1),

('Machine Learning','An introduction to ML algorithms and applications',3),

('Cloud Computing','Basics of cloud technologies and services',2),

('Data Science','Data Analysis and Visualization',3);

insert into status(status)VALUES

('enrolled'),

('completed'),

('dropped'),

('pending'),

('inactive');

INSERT into enrollments(

userID,

courseID,

enrollmentDate,

statusID

)VALUES

(7,1,'2024-05-22',2),

(7,4,'2024-05-23',4),

(7,8,'2024-05-24',1),

(8,2,'2024-05-26',4),

(8,7,'2024-05-27',2),

(10,6,'2024-05-28',4),

(11,5,'2024-05-26',4),

(11,7,'2024-05-22',1),

(12,6,'2024-05-23',4),

(12,8,'2024-05-24',3),

(13,7,'2024-05-28',4),

(14,8,'2024-05-26',4),

(15,1,'2024-05-26',4),

(15,8,'2024-05-28',4),

(17,6,'2024-05-22',4),

(18,6,'2024-05-26',4),

(19,1,'2024-05-24',4),

(20,1,'2024-05-28',4),

(21,5,'2024-05-26',4),

(21,7,'2024-05-28',2),

(22,2,'2024-05-26',4),

(23,3,'2024-05-22',4),

(24,1,'2024-05-23',4),

(24,8,'2024-05-24',5),

(24,3,'2024-05-28',3),

(25,3,'2024-05-28',4),

(26,5,'2024-05-26',4),

(26,7,'2024-05-28',5),

(28,4,'2024-05-22',4),

(28,1,'2024-05-23',3),

(29,1,'2024-05-24',4),

(30,2,'2024-05-28',4),

(30,7,'2024-05-26',5),

(30,5,'2024-05-28',4),

(31,6,'2024-05-22',4),

(32,6,'2024-05-23',4),

(33,4,'2024-05-24',4),

(33,1,'2024-05-26',3);

INSERT INTO assignments(

courseID,

title,

description,

openDate,

dueDate

)VALUES

(2,'HTML Form','Create a form','2024-06-08','2024-06-15'),

(3, 'SQL Basics', 'Write queries to manage student data', '2024-06-21', '2024-06-28'),

(4, 'Binary Tree Traversal', 'Write code for inorder, preorder, and postorder traversal', '2024-07-15', '2024-07-22'),

(7, 'Deploy Web App', 'Deploy a simple app on AWS or Firebase', '2024-07-20', '2024-07-27'),

(5,'Ethics Essay','Write on AI bias','2024-08-03','2024-08-11'),

(8, 'Visualization', 'Plot graphs using matplotlib or seaborn', '2024-09-27', '2024-10-03'),

(6,'ML project','Build a simple ML model','2024-12-03','2025-01-02'),

(1,'Python Basics','Simple Python exercise','2025-01-02','2025-01-10'),

(2, 'Responsive Design', 'Create a responsive layout using CSS Grid', '2025-01-04', '2025-02-07');

INSERT into submissions(

assignmentID,

userID,

submittedAt,

fileURL,

grade

)VALUES

(1,8,'2024-06-12 08:40:50','https://elearn.abc/submissions/web\_development/assignments1/file1',98),

(1,22,' 2024-06-13 08:45:50','https://elearn.abc/submissions/web\_development/assignments1/file2',54),

(1,30,'2024-06-14 09:01:50','https://elearn.abc/submissions/web\_development/assignments1/file3',88),

(2,23,'2024-06-25 11:59:58','https://elearn.abc/submissions/ai\_ethics/assignments1/file1',85),

(2,25,'2024-06-25 13:07:01','https://elearn.abc/submissions/intro\_to\_python/assignments1/file3',63),

(2,24,'2024-06-26 21:07:01','https://elearn.abc/submissions/intro\_to\_python/assignments1/file4',57),

(3,28,'2024-07-16 22:07:01','https://elearn.abc/submissions/intro\_to\_python/assignments1/file5',95),

(3,33,'2024-07-17 11:59:59','https://elearn.abc/submissions/ai\_ethics/assignments1/file2',78),

(3,7,'2024-07-20 12:00:00','https://elearn.abc/submissions/ai\_ethics/assignments1/file3',65),

(4,8,'2024-07-22 13:07:01','https://elearn.abc/submissions/ai\_ethics/assignments1/file4',84),

(5,26,'2024-08-04 13:07:01','https://elearn.abc/submissions/machine\_learning/assignments1/file1',95),

(5,21,'2024-08-04 13:07:11','https://elearn.abc/submissions/machine\_learning/assignments1/file2',78),

(6,15,'2024-12-28 02:00:00','https://elearn.abc/submissions/machine\_learning/assignments1/file3',65),

(6,14,'2024-12-28 14:52:59','https://elearn.abc/submissions/machine\_learning/assignments1/file4',60),

(6,7,'2024-09-30 10:00:00','https://elearn.abc/submissions/machine\_learning/assignments1/file5',69),

(7,10,'2024-12-13 13:07:01','https://elearn.abc/submissions/intro\_to\_python/assignments1/file1',78),

(7,18,'2024-12-23 08:10:00','https://elearn.abc/submissions/intro\_to\_python/assignments1/file2',75),

(8,7,'2025-01-05 13:07:01','https://elearn.abc/submissions/intro\_to\_python/assignments1/file3',63),

(8,29,'2025-01-05 21:07:01','https://elearn.abc/submissions/intro\_to\_python/assignments1/file4',57),

(9,30,'2025-01-06 22:07:01','https://elearn.abc/submissions/intro\_to\_python/assignments1/file5',95),

(9,22,'2025-01-06 23:14:00','https://elearn.abc/submissions/intro\_to\_python/assignments1/file6',62)

**To reset auto\_increment**

alter table users auto\_increment=1;