

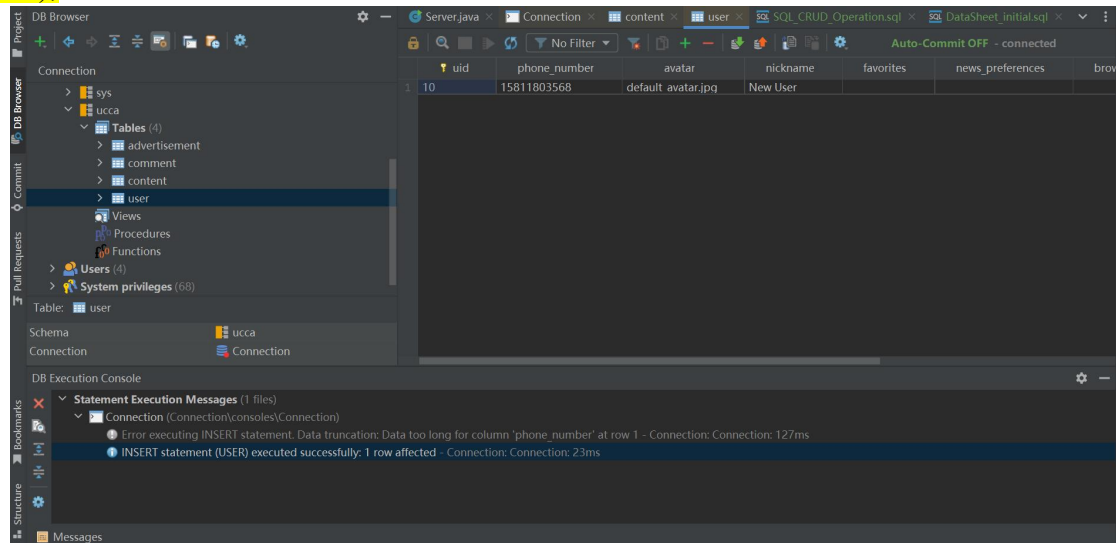
# Task 1: SQL CRUD Operations

1.1. For the command input, please see the file: “SQL\_CRUD\_Operation.sql”

1.2. Output:

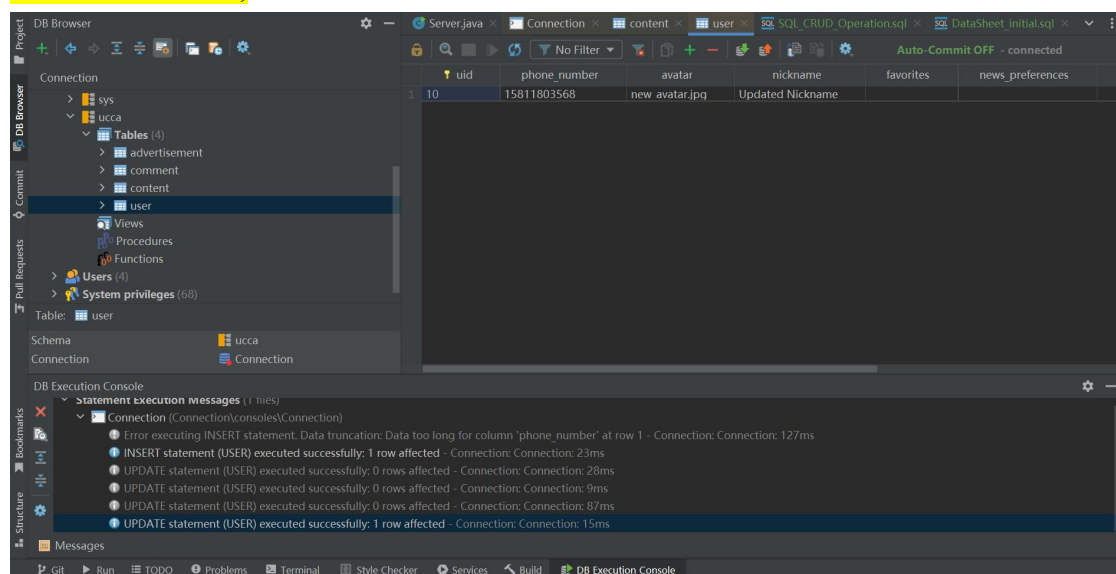
--Create User by Email

```
INSERT INTO User (uid, phone_number, avatar, nickname, last_login_time)
VALUES (10/*DEFAULT*/, '15811803568', 'default_avatar.jpg', 'New User',
NULL);
```



--Edit User Account Information

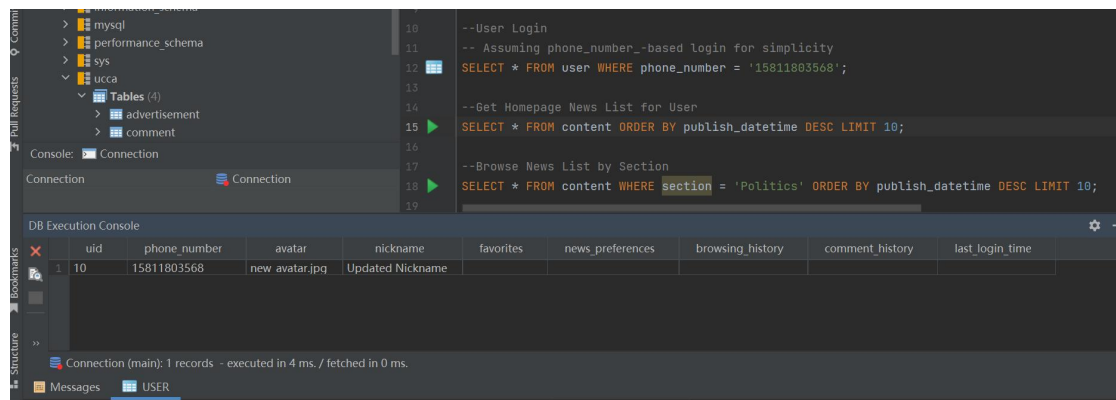
```
UPDATE User
SET nickname = 'Updated Nickname', avatar = 'new_avatar.jpg'
WHERE uid = 10;
```



--User Login

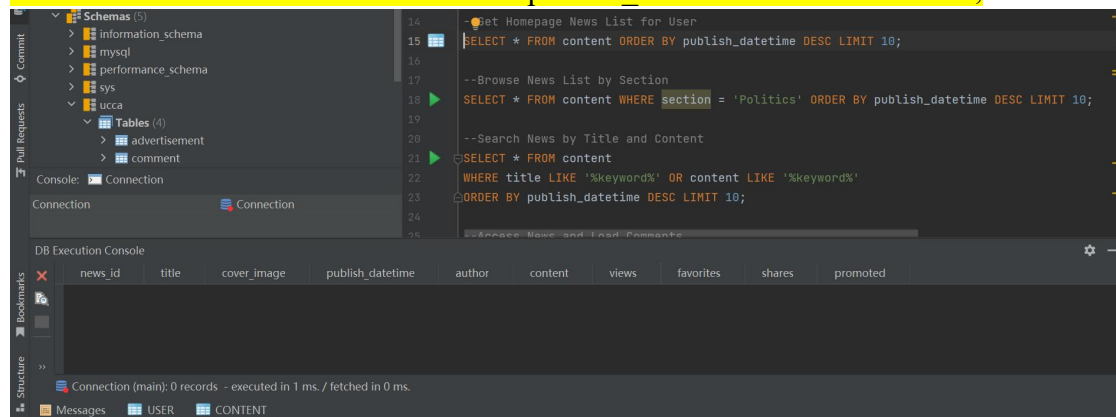
-- Assuming phone\_number\_-based login for simplicity

**SELECT \* FROM user WHERE phone\_number = '15811803568';**



--Get Homepage News List for User

**SELECT \* FROM content ORDER BY publish\_datetime DESC LIMIT 10;**

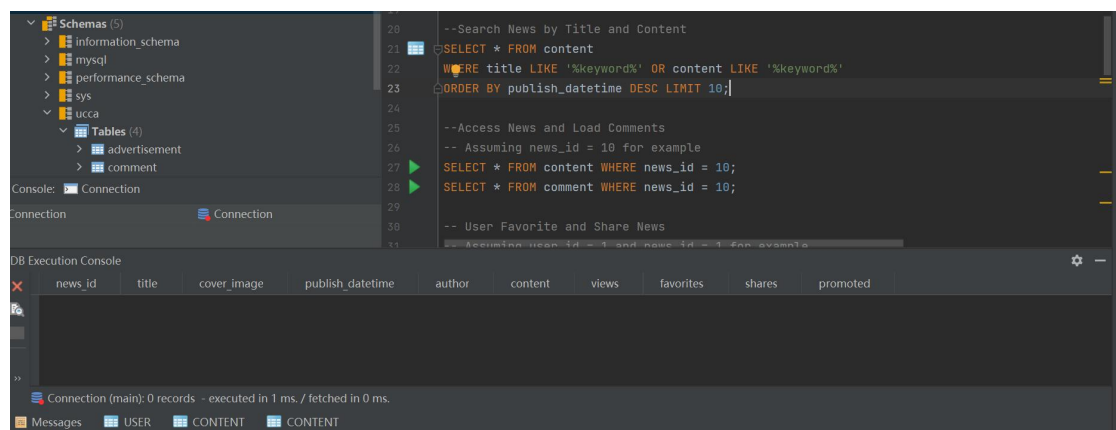


--Search News by Title and Content

**SELECT \* FROM content**

**WHERE title LIKE '%keyword%' OR content LIKE '%keyword%'**

**ORDER BY publish\_datetime DESC LIMIT 10;**

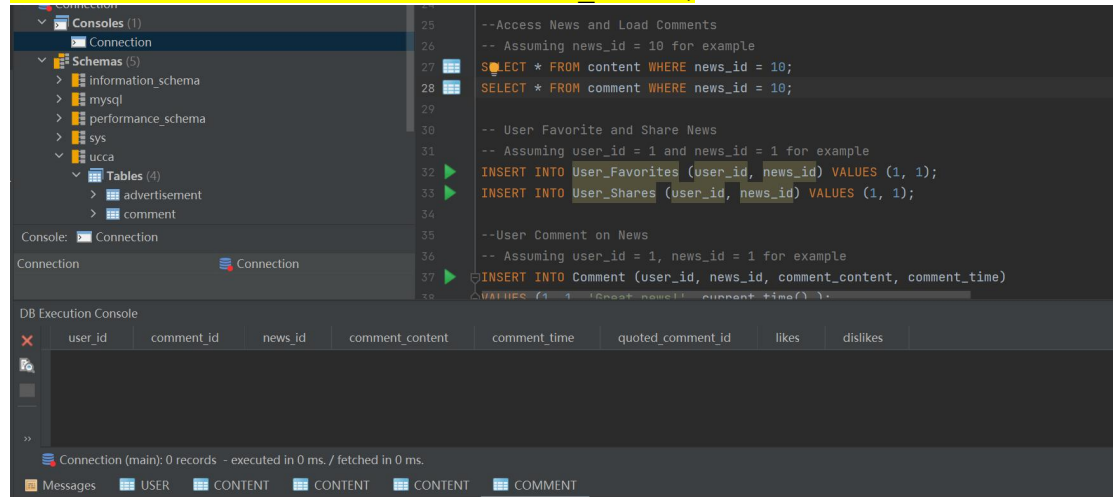


--Access News and Load Comments

-- Assuming news\_id = 10 for example

SELECT \* FROM Content WHERE news\_id = 10;

SELECT \* FROM Comment WHERE news\_id = 10;



--User Comment on News

-- Assuming user\_id = 1, news\_id = 1 for example

INSERT INTO Comment (user\_id, news\_id, comment\_content, comment\_time)  
VALUES (1, 1, 'Great news!', current\_time() );

--User Like/Dislike Comment

-- Assuming comment\_id = 1 for example

UPDATE Comment SET likes = likes + 1 WHERE comment\_id = 1;

-- or

UPDATE Comment SET dislikes = dislikes + 1 WHERE comment\_id = 1;

--User Delete Own Comment

-- Assuming user\_id = 1 and comment\_id = 1 for example

DELETE FROM Comment WHERE user\_id = 1 AND comment\_id = 1;

-- View User's Comment History

-- Assuming user\_id = 1 for example

SELECT \* FROM Comment WHERE user\_id = 1;

-- View User's Browsing History

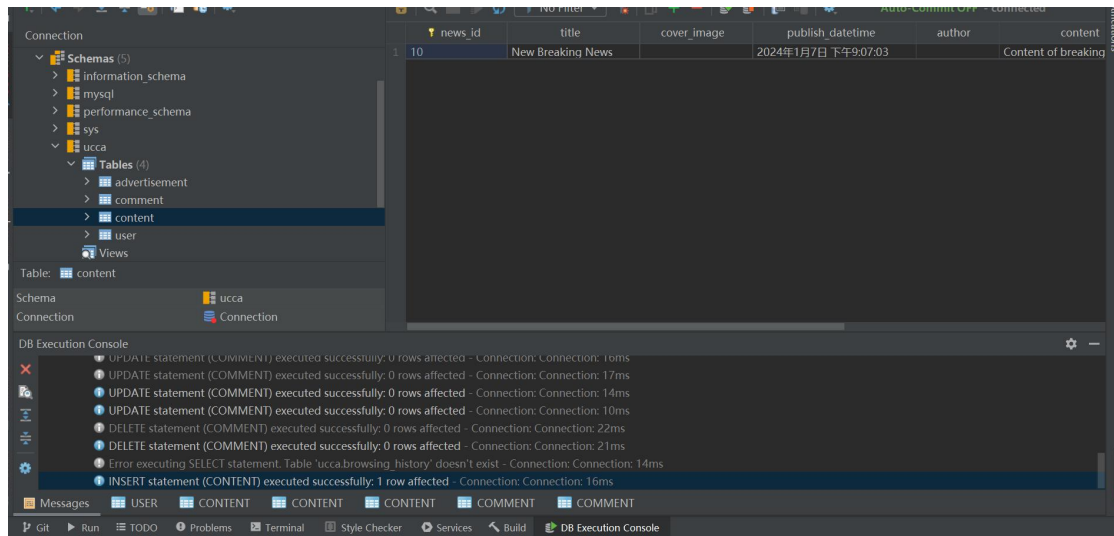
-- Assuming user\_id = 1 for example

SELECT \* FROM Browsing\_History WHERE user\_id = 1;

-- (Simulated) Publish News

INSERT INTO Content (news\_id, title, content, publish\_datetime)

VALUES (10, 'New Breaking News', 'Content of breaking news...',  
current\_time() );



-- Get Ads by Content Type

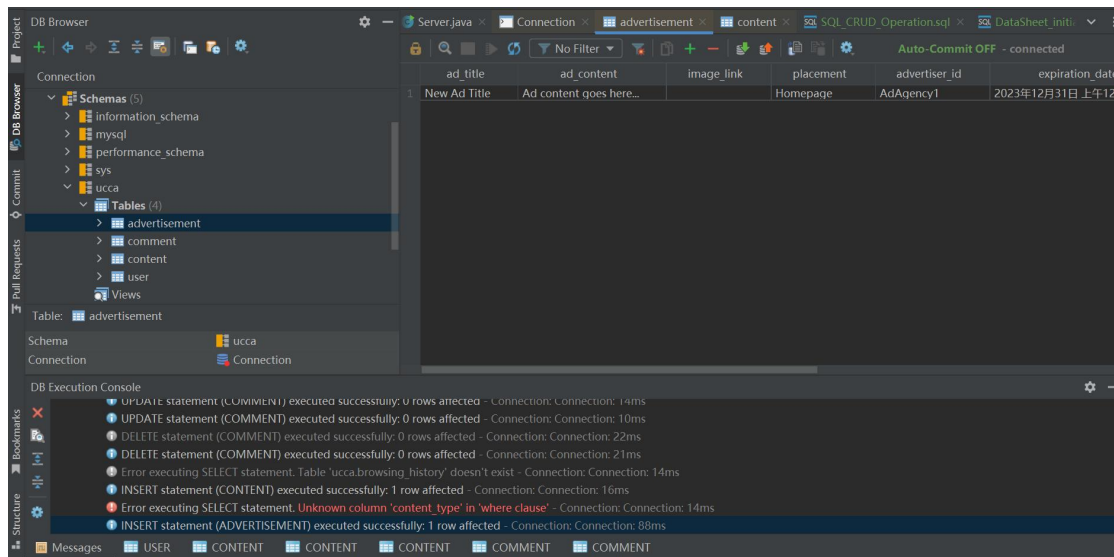
-- Assuming content\_type = 'Politics' for example

SELECT \* FROM Advertisement WHERE content\_type = 'Politics';

-- Publish Advertisement

INSERT INTO Advertisement (ad\_title, ad\_content, placement, advertiser\_id,  
expiration\_date, region\_limit, device\_limit, weight)

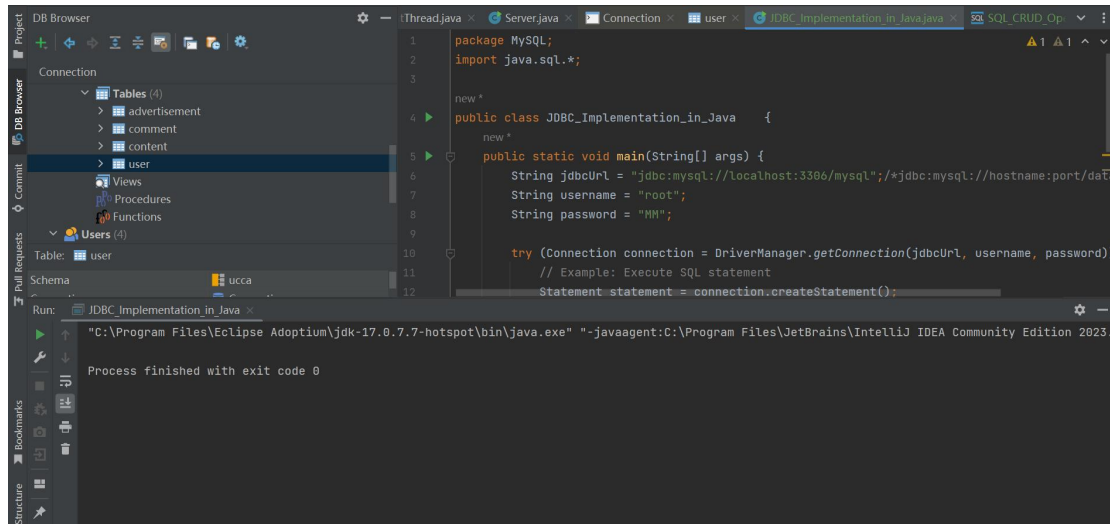
VALUES ('New Ad Title', 'Ad content goes here...', 'Homepage', 'AdAgency1',  
'2023-12-31', 'US', 'Desktop', 10);



## Task 2: JDBC Implementation in Java

### 2.1. Successfully Execute!

对于执行部分，因为数据库为空，暂时不予以展示(相关部分代码已注释)



The screenshot displays an IDE interface with the following components:

- DB Browser:** Shows a connection to a MySQL database. The 'Tables (4)' list includes 'advertisement', 'comment', 'content', and 'user'. The 'Users (4)' list includes 'uucca'.
- Code Editor:** Contains the following Java code:

```
1 package MySQL;
2 import java.sql.*;
3
4 new *
5 public class JDBC_Implementation_in_Java {
6     new *
7     public static void main(String[] args) {
8         String jdbcUrl = "jdbc:mysql://localhost:3306/mysql";/*jdbc:mysql://hostname:port/databaseName*/
9         String username = "root";
10        String password = "MM";
11
12        try (Connection connection = DriverManager.getConnection(jdbcUrl, username, password)) {
13            // Example: Execute SQL statement
14            Statement statement = connection.createStatement();
```
- Run Console:** Shows the command executed: `"C:\Program Files\Eclipse Adoptium\jdk-17.0.7-hotspot\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023..."`. The output indicates: `Process finished with exit code 0`.