RAWDA

REYAM

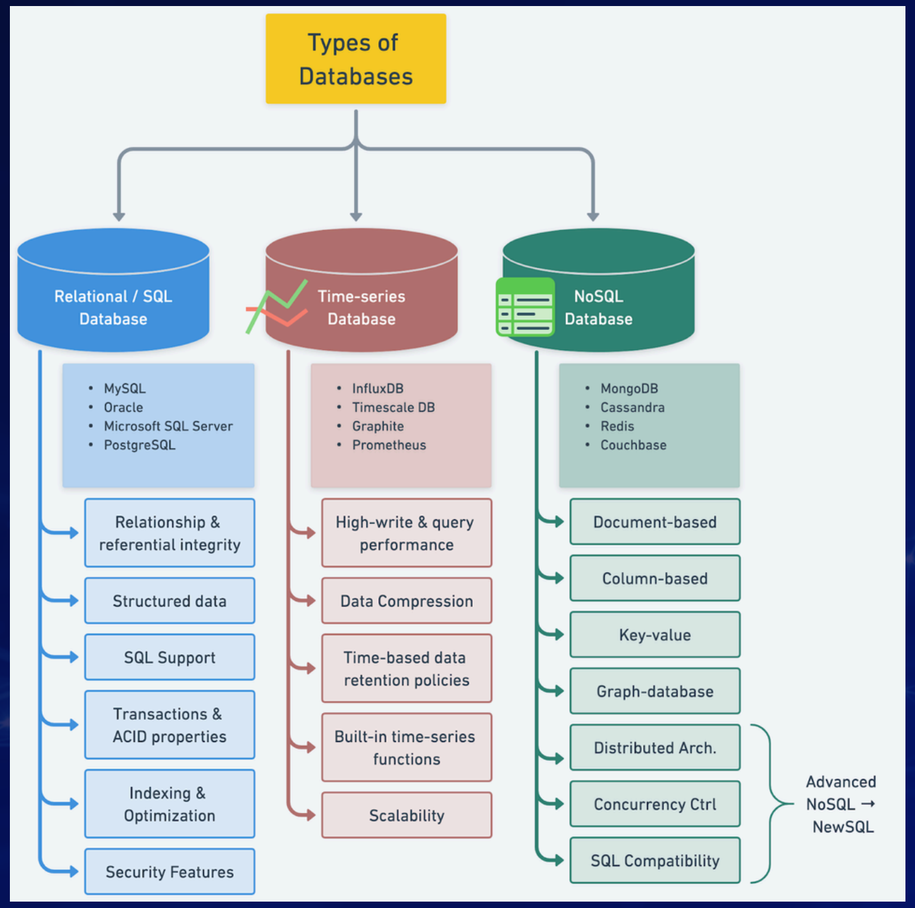
Database testing tasks

Presentation

AREEJ

FATEMA

INTRODUCTION



What is database

Database :is acollection of related data

DBMS :asoftware that facilitates the creation

Database system =DBMS+database

Database testing

,is testing, which is used to analyze the schema, tables triggers, etc., of the database under test. It also assesses data integrity and consistency, which might include creating difficult queries to load and stress test the Database and .review its responsiveness

During the database testing, we can cover the following database activities, such as:

- Testing data integrity
- Checking data validity
- Performance check relate
- Triggers and Functions in the database
- Testing various procedures

What is the purpose of the Database Testing?

Transaction's ACID Properties

Atomicity

Consistency

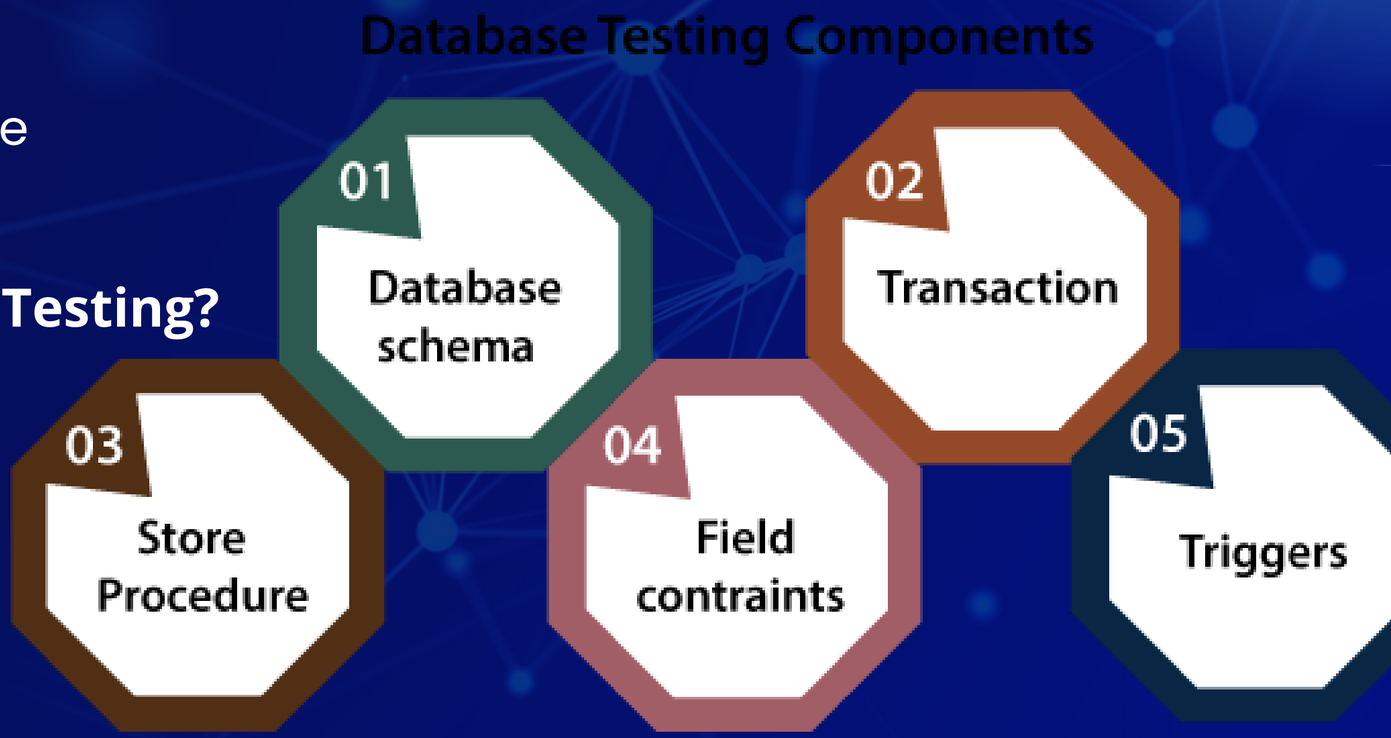
I Isolation

Durability

Data mapping

Accuracy of Business Rule

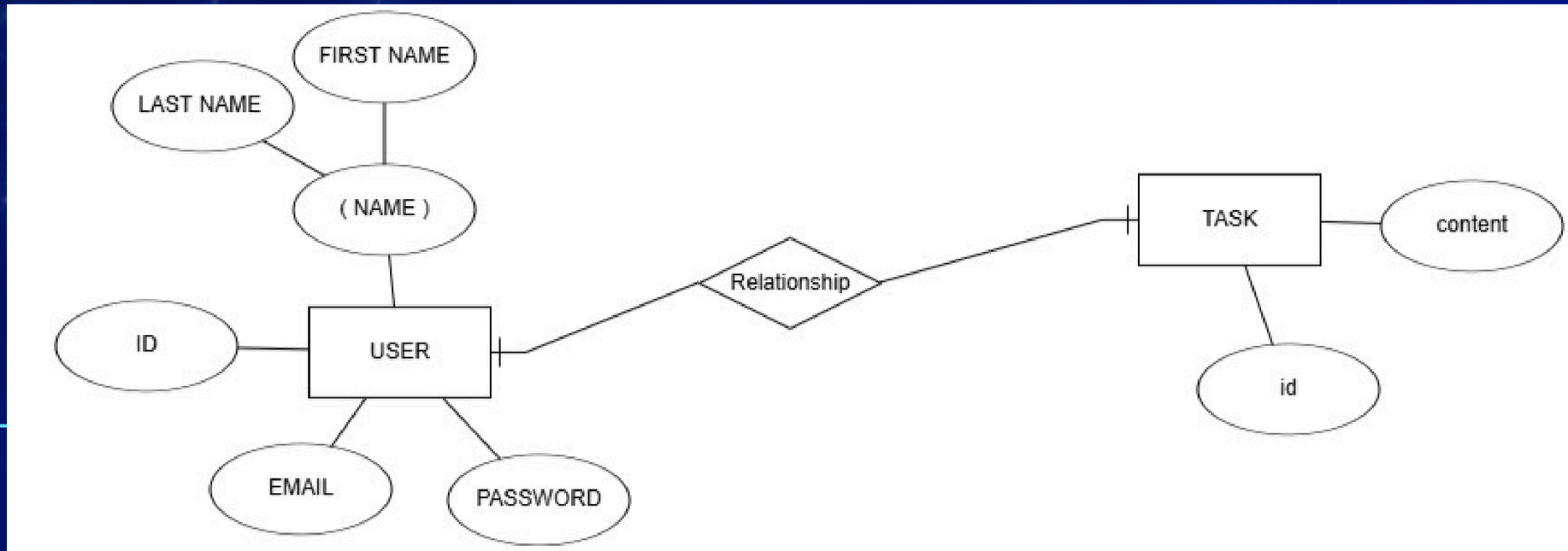
Data integrity



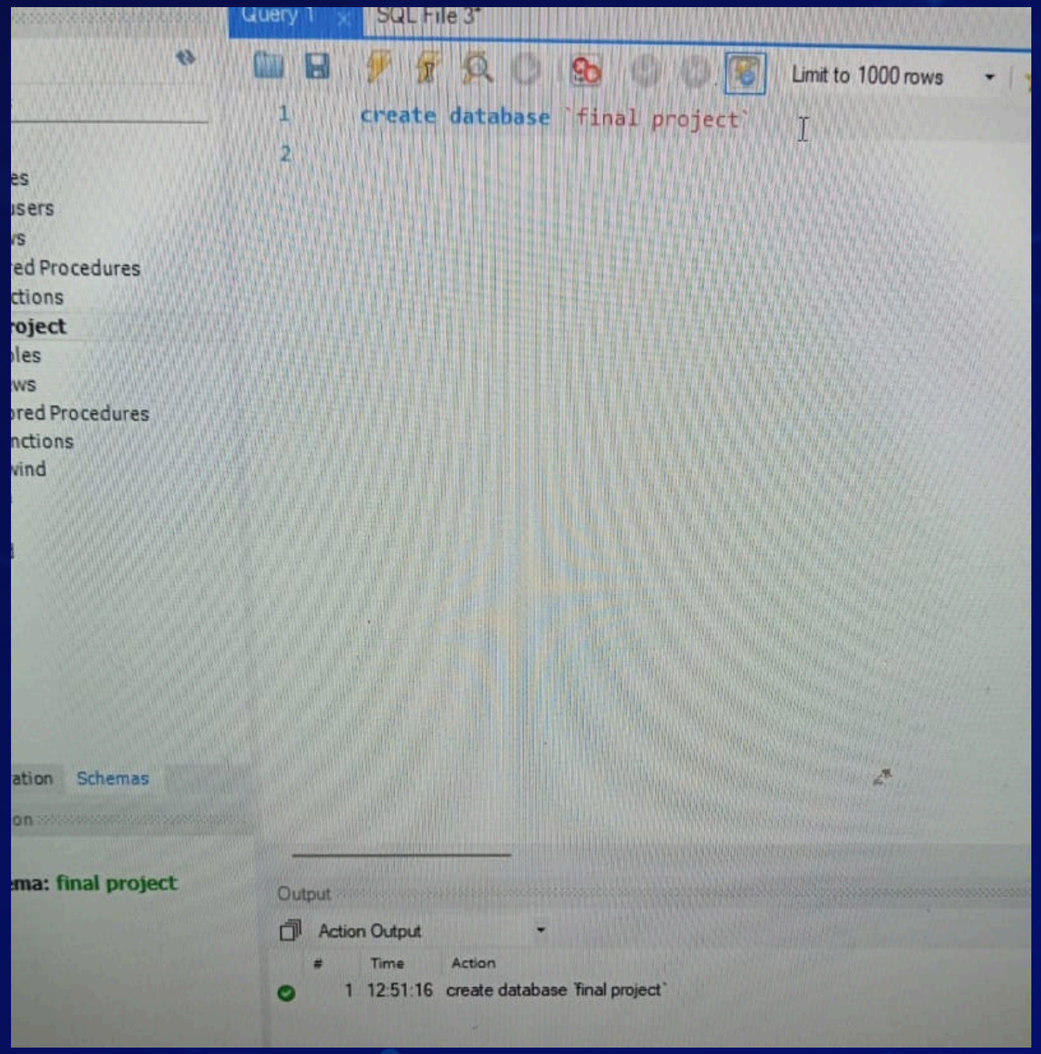
ERD

show the logical structure of databases and highlight the interrelations between specific concepts, or entities, (i.e. objects, people, places, etc.) in a given topic area.

Flirst step before we creat database we build ERD as following



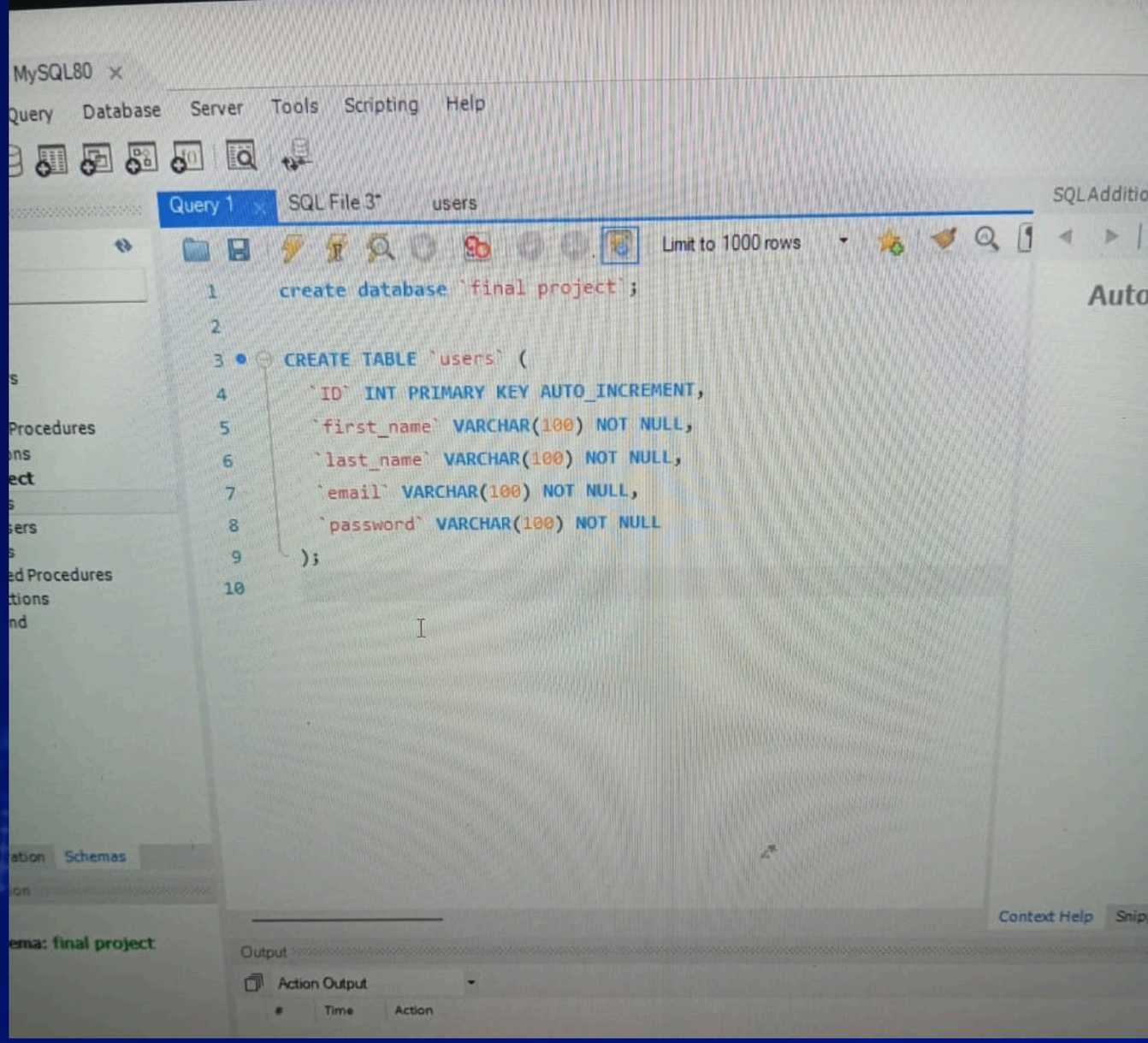
Then we open mysql



MySQL is an open source RDBMS that uses SQL to create and manage databases

1-we create database called **final project**

2-creat table users



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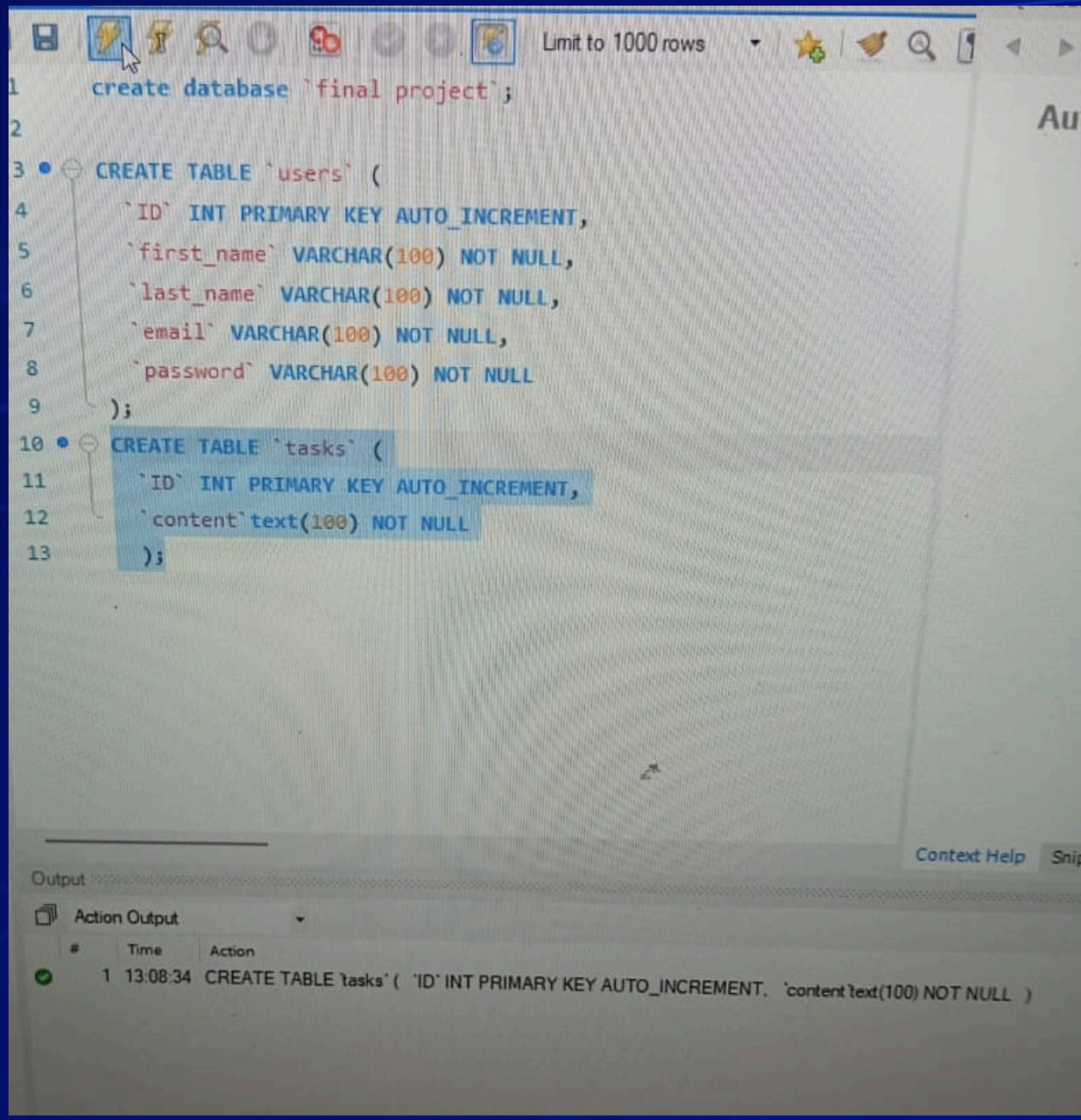
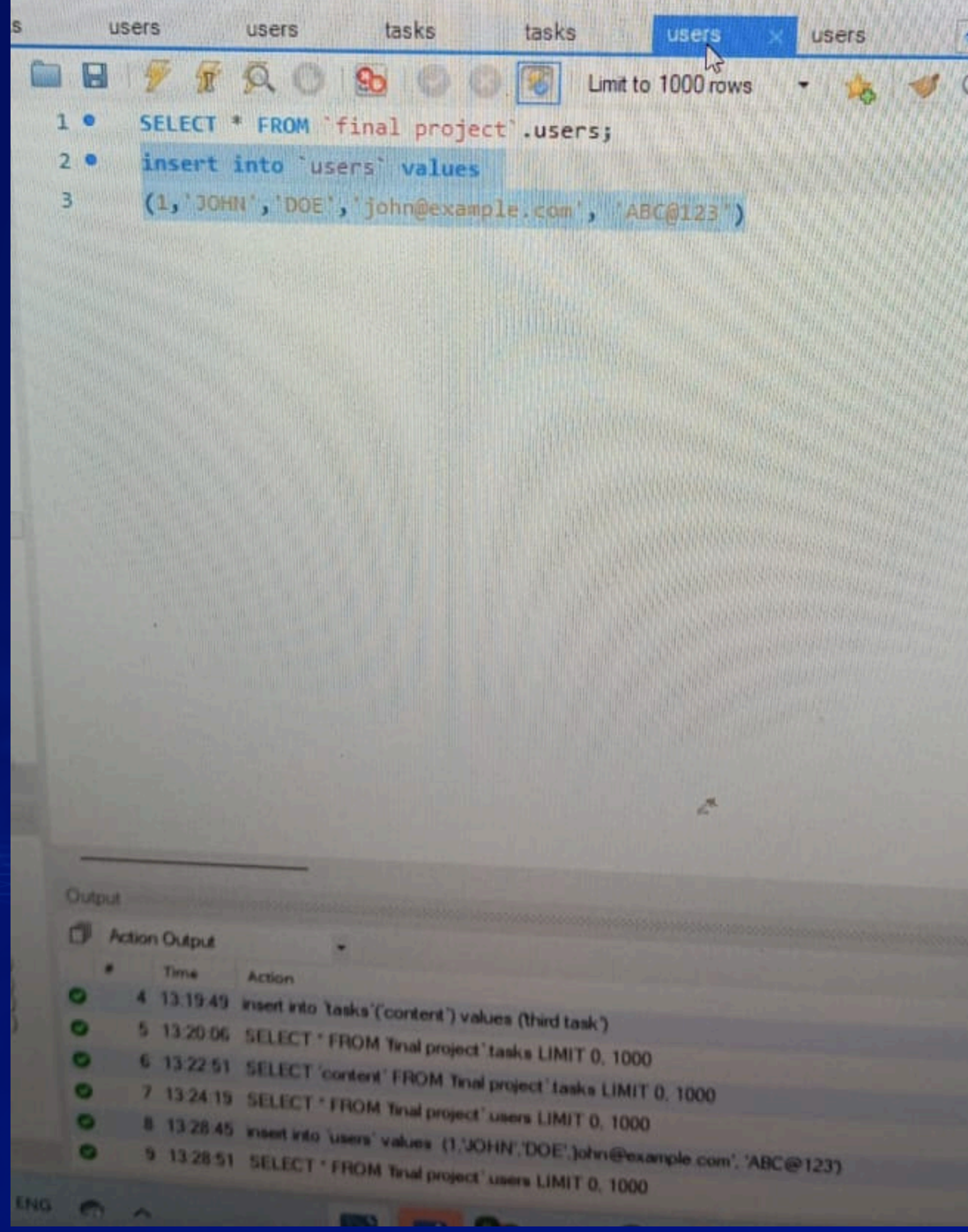
3-create table tasks

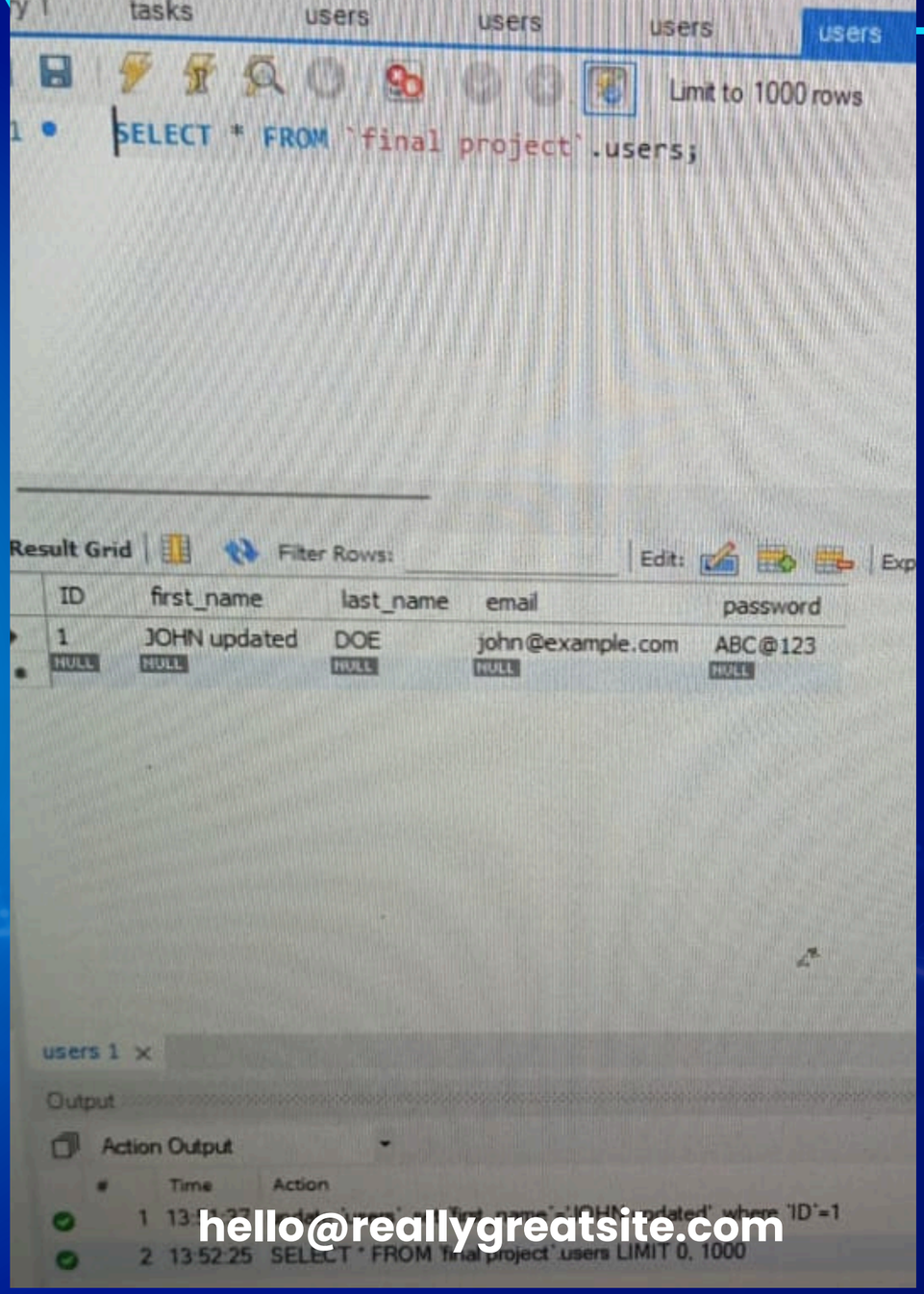


4-insert a user in table users

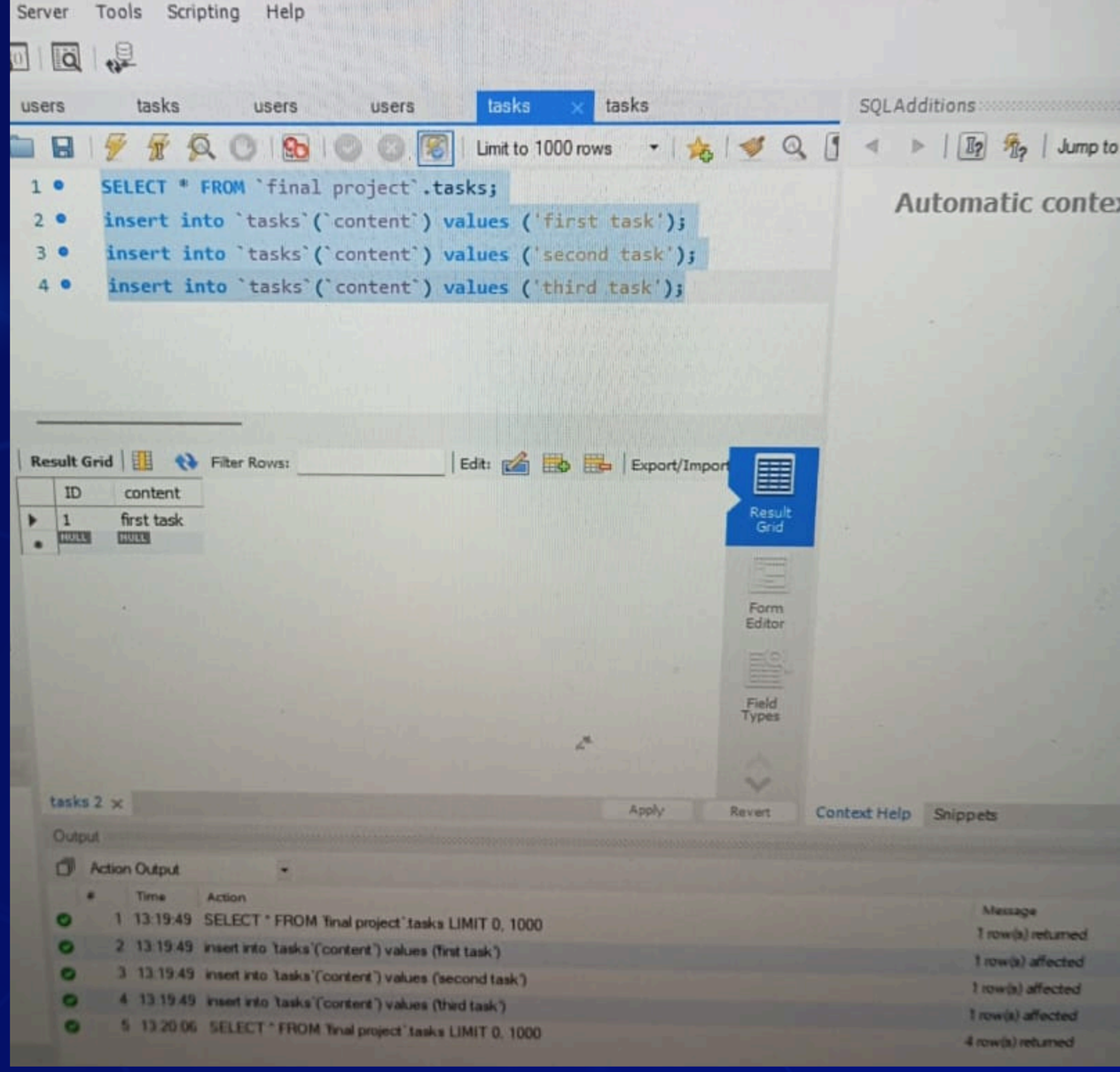
first_name :John
last_ name: Doe
Email :john@example.com
Password:ABC@123



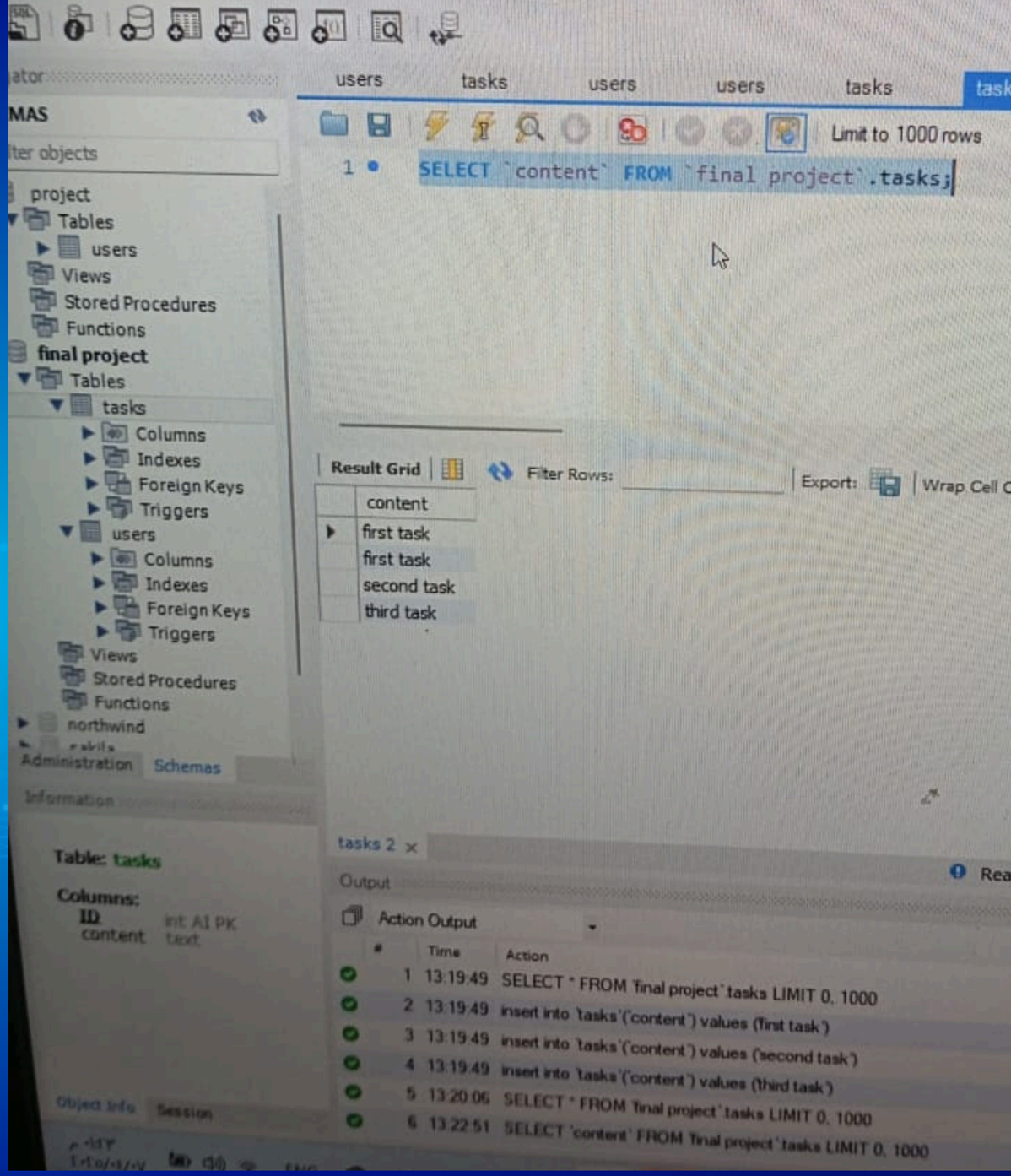
select * from `final project `.users



5-insert in table tasks



select `content` from ‘final project’ .tasks;



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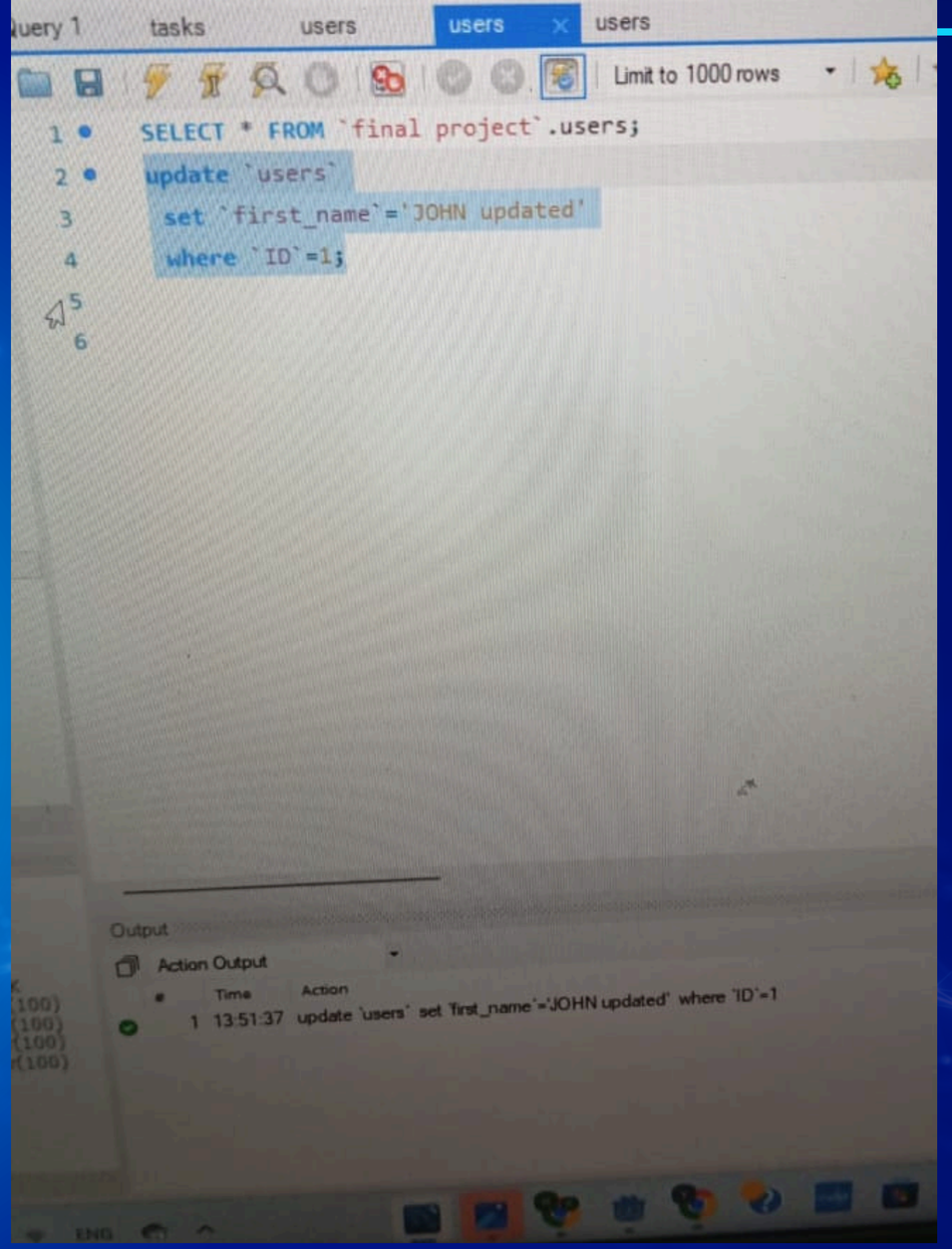
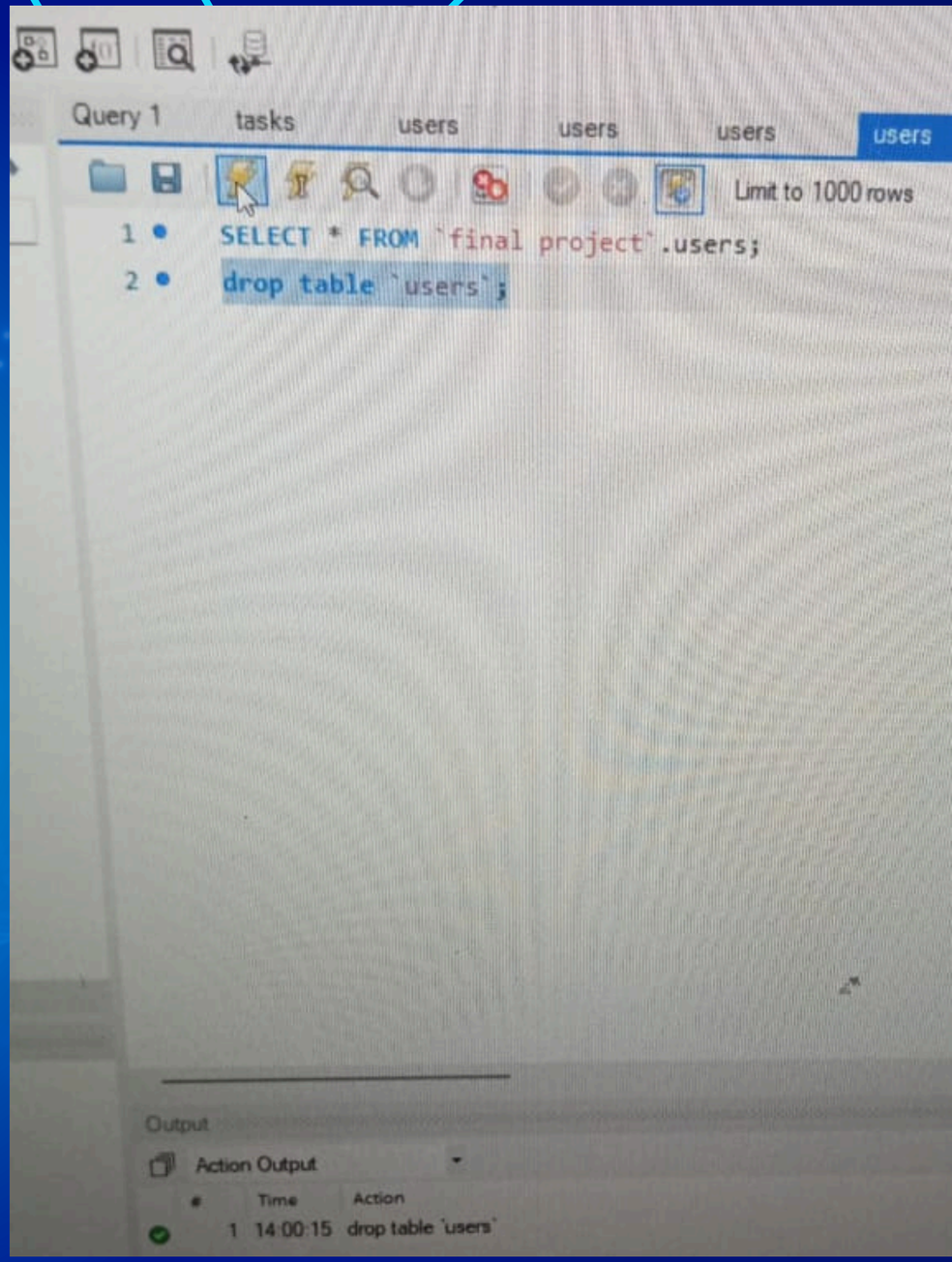
update name =john updated;

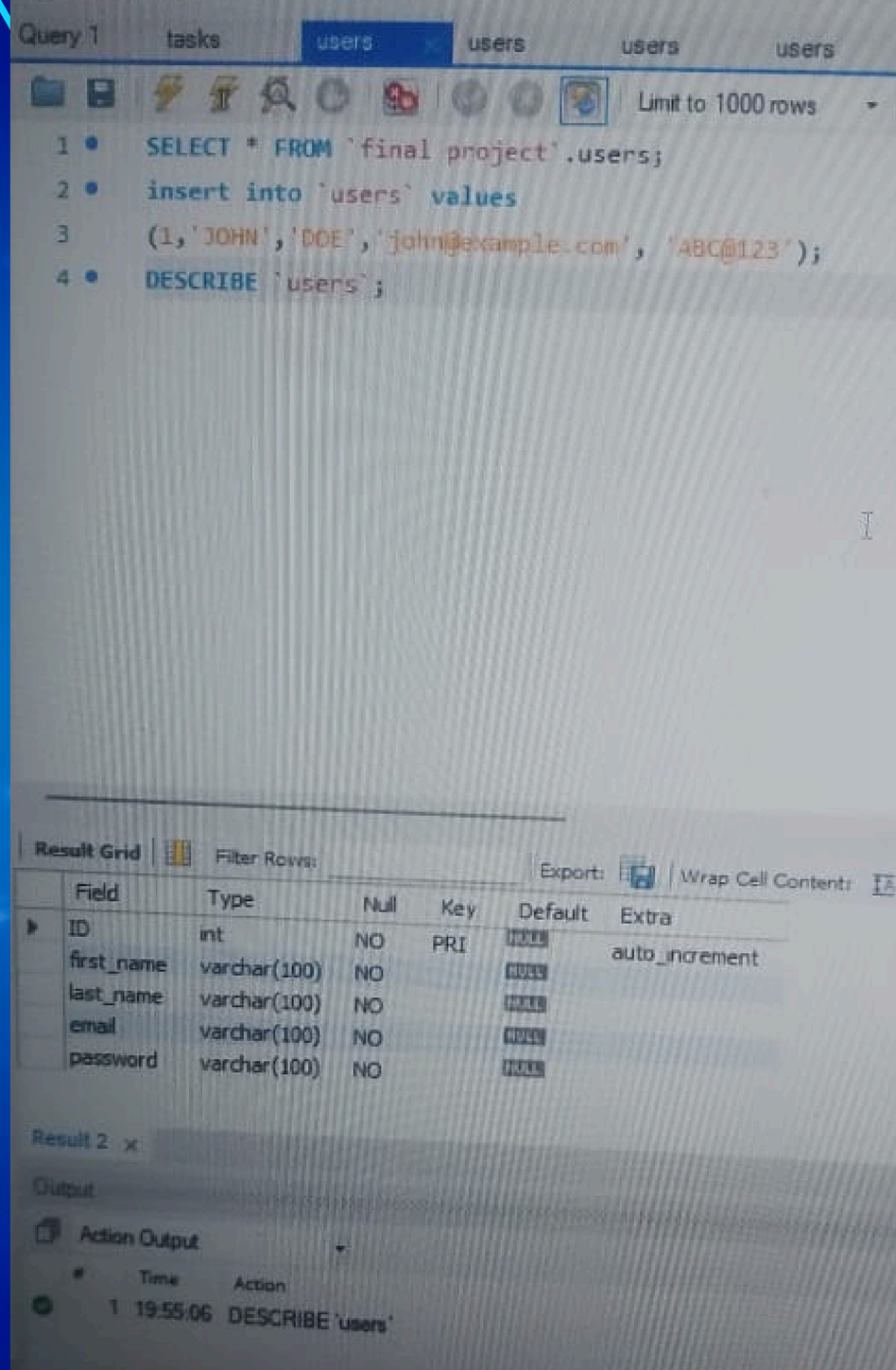


DELETE THE USER



2-VALIDATING DATABASE SCHEMA

DESCRIBE users ;

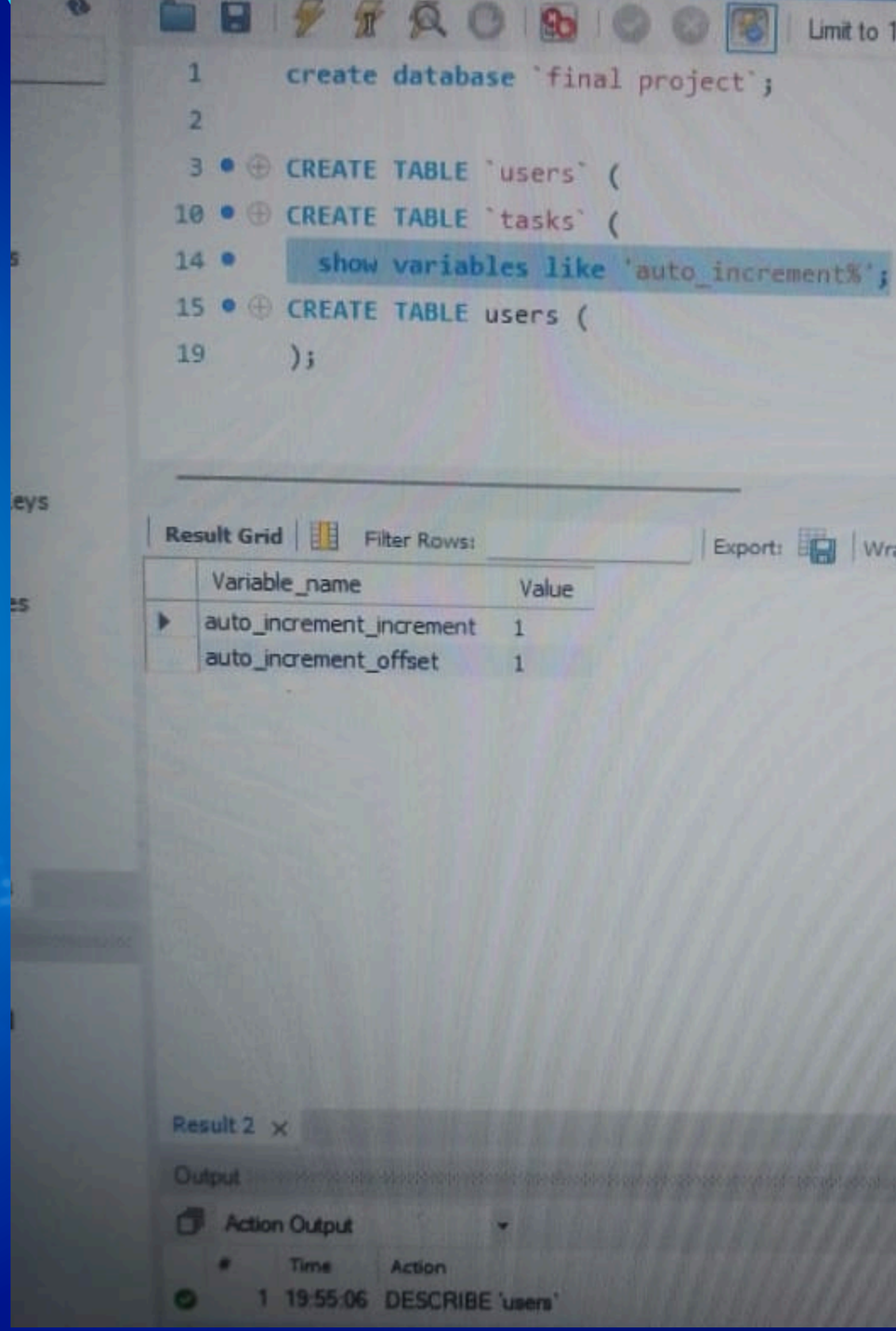


2-VALIDATING DATABASE SCHEMA

show variables like 'auto_increment`

auto_increment_increment – This is the interval between successive AUTO_INCREMENT

- auto_increment_offset – This is the starting point for .AUTO_INCREMENT values on that server



VALIDATING DATABASE SCHEMA

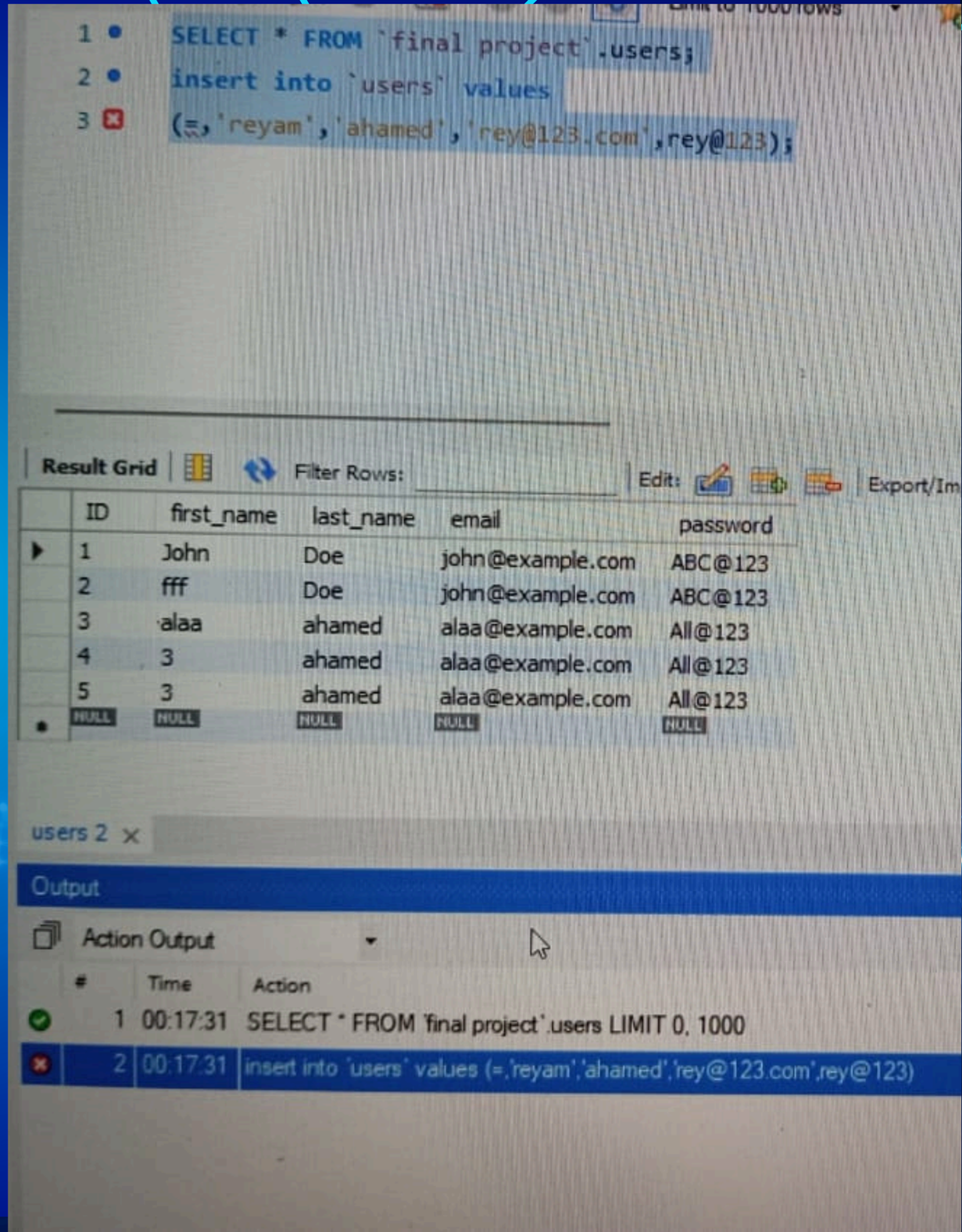
check data type in id by adding ‘=’ rather than int number

EXPECTED RESULT : ERROR

ACTUAL RESULT :

insert into `users` values
(=,'reyam','ahamed','rey@123.com','rey@123')
Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near
'=,'reyam','ahamed','rey@123.com','rey@123')' at line 2
0.000 sec

-



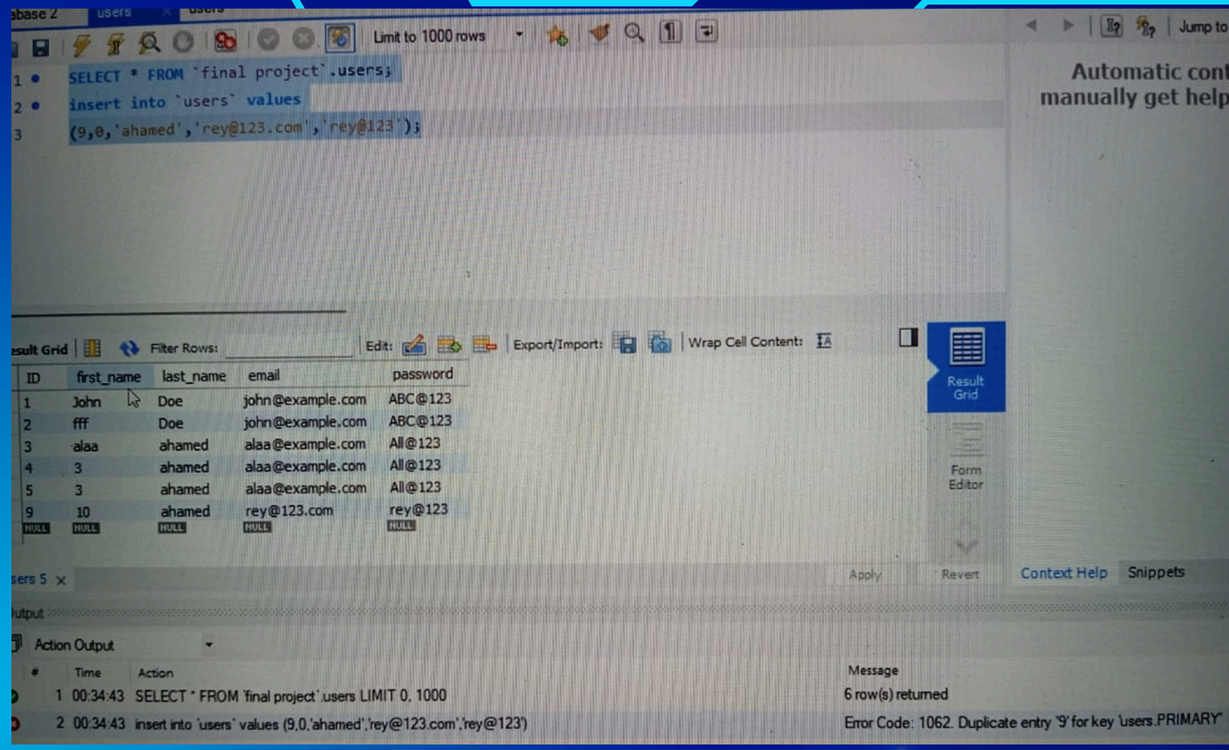
VALIDATING DATABASE SCHEMA

CHECK DUPLICATE DATE

EXPECTED RESULT : ERROR

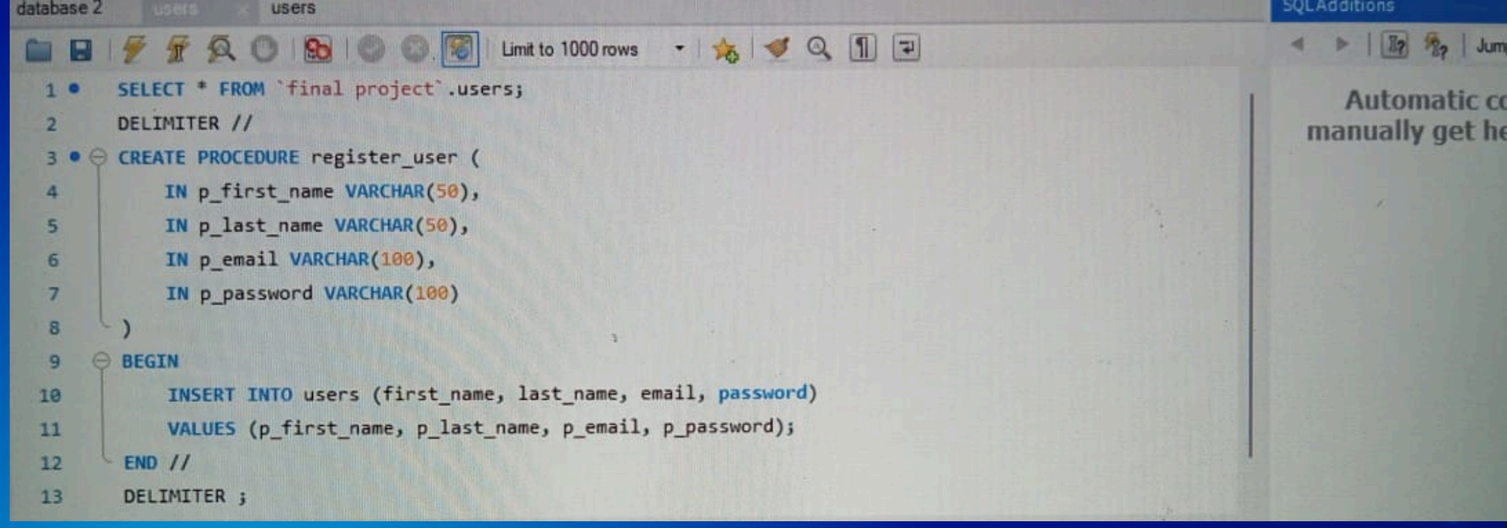
ACTUAL RESULT :

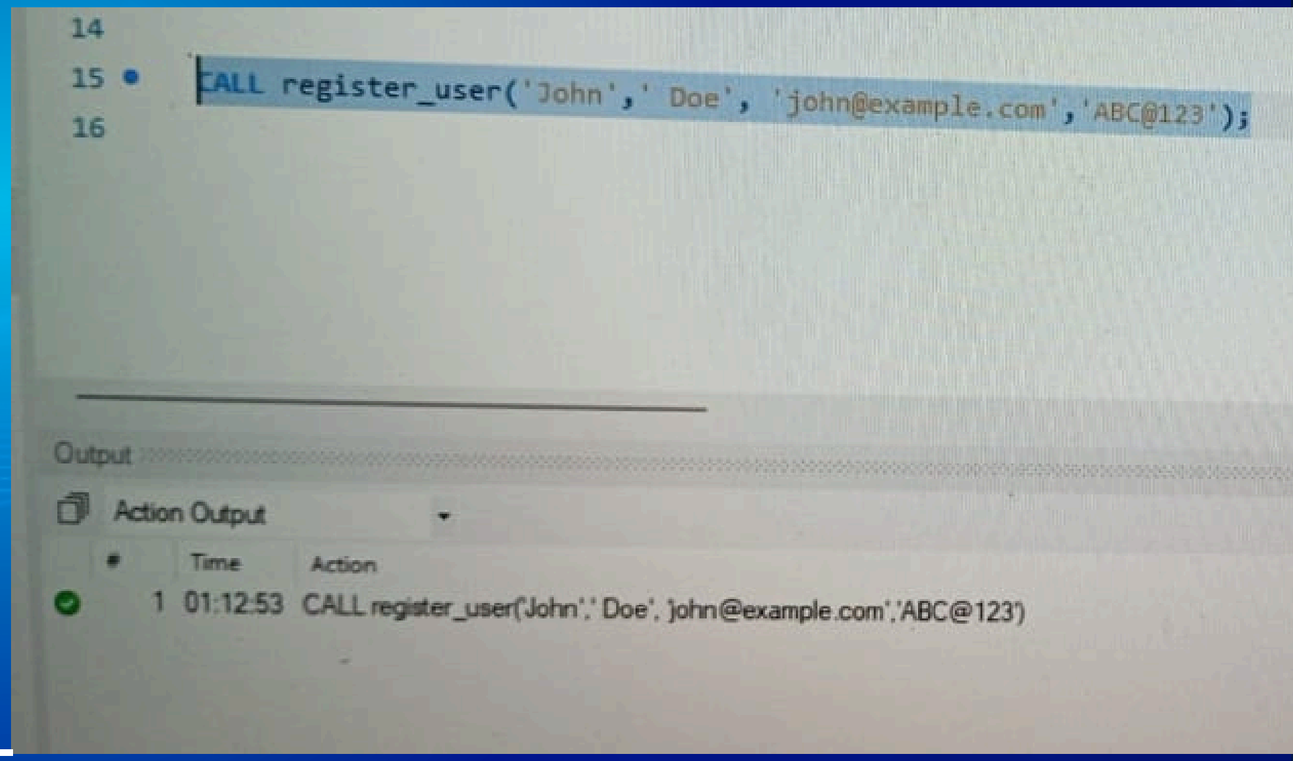
Error Code: 1062. Duplicate entry '9' for key 'users.PRIMARY'



3

Testing Stored Procedures Scenario: A database has a stored procedure for user registration. You need to test if it works correctl





4 Security Testing: Preventing SQL Injection

Scenario: A web application should prevent SQL injection attacks

.SQL injection is a code injection technique that might destroy your database

.SQL injection is one of the most common web hacking techniques

.SQL injection is the placement of malicious code in SQL statements, via web page input

SQL Injection Based on 1=1 is Always True

A hacker might get access to user names and passwords in a database by

:simply inserting " OR ""=" into the user name or password text box