**CREATE DATABASE IF NOT EXISTS** university;

**USE** university;

**CREATE TABLE** college (

**col\_id INTEGER PRIMARY KEY AUTO\_INCREMENT**,

**col\_name VARCHAR**(100) **NOT NULL**,

**col\_address VARCHAR**(200) **NOT NULL**,

**col\_state VARCHAR**(20) **NOT NULL**,

**col\_city VARCHAR**(100) **NOT NULL**,

**col\_zip VARCHAR**(10) **NOT NULL**

);

**CREATE TABLE** department (

**dept\_id INTEGER PRIMARY KEY AUTO\_INCREMENT**,

**dept\_name VARCHAR**(500) **NOT NULL**,

**dept\_email VARCHAR**(200) **NOT NULL**,

**col\_id INTEGER NOT NULL**,

**FOREIGN KEY** (**col\_id**) **REFERENCES** college (**col\_id**),

**INDEX** (**col\_id**)

);

**CREATE TABLE** instructor (

**inst\_id INTEGER PRIMARY KEY AUTO\_INCREMENT**,

**inst\_name VARCHAR**(500) **NOT NULL**,

**inst\_email VARCHAR**(200) **NOT NULL**,

**inst\_rank ENUM** (**'Lecture'**, **'Sr.Lecturer'**, **'Assistant'**, **'associate'**,

**'Full-Professor'**),

**inst\_starting\_date DATE NOT NULL**,

**dept\_id INTEGER NOT NULL**,

**FOREIGN KEY** (**dept\_id**) **REFERENCES** department (**dept\_id**),

**INDEX** (**dept\_id**)

);

**CREATE TABLE** student (

**std\_id INTEGER PRIMARY KEY AUTO\_INCREMENT**,

**std\_name VARCHAR**(500) **NOT NULL**,

**std\_email VARCHAR**(200) **NOT NULL**,

**std\_status ENUM** (**'Undergraduate'**, **'Graduate'**),

**std\_address VARCHAR**(200) **NOT NULL**,

**std\_state VARCHAR**(20) **NOT NULL**,

**std\_city VARCHAR**(100) **NOT NULL**,

**std\_zip VARCHAR**(10) **NOT NULL**,

**dept\_id INTEGER NOT NULL**,

**FOREIGN KEY** (**dept\_id**) **REFERENCES** department (**dept\_id**),

**INDEX** (**dept\_id**)

);

**CREATE TABLE** enrollment (

**e\_id INTEGER PRIMARY KEY AUTO\_INCREMENT**,

**e\_grade DECIMAL NOT NULL**,

**e\_letter ENUM** (**'A'**, **'B'**, **'C'**, **'D'**, **'F'**),

**std\_id INTEGER NOT NULL**,

**sec\_id INTEGER NOT NULL**,

**FOREIGN KEY** (**std\_id**) **REFERENCES** student (**std\_id**),

**FOREIGN KEY** (**sec\_id**) **REFERENCES** section (**sec\_id**),

**INDEX** (**std\_id**),

**INDEX** (**sec\_id**)

);

**CREATE TABLE** class (

**class\_id INTEGER PRIMARY KEY AUTO\_INCREMENT**,

**class\_num INTEGER NOT NULL**,

**class\_name VARCHAR**(500) **NOT NULL**,

**class\_description VARCHAR**(1000) **NOT NULL**,

**class\_type ENUM** (**'Core'**, **'Non-core'**),

**dept\_id INTEGER NOT NULL**,

**FOREIGN KEY** (**dept\_id**) **REFERENCES** department (**dept\_id**),

**INDEX** (**dept\_id**)

);

**CREATE TABLE** section (

**sec\_id INTEGER PRIMARY KEY AUTO\_INCREMENT**,

**sec\_num INTEGER NOT NULL**,

**sec\_year YEAR**(4) **NOT NULL**,

**sec\_term ENUM** (**'Spring'**, **'Fall'**, **'Summer'**),

**num\_of\_std INT NOT NULL**,

**class\_id INTEGER NOT NULL REFERENCES** class,

**inst\_id INTEGER NOT NULL REFERENCES** instructor,

**FOREIGN KEY** (**class\_id**) **REFERENCES** class (**class\_id**),

**FOREIGN KEY** (**inst\_id**) **REFERENCES** instructor (**inst\_id**),

**INDEX** (**class\_id**),

**INDEX** (**inst\_id**)

);