**Assignment 2: Student Information System**

**Code :**

**Task:1:**

1. **Table creation**

CREATE DATABASE SISDB;

USE SISDB;

CREATE TABLE Students (

student\_id INT AUTO\_INCREMENT,

first\_name VARCHAR(20) NOT NULL,

last\_name VARCHAR(20) NOT NULL,

date\_of\_birth DATE,

email VARCHAR(50) NOT NULL,

phone\_number VARCHAR(15) NOT NULL,

CONSTRAINT Students\_studentid\_pk PRIMARY KEY (student\_id),

CONSTRAINT Students\_email\_uk UNIQUE (email),

CONSTRAINT Students\_phoneno\_uk UNIQUE (phone\_number)

);

CREATE TABLE Teacher (

teacher\_id INT AUTO\_INCREMENT,

first\_name VARCHAR(20) NOT NULL,

last\_name VARCHAR(20) NOT NULL,

email VARCHAR(50) NOT NULL,

CONSTRAINT Teacher\_teacherid\_pk PRIMARY KEY (teacher\_id),

CONSTRAINT Teacher\_email\_uk UNIQUE (email)

);

CREATE TABLE Courses (

course\_id INT AUTO\_INCREMENT,

course\_name VARCHAR(20) NOT NULL,

credits INT DEFAULT 0,

teacher\_id INT,

CONSTRAINT Courses\_courseid\_pk PRIMARY KEY (course\_id),

CONSTRAINT Courses\_teacherid\_fk FOREIGN KEY (teacher\_id)

REFERENCES Teacher (teacher\_id) ON DELETE SET NULL,

CHECK (credits > 0)

);

CREATE TABLE Enrollments(

enrollment\_id INT AUTO\_INCREMENT,

student\_id INT,

course\_id INT,

enrollment\_date DATE DEFAULT (CURRENT\_DATE),

CONSTRAINT Enrollments\_enrollmentid\_pk PRIMARY KEY(enrollment\_id),

CONSTRAINT Enrollments\_studentid\_fk FOREIGN KEY(student\_id)

REFERENCES Students(student\_id) ON DELETE CASCADE,

CONSTRAINT Enrollments\_courseid\_fk FOREIGN KEY(course\_id)

REFERENCES Courses(course\_id) ON DELETE CASCADE

);

CREATE TABLE Payments(

payment\_id INT AUTO\_INCREMENT,

student\_id INT,

amount DECIMAL(10,2) DEFAULT 0,

payment\_date DATE DEFAULT (CURRENT\_DATE-1),

CONSTRAINT Payments\_paymentid\_pk PRIMARY KEY(payment\_id),

CONSTRAINT Payments\_studentid\_fk FOREIGN KEY(student\_id)

REFERENCES Students(student\_id) ON DELETE CASCADE,

CHECK (amount>0)

);

**b)data insertion:**

INSERT INTO Students(first\_name,last\_name,date\_of\_birth,email,phone\_number) VALUES

('Aarav','Sharma','2000-05-12','aarav.sharma@example.com','9876543210'),

('Ishita','Verma','2001-08-23','ishita.verma@example.com','9876543211'),

('Kabir','Patel','1999-11-15','kabir.patel@example.com','9876543212'),

('Ananya','Rao','2002-03-30','ananya.rao@example.com','9876543213'),

('Vivaan','Iyer','2000-12-05','vivaan.iyer@example.com','9876543214'),

('Sanya','Kapoor','2001-07-18','sanya.kapoor@example.com','9876543215'),

('Aditya','Menon','1998-09-22','aditya.menon@example.com','9876543216'),

('Meera','Joshi','2002-04-09','meera.joshi@example.com','9876543217'),

('Rohan','Pillai','2000-06-14','rohan.pillai@example.com','9876543218'),

('Diya','Nair','2001-01-27','diya.nair@example.com','9876543219');

INSERT INTO Teacher(first\_name,last\_name,email) VALUES

('Rajesh','Malhotra','rajesh.malhotra@example.com'),

('Sneha','Iyer','sneha.iyer@example.com'),

('Amit','Gupta','amit.gupta@example.com'),

('Priya','Nair','priya.nair@example.com'),

('Vikram', 'Sharma', 'vikram.sharma@example.com'),

('Anjali','Kapoor','anjali.kapoor@example.com'),

('Suresh','Menon','suresh.menon@example.com'),

('Neha','Joshi','neha.joshi@example.com'),

('Arjun','Verma','arjun.verma@example.com'),

('Meera','Rao','meera.rao@example.com');

INSERT INTO Courses(course\_name,credits,teacher\_id) VALUES

('Mathematics',4,1),

('Physics',3,2),

('Chemistry',3,3),

('Biology',4,4),

('Computer Science',5,5),

('History',2,6),

('English Literature',3,7),

('Economics',4,8),

('Psychology',3,9),

('Environmental Science',4,10);

ALTER TABLE Courses

MODIFY COLUMN course\_name varchar(40); -- added this line as the 10th record's course name is large and at the same time to ensure the course names of max characters being added without errors

INSERT INTO Enrollments(student\_id,course\_id,enrollment\_date) VALUES

(1,3,'2023-06-15'),

(2,5,'2023-07-10'),

(3,1,'2023-08-20'),

(4,4,'2023-09-05'),

(5,2,'2023-10-12'),

(6,6,'2023-11-25'),

(7,8,'2023-12-01'),

(8,7,'2024-01-18'),

(9,9,'2024-02-14'),

(10,10,'2024-03-08');

INSERT INTO Payments(student\_id,amount,payment\_date) VALUES

(1,5000.00,'2023-06-10'),

(2,4500.50,'2023-07-12'),

(3,6000.75,'2023-08-15'),

(4,3000.00,'2023-09-20'),

(5,5500.25,'2023-10-05'),

(6,4000.00,'2023-11-18'),

(7,3500.00,'2023-12-22'),

(8,4800.50,'2024-01-08'),

(9,5200.00,'2024-02-14'),

(10,4600.75,'2024-03-01');