**--TASK 1**

create database SSIDB

--creating tables

create table students(

student\_id int,

first\_name varchar(20),

last\_name varchar(20),

date\_of\_birth date,

email varchar(100),

phone\_no varchar(10))

create table teacher(

teacher\_id int primary key,

first\_name varchar(20) NOT NULL,

last\_name varchar(20),

email varchar(100) UNIQUE NOT NULL

)

create table courses(

course\_id int primary key,

course\_name varchar(50),

credits int,

teacher\_id int references teacher(teacher\_id)

)

create table enrollments(

enrollment\_id int primary key,

student\_id int references students(student\_id),

course\_id int references courses(course\_id),

enrollment\_date date

)

create table payments(

payment\_id int primary key,

student\_id int references students(student\_id),

amount float,

payment\_date date)

-- constraints for referential integrity

alter table payments

alter column payment\_id int NOT NULL;

alter table enrollments

alter column enrollment\_id int NOT NULL;

alter table courses

alter column course\_id int NOT NULL;

alter table students

alter column phone\_no varchar(10) NOT NULL;

alter table students

alter column student\_id int NOT NULL;

alter table students

add constraint pk\_students primary key(student\_id);

alter table students

alter column first\_name varchar(20) NOT NULL;

alter table students

alter column email varchar(100) NOT NULL;

alter table students

alter column phone\_no varchar(10) NOT NULL;

--inserting values

insert into students(student\_id,first\_name,last\_name,date\_of\_birth,email,phone\_no) values

(1, 'John', 'Doe', '2002-05-15', 'john.doe@example.com', '9876543210'),

(2, 'Emma', 'Smith', '2001-09-21', 'emma.smith@example.com', '9123456789'),

(3, 'Liam', 'Johnson', '2003-01-11', 'liam.johnson@example.com', '9234567890'),

(4, 'Olivia', 'Brown', '2000-07-30', 'olivia.brown@example.com', '9345678901'),

(5, 'Noah', 'Williams', '2002-12-10', 'noah.williams@example.com', '9456789012'),

(6, 'Ava', 'Jones', '2001-06-18', 'ava.jones@example.com', '9567890123'),

(7, 'William', 'Garcia', '2003-03-25', 'william.garcia@example.com', '9678901234'),

(8, 'Sophia', 'Martinez', '2000-10-05', 'sophia.martinez@example.com', '9789012345'),

(9, 'James', 'Anderson', '2002-02-14', 'james.anderson@example.com', '9890123456'),

(10, 'Isabella', 'Thomas', '2001-08-29', 'isabella.thomas@example.com', '9901234567');

insert into teacher (teacher\_id, first\_name, last\_name, email) values

(1, 'Michael', 'Clark', 'michael.clark@example.com'),

(2, 'Linda', 'Lopez', 'linda.lopez@example.com'),

(3, 'Robert', 'Wilson', 'robert.wilson@example.com'),

(4, 'Elizabeth', 'Taylor', 'elizabeth.taylor@example.com'),

(5, 'David', 'Lee', 'david.lee@example.com'),

(6, 'Jennifer', 'Hall', 'jennifer.hall@example.com'),

(7, 'Richard', 'Allen', 'richard.allen@example.com'),

(8, 'Jessica', 'Young', 'jessica.young@example.com'),

(9, 'Charles', 'King', 'charles.king@example.com'),

(10, 'Patricia', 'Scott', 'patricia.scott@example.com');

insert into courses (course\_id, course\_name, credits, teacher\_id) values

(101, 'Mathematics', 4, 1),

(102, 'Physics', 3, 2),

(103, 'Chemistry', 3, 3),

(104, 'Biology', 4, 4),

(105, 'Computer Science', 3, 5),

(106, 'History', 2, 6),

(107, 'Geography', 2, 7),

(108, 'English', 3, 8),

(109, 'Psychology', 3, 9),

(110, 'Economics', 3, 10);

insert into enrollments (enrollment\_id, student\_id, course\_id, enrollment\_date) values

(1, 1, 101, '2024-01-10'),

(2, 2, 102, '2024-01-11'),

(3, 3, 103, '2024-01-12'),

(4, 4, 104, '2024-01-13'),

(5, 5, 105, '2024-01-14'),

(6, 6, 106, '2024-01-15'),

(7, 7, 107, '2024-01-16'),

(8, 8, 108, '2024-01-17'),

(9, 9, 109, '2024-01-18'),

(10, 10, 110, '2024-01-19');

insert into payments (payment\_id, student\_id, amount, payment\_date) values

(1, 1, 1000.00, '2024-02-01'),

(2, 2, 1200.50, '2024-02-02'),

(3, 3, 1500.75, '2024-02-03'),

(4, 4, 1100.00, '2024-02-04'),

(5, 5, 1300.25, '2024-02-05'),

(6, 6, 1400.00, '2024-02-06'),

(7, 7, 1250.50, '2024-02-07'),

(8, 8, 1600.00, '2024-02-08'),

(9, 9, 1700.75, '2024-02-09'),

(10, 10, 1800.00, '2024-02-10');