# TASK 3

## Table Structure

```
CREATE TABLE students (
student_id INTEGER PRIMARY KEY AUTOINCREMENT,
name TEXT NOT NULL,
email TEXT UNIQUE NOT NULL,
dob DATE
);
```

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```
CREATE TABLE courses (
course_id INTEGER PRIMARY KEY AUTOINCREMENT,
course_name TEXT NOT NULL,
course_code TEXT UNIQUE NOT NULL,
credits INTEGER
);
```

---

```
CREATE TABLE enrollments (
enrollment_id INTEGER PRIMARY KEY AUTOINCREMENT,
student_id INTEGER,
course_id INTEGER,
enrollment_date DATE,
grade TEXT,
FOREIGN KEY(student_id) REFERENCES students(student_id),
FOREIGN KEY(course_id) REFERENCES courses(course_id)
);
```

---

```
INSERT INTO students (name, email, dob) VALUES
('Amit Patel', 'amit.patel@example.com', '2000-01-15'),
('Bhavna Shah', 'bhavna.shah@example.com', '2001-06-20'),
('Chetan Mehta', 'chetan.mehta@example.com', '1999-09-25'),
('Deepa Rana', 'deepa.rana@example.com', '2002-02-05');
```

---

```
INSERT INTO courses (course_name, course_code, credits) VALUES
('Database Systems', 'CS101', 4),
('Data Structures', 'CS102', 3),
('Web Development', 'CS103', 3),
('Cyber Security', 'CS104', 2);
```

---

```
INSERT INTO enrollments (student_id, course_id, enrollment_date, grade) VALUES
(1, 1, '2025-01-10', 'A'),
(1, 2, '2025-01-11', 'B'),
(2, 1, '2025-01-12', 'A'),
(3, 3, '2025-01-13', 'C'),
(4, 4, '2025-01-14', 'B');
```

---

```
select * from students;
```

Grid view | Form view

Total rows loaded: 4

| | student_id | name | email | dob |
|---|---|---|---|---|
| 1 | 1 | Amit Patel | amit.patel@example.com | 2000-01-15 |
| 2 | 2 | Bhavna Shah | bhavna.shah@example.com | 2001-06-20 |
| 3 | 3 | Chetan Mehta | chetan.mehta@example.com | 1999-09-25 |
| 4 | 4 | Deepa Rana | deepa.rana@example.com | 2002-02-05 |

---

```
select * from courses;
```

Grid view | Form view

Total rows loaded: 4

| | course_id | course_name | course_code | credits |
|---|---|---|---|---|
| 1 | 1 | Database Systems | CS101 | 4 |
| 2 | 2 | Data Structures | CS102 | 3 |
| 3 | 3 | Web Development | CS103 | 3 |
| 4 | 4 | Cyber Security | CS104 | 2 |

select * from enrollments;

Grid view | Form view

Total rows loaded: 5

| | enrollment_id | student_id | course_id | enrollment_date | grade |
|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 2025-01-10 | A |
| 2 | 2 | 1 | 2 | 2025-01-11 | B |
| 3 | 3 | 2 | 1 | 2025-01-12 | A |
| 4 | 4 | 3 | 3 | 2025-01-13 | C |
| 5 | 5 | 4 | 4 | 2025-01-14 | B |

---

**Get student names and DOB only**

SELECT name, dob FROM students;

Grid view | Form view

Total rows loaded: 4

| | name | dob |
|---|---|---|
| 1 | Amit Patel | 2000-01-15 |
| 2 | Bhavna Shah | 2001-06-20 |
| 3 | Chetan Mehta | 1999-09-25 |
| 4 | Deepa Rana | 2002-02-05 |

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**Find students born after 2000**

SELECT * FROM students

WHERE dob > '2000-01-01';

Grid view | Form view

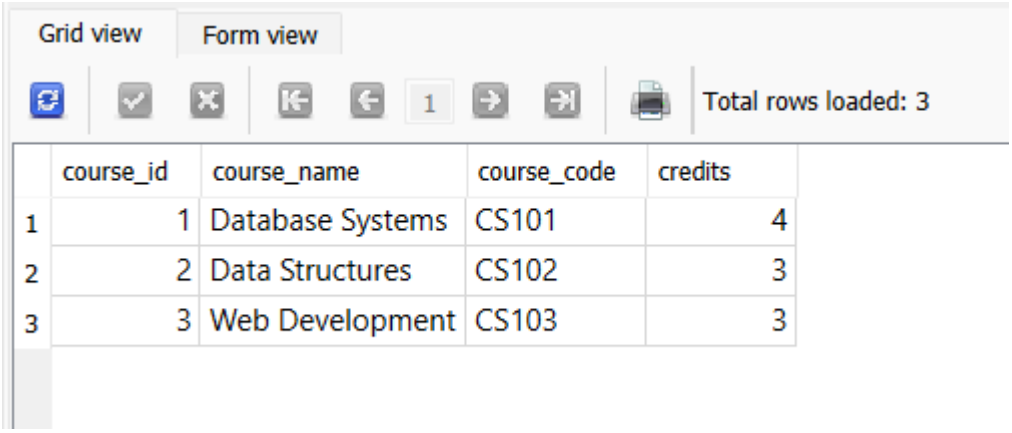
Total rows loaded: 3

| | student_id | name | email | dob |
|---|---|---|---|---|
| 1 | 1 | Amit Patel | amit.patel@example.com | 2000-01-15 |
| 2 | 2 | Bhavna Shah | bhavna.shah@example.com | 2001-06-20 |
| 3 | 4 | Deepa Rana | deepa.rana@example.com | 2002-02-05 |

**Find courses with more than 2 credits**

SELECT * FROM courses

WHERE credits > 2;



Grid view | Form view

Total rows loaded: 3

| | course_id | course_name | course_code | credits |
|---|---|---|---|---|
| 1 | 1 | Database Systems | CS101 | 4 |
| 2 | 2 | Data Structures | CS102 | 3 |
| 3 | 3 | Web Development | CS103 | 3 |

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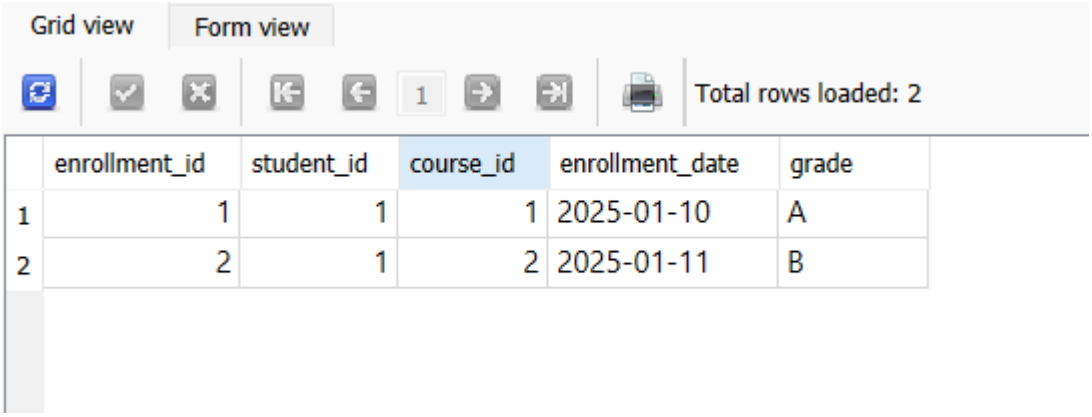
**List enrollments for student ID 1**

SELECT * FROM enrollments

WHERE student_id = 1;



Grid view | Form view

Total rows loaded: 2

| | enrollment_id | student_id | course_id | enrollment_date | grade |
|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 2025-01-10 | A |
| 2 | 2 | 1 | 2 | 2025-01-11 | B |

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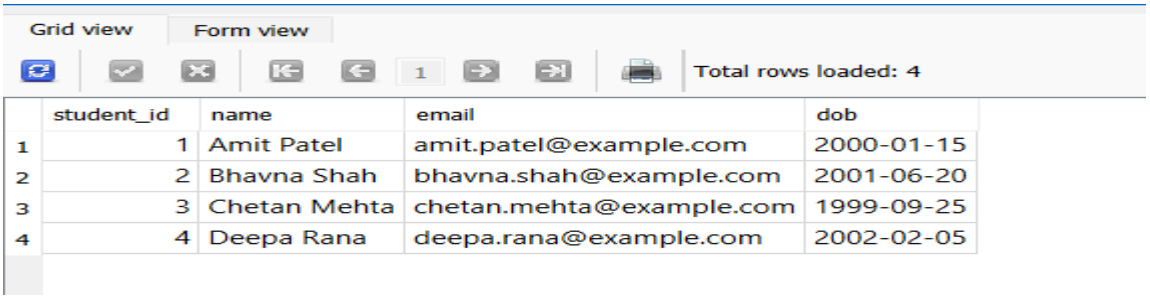
**Students with name containing 'a'**

SELECT * FROM students

WHERE name LIKE '%a%';



Grid view | Form view

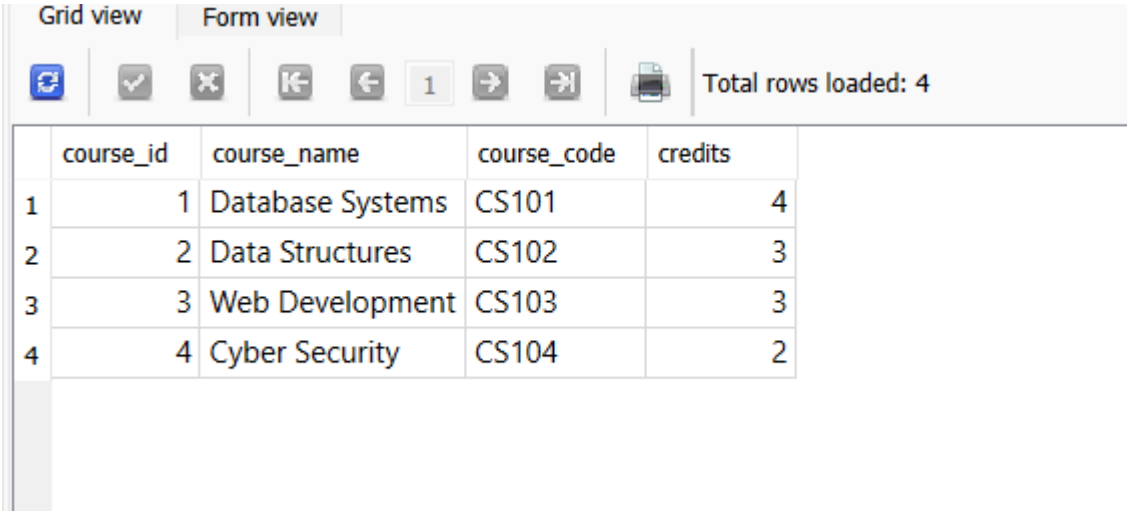
Total rows loaded: 4

| | student_id | name | email | dob |
|---|---|---|---|---|
| 1 | 1 | Amit Patel | amit.patel@example.com | 2000-01-15 |
| 2 | 2 | Bhavna Shah | bhavna.shah@example.com | 2001-06-20 |
| 3 | 3 | Chetan Mehta | chetan.mehta@example.com | 1999-09-25 |
| 4 | 4 | Deepa Rana | deepa.rana@example.com | 2002-02-05 |

**Courses with credits between 2 and 4**

SELECT * FROM courses

WHERE credits BETWEEN 2 AND 4;


Grid view Form view

Total rows loaded: 4

| | course_id | course_name | course_code | credits |
|---|---|---|---|---|
| 1 | 1 | Database Systems | CS101 | 4 |
| 2 | 2 | Data Structures | CS102 | 3 |
| 3 | 3 | Web Development | CS103 | 3 |
| 4 | 4 | Cyber Security | CS104 | 2 |

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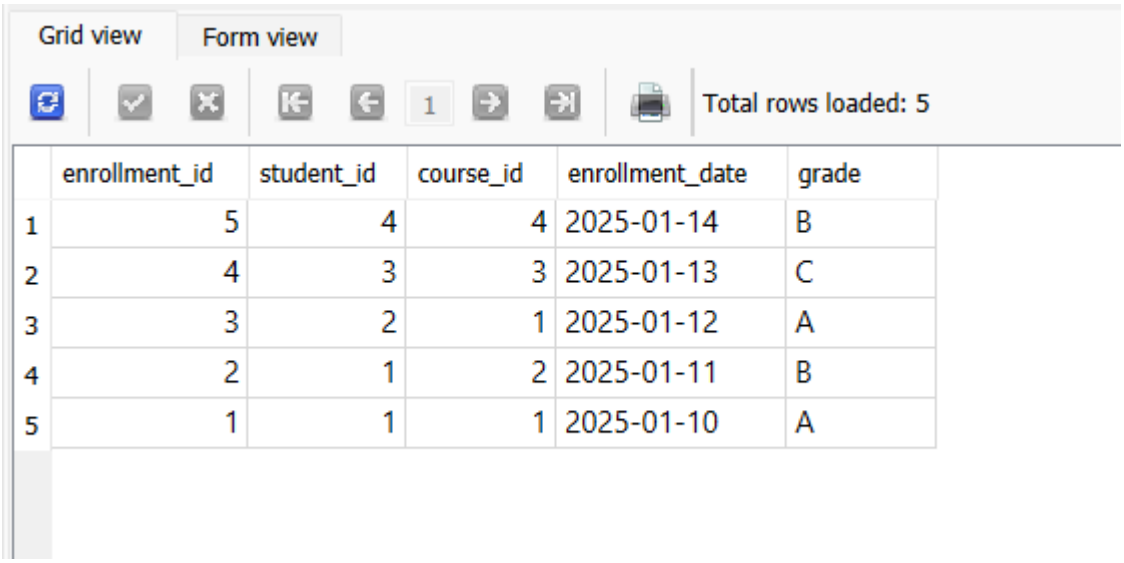
**All enrollments ordered by date (newest first)**

SELECT * FROM enrollments

ORDER BY enrollment_date DESC;


Grid view Form view

Total rows loaded: 5

| | enrollment_id | student_id | course_id | enrollment_date | grade |
|---|---|---|---|---|---|
| 1 | 5 | 4 | 4 | 2025-01-14 | B |
| 2 | 4 | 3 | 3 | 2025-01-13 | C |
| 3 | 3 | 2 | 1 | 2025-01-12 | A |
| 4 | 2 | 1 | 2 | 2025-01-11 | B |
| 5 | 1 | 1 | 1 | 2025-01-10 | A |

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**Top 2 most recent enrollments**

SELECT * FROM enrollments

ORDER BY enrollment_date DESC

LIMIT 2;

Grid view | Form view

Total rows loaded: 2

| | enrollment_id | student_id | course_id | enrollment_date | grade |
|---|---|---|---|---|---|
| 1 | 5 | 4 | 4 | 2025-01-14 | B |
| 2 | 4 | 3 | 3 | 2025-01-13 | C |

---

**Use alias to display custom column names**

SELECT name AS student_name, email AS student_email

FROM students;

Grid view | Form view

Total rows loaded: 4

| | student_name | student_email |
|---|---|---|
| 1 | Amit Patel | amit.patel@example.com |
| 2 | Bhavna Shah | bhavna.shah@example.com |
| 3 | Chetan Mehta | chetan.mehta@example.com |
| 4 | Deepa Rana | deepa.rana@example.com |

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**Show all unique grades**

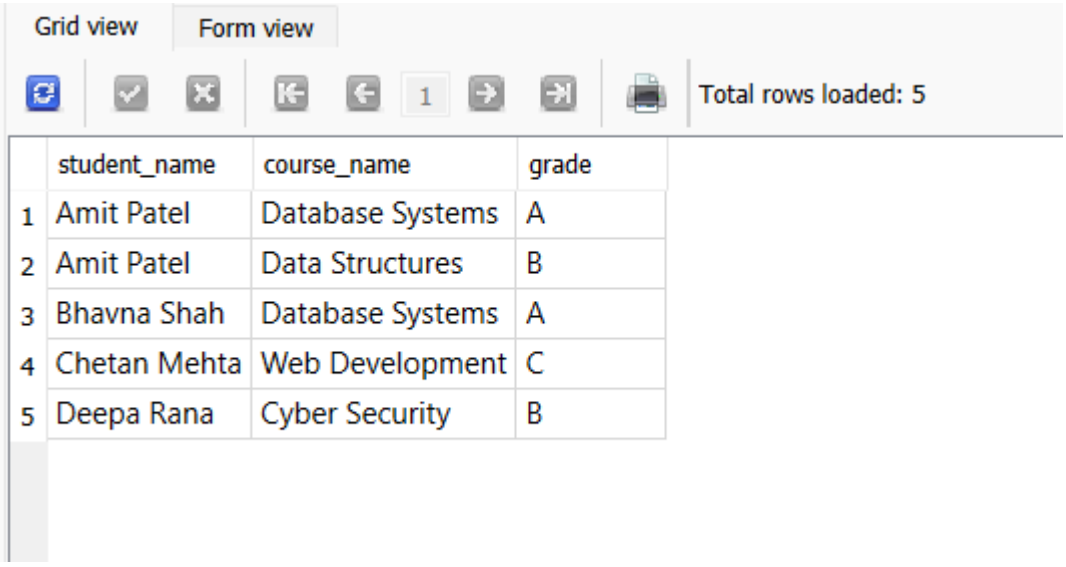
SELECT DISTINCT grade FROM enrollments;

Grid view | Form view

| | grade |
|---|---|
| 1 | A |
| 2 | B |
| 3 | C |

**Join to show student names with course names and grades**

```
SELECT s.name AS student_name, c.course_name, e.grade
FROM enrollments e
JOIN students s ON e.student_id = s.student_id
JOIN courses c ON e.course_id = c.course_id;
```




| | student_name | course_name | grade |
|---|---|---|---|
| 1 | Amit Patel | Database Systems | A |
| 2 | Amit Patel | Data Structures | B |
| 3 | Bhavna Shah | Database Systems | A |
| 4 | Chetan Mehta | Web Development | C |
| 5 | Deepa Rana | Cyber Security | B |