**Exercise 1: Create a Table (DDL Command)**

**Task**: Write a SQL query to create a table named students with the following columns:

* id (integer, primary key)
* name (varchar, not null)
* age (integer, not null)
* class (varchar)

**Solution**:

CREATE TABLE students (

id INT PRIMARY KEY,

name VARCHAR(100) NOT NULL,

age INT NOT NULL,

class VARCHAR(50)

);

**Exercise 2: Insert Data into the Table (DML Command)**

**Task**: Insert the following data into the students table:

1. (1, 'John Doe', 15, '10th')
2. (2, 'Jane Smith', 14, '9th')
3. (3, 'Alice Brown', 16, '11th')

**Solution**:

INSERT INTO students (id, name, age, class)

VALUES

(1, 'John Doe', 15, '10th'),

(2, 'Jane Smith', 14, '9th'),

(3, 'Alice Brown', 16, '11th');

**Exercise 3: Describe Table**

**Task**: Write a query to view the structure of the students table.

**Solution**:

DESCRIBE students;

**Exercise 4: Add a Column to the Table (ALTER TABLE)**

**Task**: Add a new column email (varchar) to the students table.

**Solution**:

ALTER TABLE students

ADD email VARCHAR(100);

**Exercise 5: Modify a Column (MODIFY)**

**Task**: Modify the class column in the students table to increase its size to 100 characters.

**Solution**:

ALTER TABLE students

MODIFY class VARCHAR(100);

**Exercise 6: Drop a Column (DROP Clause)**

**Task**: Remove the email column from the students table.

**Solution**:

ALTER TABLE students

DROP COLUMN email;

**Exercise 7: Update Records (DML Command)**

**Task**: Update the class of the student with id = 1 to '12th'.

**Solution**:

UPDATE students

SET class = '12th'

WHERE id = 1;

**Exercise 8: Delete Records (DML Command)**

**Task**: Delete the record of the student with id = 2.

**Solution**:

DELETE FROM students

WHERE id = 2;

**Exercise 9: Retrieve Specific Data (Data Manipulation)**

**Task**: Retrieve the names and classes of all students aged 15 or older.

**Solution**:

SELECT name, class

FROM students

WHERE age >= 15;

**Exercise 10: Drop the Table (DDL Command)**

**Task**: Write a query to delete the students table from the database.

**Solution**:

DROP TABLE students;