CODE 1

DROP TABLE IF EXISTS FeePayments;

CREATE TABLE FeePayments (

payment\_id INT PRIMARY KEY,

student\_name VARCHAR(100) NOT NULL,

amount DECIMAL(10,2) CHECK (amount > 0),

payment\_date DATE NOT NULL

);

START TRANSACTION;

INSERT INTO FeePayments VALUES (1, 'Ashish', 5000.00, '2024-06-01');

INSERT INTO FeePayments VALUES (2, 'Smaran', 4500.00, '2024-06-02');

INSERT INTO FeePayments VALUES (3, 'Vaibhav', 5500.00, '2024-06-03');

COMMIT;

START TRANSACTION;

INSERT INTO FeePayments VALUES (4, 'Kiran', 4800.00, '2024-06-04');

INSERT INTO FeePayments VALUES (1, 'Ashish', -3000.00, '2024-06-05'); -- duplicate id + negative

ROLLBACK;

SELECT \* FROM FeePayments;

START TRANSACTION;

INSERT INTO FeePayments VALUES (5, 'Rohit', 5200.00, '2024-06-06');

INSERT INTO FeePayments VALUES (6, NULL, 4900.00, '2024-06-07'); -- invalid null

ROLLBACK;

START TRANSACTION;

INSERT INTO FeePayments VALUES (7, 'Sneha', 4700.00, '2024-06-08');

INSERT INTO FeePayments VALUES (8, 'Arjun', 4900.00, '2024-06-09');

COMMIT;

SELECT \* FROM FeePayments;

CODE 2

DROP TABLE IF EXISTS StudentEnrollments;

CREATE TABLE StudentEnrollments (

enrollment\_id INT PRIMARY KEY,

student\_name VARCHAR(100) NOT NULL,

course\_id VARCHAR(10) NOT NULL,

enrollment\_date DATE NOT NULL,

CONSTRAINT unique\_student\_course UNIQUE (student\_name, course\_id)

);

START TRANSACTION;

INSERT INTO StudentEnrollments VALUES (1, 'Ashish', 'CSE101', '2024-07-01');

INSERT INTO StudentEnrollments VALUES (2, 'Smaran', 'CSE102', '2024-07-01');

INSERT INTO StudentEnrollments VALUES (3, 'Vaibhav', 'CSE101', '2024-07-01');

COMMIT;

START TRANSACTION;

INSERT INTO StudentEnrollments VALUES (4, 'Ashish', 'CSE101', '2024-07-02');

ROLLBACK;

START TRANSACTION;

SELECT \* FROM StudentEnrollments

WHERE student\_name = 'Ashish' AND course\_id = 'CSE101'

FOR UPDATE;

START TRANSACTION;

INSERT INTO StudentEnrollments VALUES (4, 'Ashish', 'CSE101', '2024-07-02');

COMMIT;

START TRANSACTION;

SELECT \* FROM StudentEnrollments

WHERE student\_name = 'Ashish' AND course\_id = 'CSE101'

FOR UPDATE;

START TRANSACTION;

SELECT \* FROM StudentEnrollments

WHERE student\_name = 'Ashish' AND course\_id = 'CSE101'

FOR UPDATE;

UPDATE StudentEnrollments

SET enrollment\_date = '2024-07-10'

WHERE student\_name = 'Ashish' AND course\_id = 'CSE101';

COMMIT;

START TRANSACTION;

UPDATE StudentEnrollments

SET enrollment\_date = '2024-07-15'

WHERE student\_name = 'Ashish' AND course\_id = 'CSE101';

COMMIT;

SELECT \* FROM StudentEnrollments

CODE 3

DROP TABLE IF EXISTS StudentEnrollments;

CREATE TABLE StudentEnrollments (

student\_id INT PRIMARY KEY,

student\_name VARCHAR(100),

course\_id VARCHAR(10),

enrollment\_date DATE

);

INSERT INTO StudentEnrollments VALUES

(1, 'Ashish', 'CSE101', '2024-06-01'),

(2, 'Smaran', 'CSE102', '2024-06-01'),

(3, 'Vaibhav', 'CSE103', '2024-06-01');

START TRANSACTION;

UPDATE StudentEnrollments SET enrollment\_date = '2024-07-01' WHERE student\_id = 1;

START TRANSACTION;

UPDATE StudentEnrollments SET enrollment\_date = '2024-07-02' WHERE student\_id = 2;

UPDATE StudentEnrollments SET enrollment\_date = '2024-07-03' WHERE student\_id = 2;

UPDATE StudentEnrollments SET enrollment\_date = '2024-07-04' WHERE student\_id = 1;

START TRANSACTION;

SELECT \* FROM StudentEnrollments WHERE student\_id = 1;

START TRANSACTION;

UPDATE StudentEnrollments SET enrollment\_date = '2024-07-10' WHERE student\_id = 1;

COMMIT;

SELECT \* FROM StudentEnrollments WHERE student\_id = 1;

COMMIT;

SELECT \* FROM StudentEnrollments WHERE student\_id = 1;

START TRANSACTION;

SELECT \* FROM StudentEnrollments WHERE student\_id = 1 FOR UPDATE;

SELECT \* FROM StudentEnrollments WHERE student\_id = 1;

START TRANSACTION;

UPDATE StudentEnrollments SET enrollment\_date = '2024-07-20' WHERE student\_id = 1;

START TRANSACTION;

SELECT \* FROM StudentEnrollments WHERE student\_id = 1;