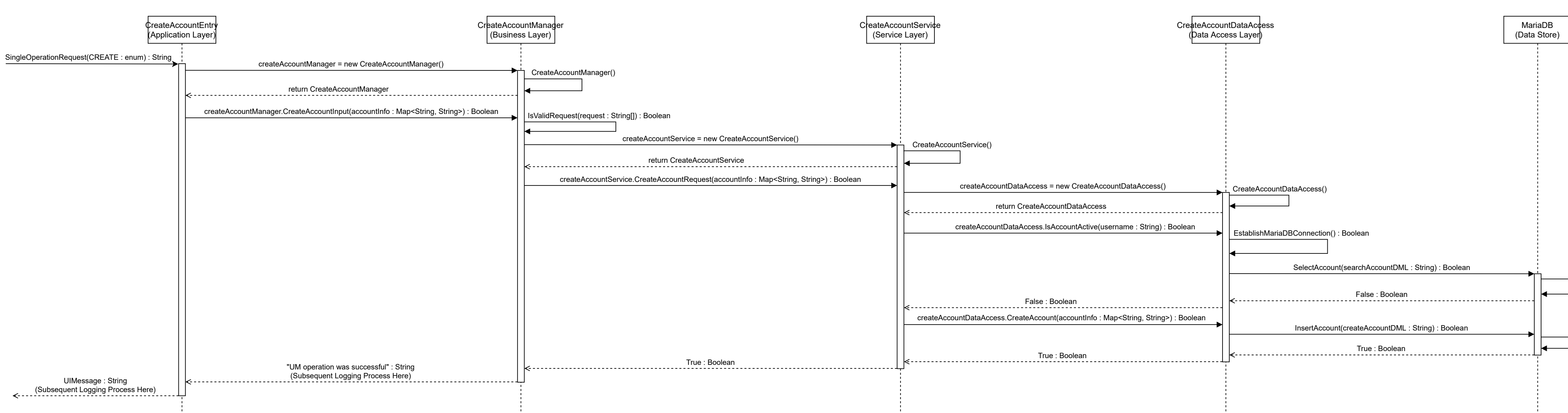
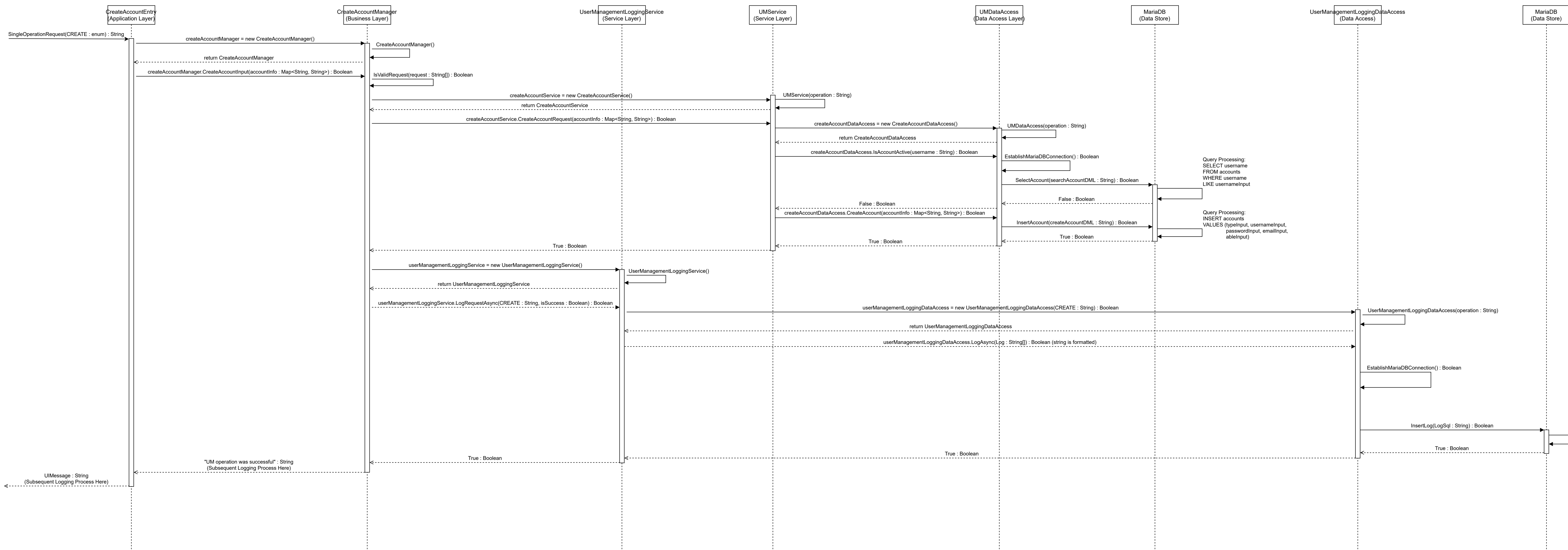


SUCCESS CASE DIAGRAM



SUCCESS CASE DIAGRAM w/ Logging



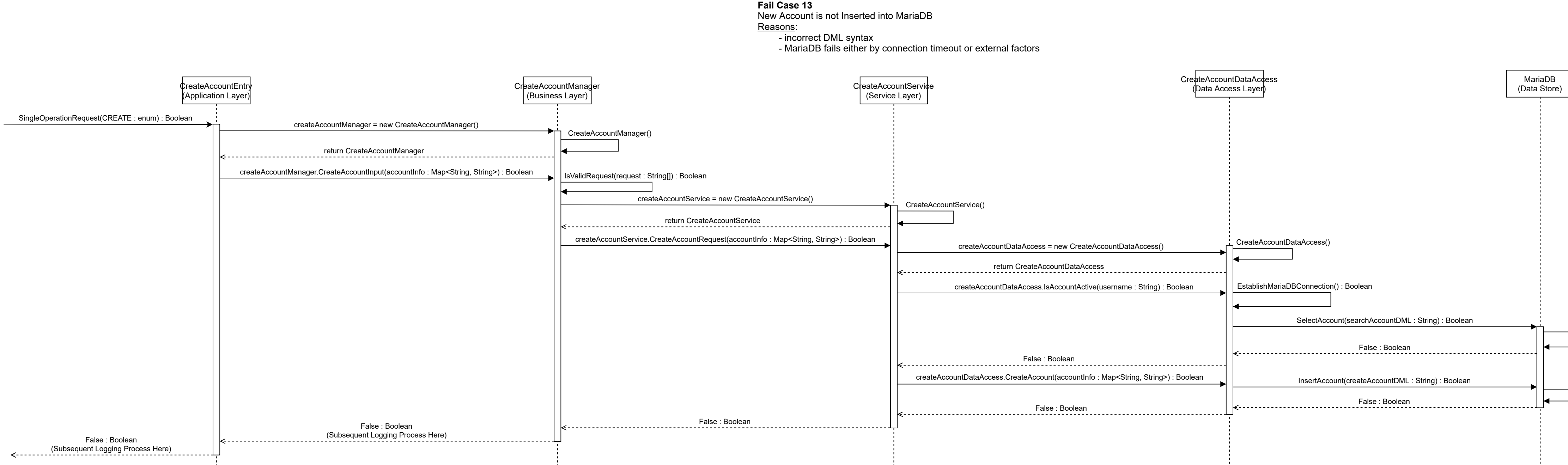
Success Scenario

1. Single Request is made for the CREATE operation
2. New instance of CreateAccountManager is created
3. Input account info
4. Check if request is valid, the following is checked:
 - does the input follow the appropriate regex
 - does the input contain all necessary info for the operation request
5. New instance of CreateAccountService is created
6. Call the CreateAccountService to process operation with the validated input
7. New instance of CreateAccountDataAccess is created
8. Check if the account already exists using the username
9. Establish the MariaDB connection in DataAccess if not already opened
10. Perform a SELECT query on the Accounts table in the database:


```
SELECT username
FROM accounts
WHERE username = ?
```
11. Return FALSE if not found
12. Return TRUE to the Service if no account already exists, and continue
13. Create the account with the account info


```
INSERT accounts
VALUES (username, passwordinput, emailinput, emailinput, emailinput)
```
14. Return TRUE if account is successfully created
15. Return TRUE to the Manager if the account was successfully created
16. Return TRUE to the Manager if the request was successfully performed
17. Return TRUE to System and follow with the appropriate Logging for the operation

FAILURE CASE DIAGRAMS

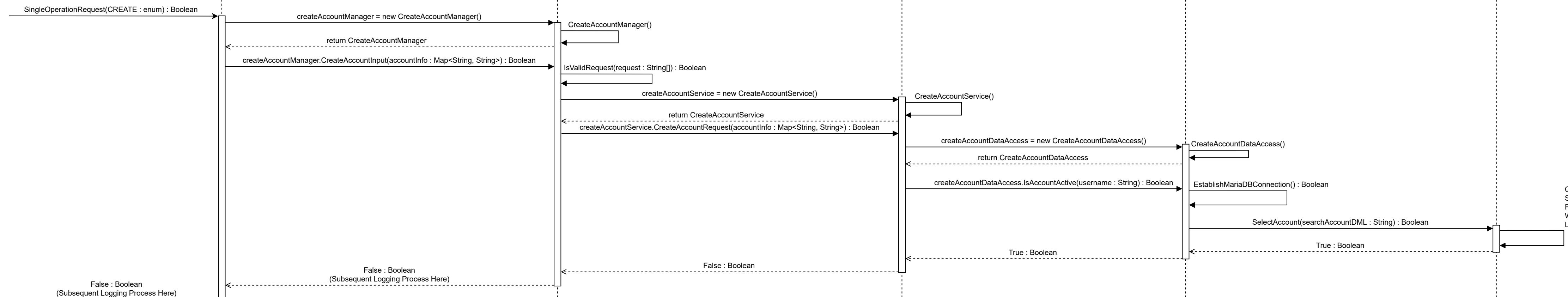


Fail Case 1a

New Account already exists in MariaDB

Reasons:

- account already exists



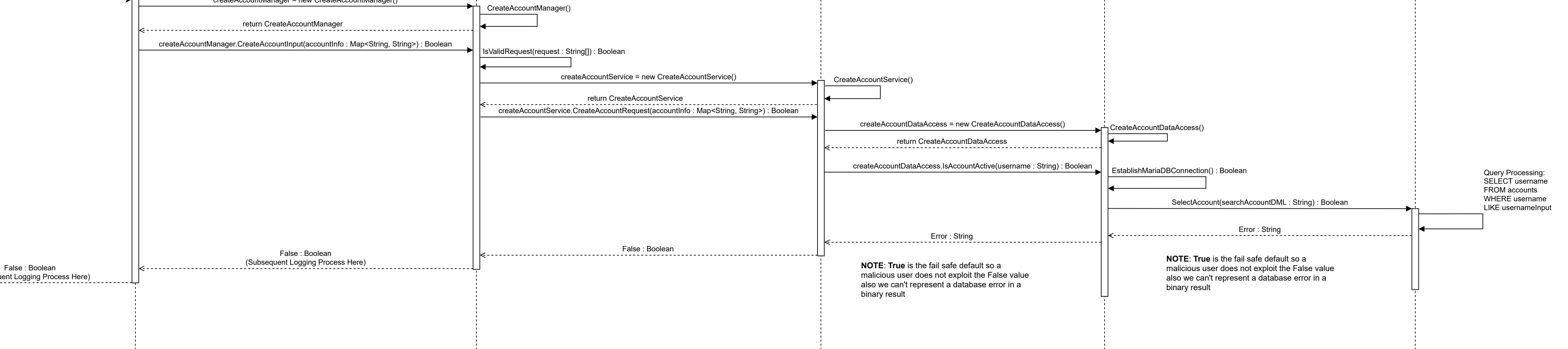
Fail Case 1b

Could Not Process Query

Reasons:

- Incorrect DML syntax

- MariaDB fails either by connection timeout or external factors



Fail Case 3

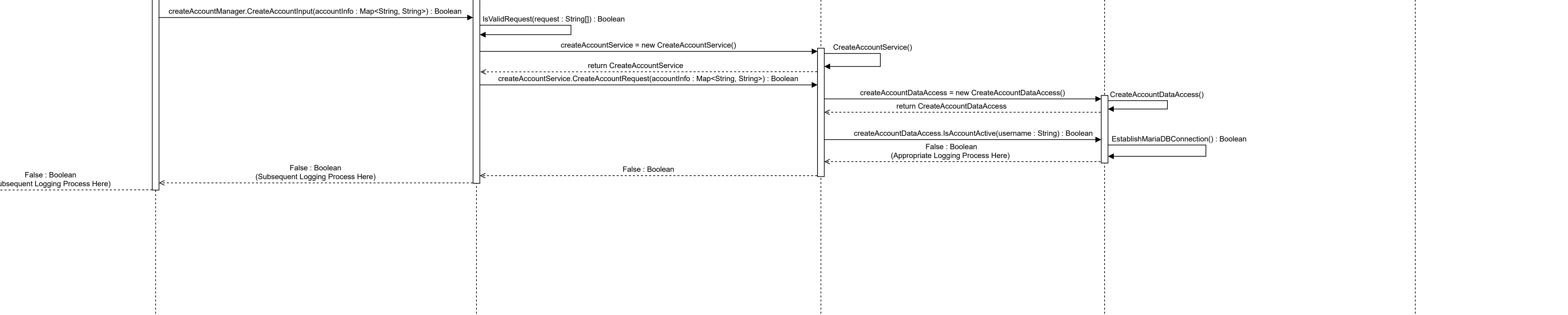
MariaDB Connection could not be Established

Reasons:

- EstablishMariaDBConnection() returns False

- NOTE: continue to call this method until True

- if still no connection after 5 seconds, log the error and end the process



Fail Case 4

Invalid Request

Reasons:

- Inputs do not follow their respective regex

- Missing required input(s) or does not match the inputs required for request

