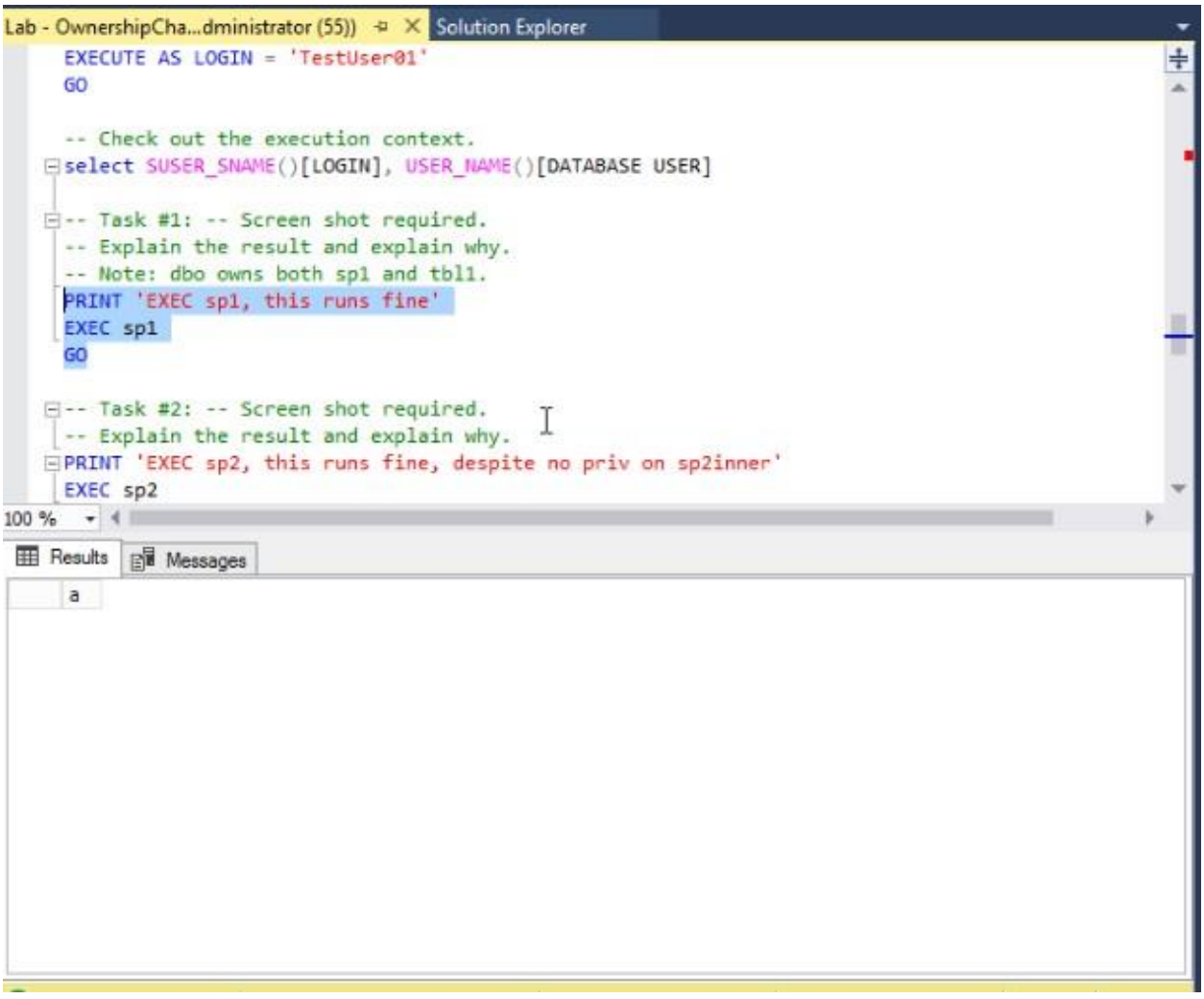
Lab - Ownership Chain

Submission Guideline

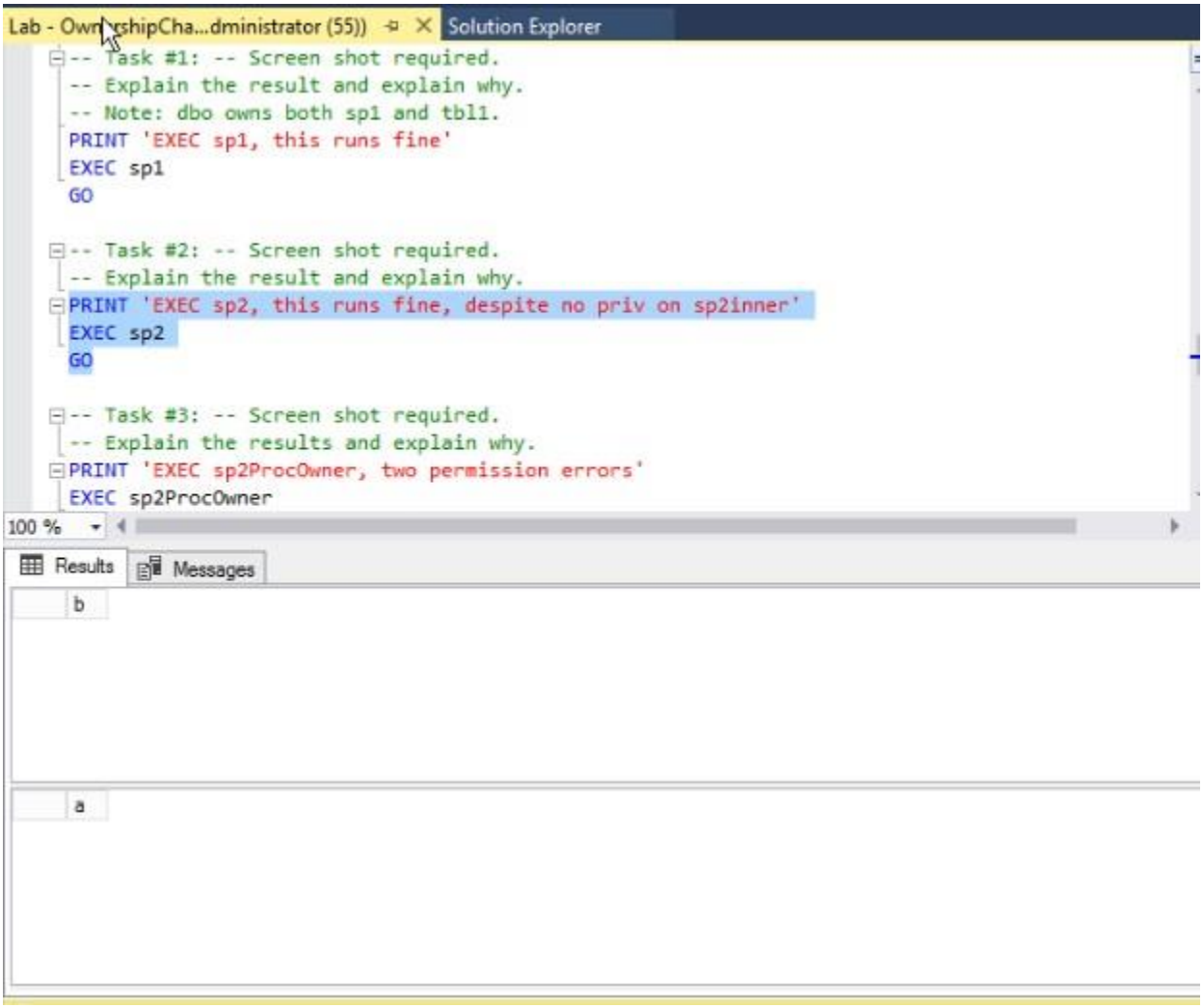
- This is due on **Sunday at midnight**.
- This is worth 5 points and graded as pass/fail.
- Use the following naming convention: Lab, lab#, last name, and extension (e.g., Lab1_Im.docx).
- Zoom in your screenshots, please.
- The instructions are in the attached file: **Lab-OwnershipChain (lab).sql**.

(**Task 1**) Show the outcome of this task in a screenshot. Also, explain briefly why you have received the result.



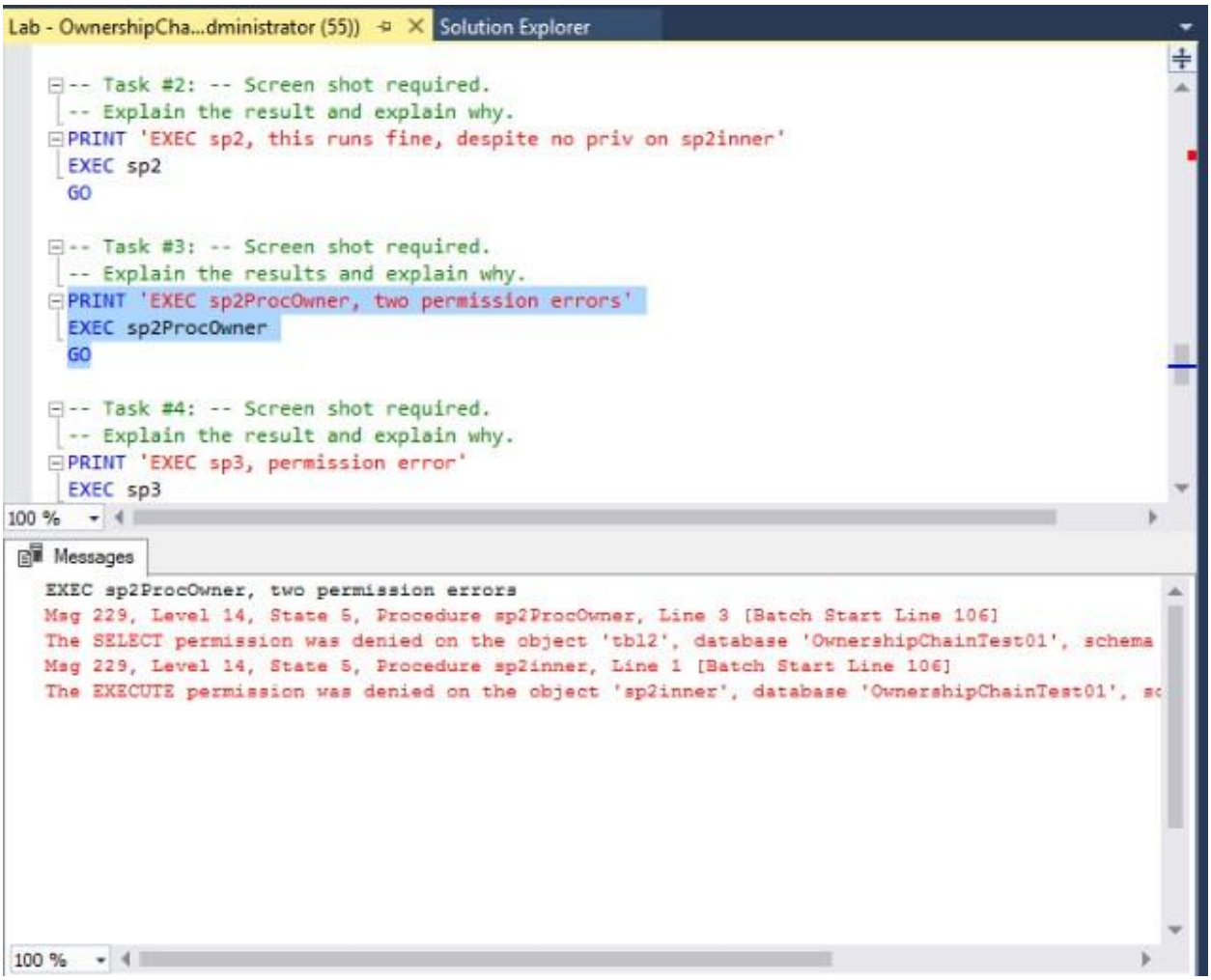
The stored procedure 'sp1' selects the column 'a' from the table 'tbl1' and we receive the result of column 'a'. The stored procedure executed successfully and returned the expected result. The functionality of the stored procedure works as expected.

(**Task 2**) Show the outcome of this task in a screenshot. Also, explain briefly why you have received the result.



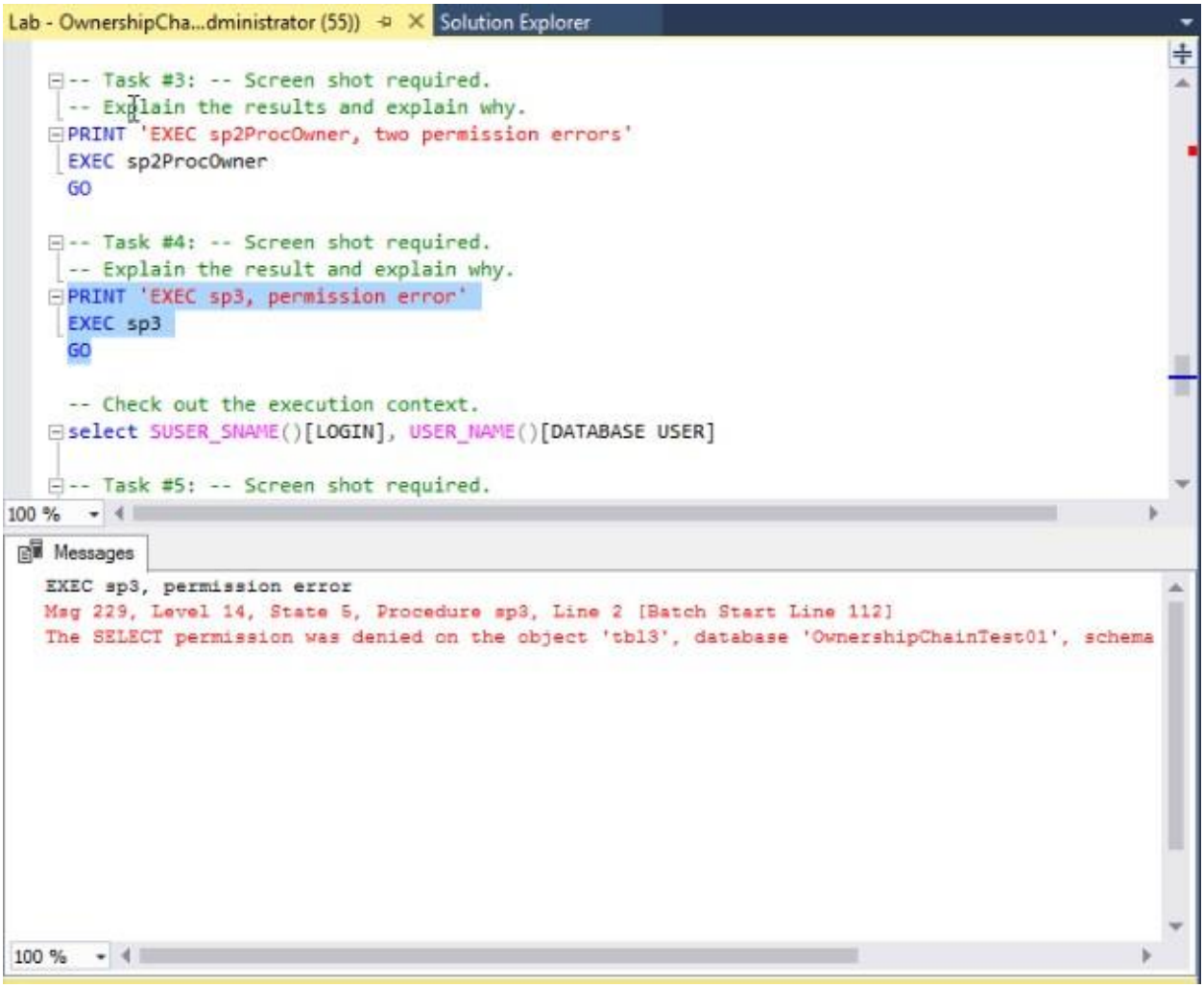
The stored procedure 'sp2' selects the column 'b' from the table 'tbl2' and we receive the result of column 'b'. The test user we created has EXECUTE permissions for 'sp2' but not for 'sp2inner'. Despite this, the execution of 'sp2' is successful for the TestUser01 because of ownership chaining. 'sp2' and 'sp2inner' are both under the same schema which means a direct call from 'sp2' to 'sp2inner' is able to occur and execute as such.

(**Task 3**) Show the outcome of this task in a screenshot. Also, explain briefly why you have received the result.



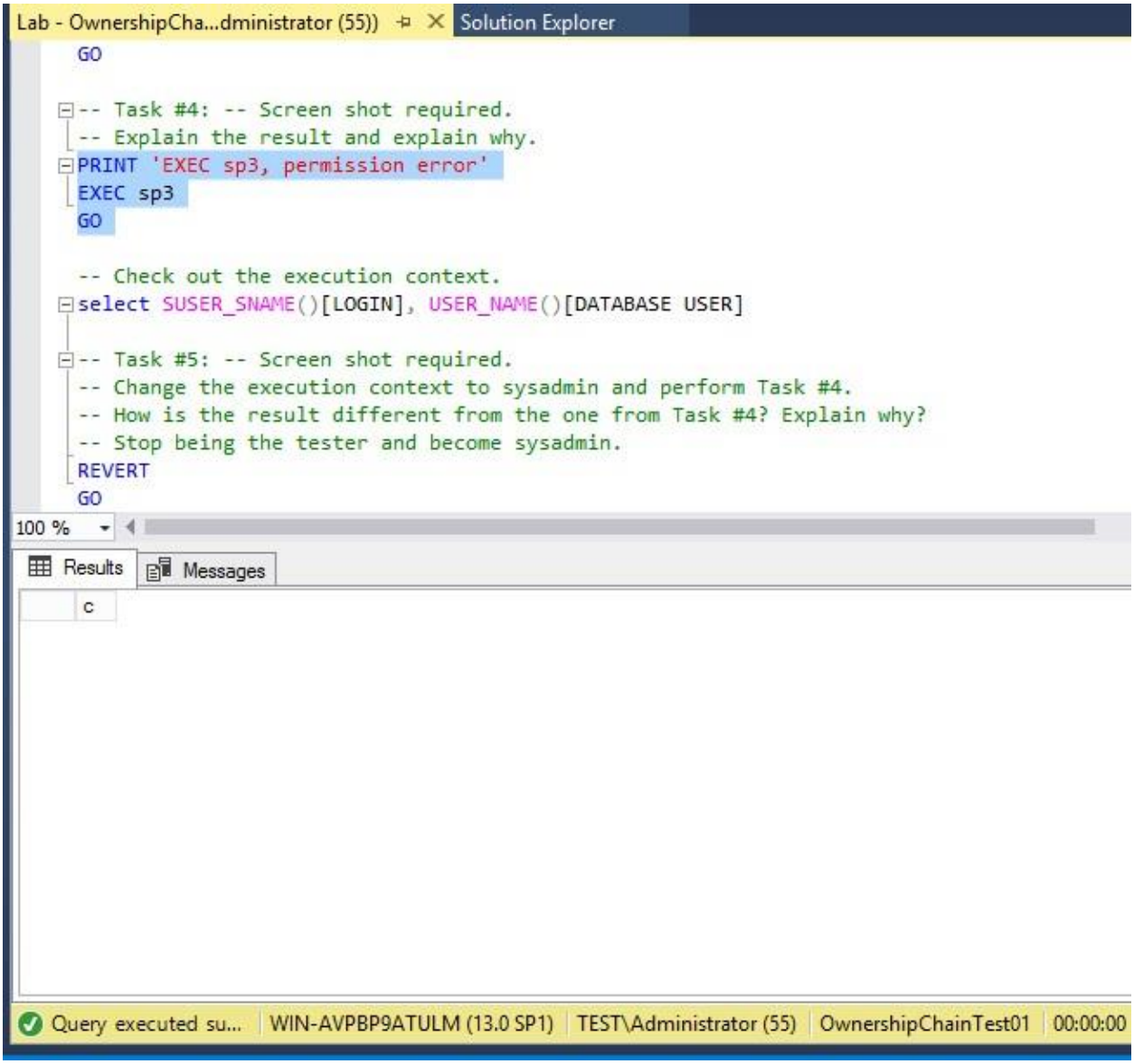
We get this result because 'TestUser01' does not have SELECT permissions for the table 'tbl2'. 'sp2ProcOwner' is executed successfully due to ownership chaining between 'sp2ProcOwner' and 'sp2inner', but the SELECT operation inside 'sp2' on 'tbl2' requires us to provide direct permissions which have not been done for 'TestUser01'. Consequently, the user also does not have explicit execute permissions since it tries to execute via 'sp2inner' which lacks the EXECUTE permissions for that user.

(**Task 4**) Show the outcome of this task in a screenshot. Also, explain briefly why you have received the result.



Like above, the TestUser01 lacks EXECUTE permissions for 'tbl3' when executing 'sp3'. Despite the ownership chain being present, those explicit permissions are required of the user to execute the stored procedure. The user was never even given stored procedure access in the first place, and that is required.

(**Task 5**) Show the outcome of this task in a screenshot. Also, explain briefly why the result is different from the one from Task #4?



The stored procedure ‘sp3’ selects the column ‘c’ from the table ‘tbl3’ and we receive the result of column ‘c’. It now works since we switched over the execution context to an admin account that has EXECUTE privileges by default.