**Assignment 2: Student Information System**

**TASK : 1**

**Code :**

**Task:1:**

**a) Table and database 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@gmail.com','9876543210'),

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

('Meera','Rao','meera.rao@gmail.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');