Task 3:

Writing Basic SELECT Queries

Objective: Extract data from one or more tables.

Tools: DB Browser for SQLite / MySQL Workbench

Deliverables: SQL script with SELECT, WHERE, ORDER BY,

LIMIT

Create a sample table

```
CREATE TABLE students (

student_id INTEGER PRIMARY KEY,

name TEXT NOT NULL,

age INTEGER,

grade TEXT
);
```

Insert sample data

```
INSERT INTO students (student_id, name, age, grade) VALUES (1, 'Alice', 20, 'A');
INSERT INTO students (student_id, name, age, grade) VALUES (2, 'Bob', 22, 'B');
INSERT INTO students (student_id, name, age, grade) VALUES (3, 'Charlie', 21, 'A');
```

INSERT INTO students (student_id, name, age, grade) VALUES (4, 'David', 23, 'C');

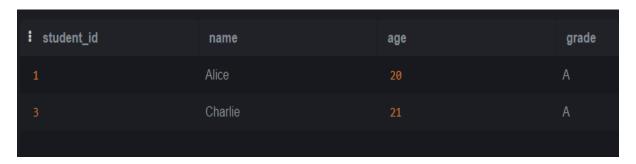
INSERT INTO students (student_id, name, age, grade) VALUES (5, 'Eva', 20, 'B');

Basic SELECT query (select all columns)

SELECT * FROM students;

: student_id	name	age	grade
1	Alice	20	А
2	Bob	22	В
3	Charlie	21	А
4	David	23	С
5	Eva	20	В

SELECT with WHERE clause (filter students with grade A)
SELECT * FROM students WHERE grade = 'A';



SELECT with ORDER BY clause (order by age ascending) SELECT * FROM students ORDER BY age ASC;

student_id	name	age	grade
1	Alice	20	А
5	Eva	20	В
3	Charlie	21	Α
2	Bob	22	В
4	David	23	С

SELECT with ORDER BY clause (order by name descending) SELECT * FROM students ORDER BY name DESC;

: student_id	name	age	grade
5	Eva		В
4	David	23	С
3	Charlie	21	Α
2	Bob	22	В
1	Alice		Α

SELECT with LIMIT clause (return top 3 students) SELECT * FROM students LIMIT 3;

: student_id	name	age	grade
1	Alice	20	А
2	Bob	22	В
3	Charlie	21	Α