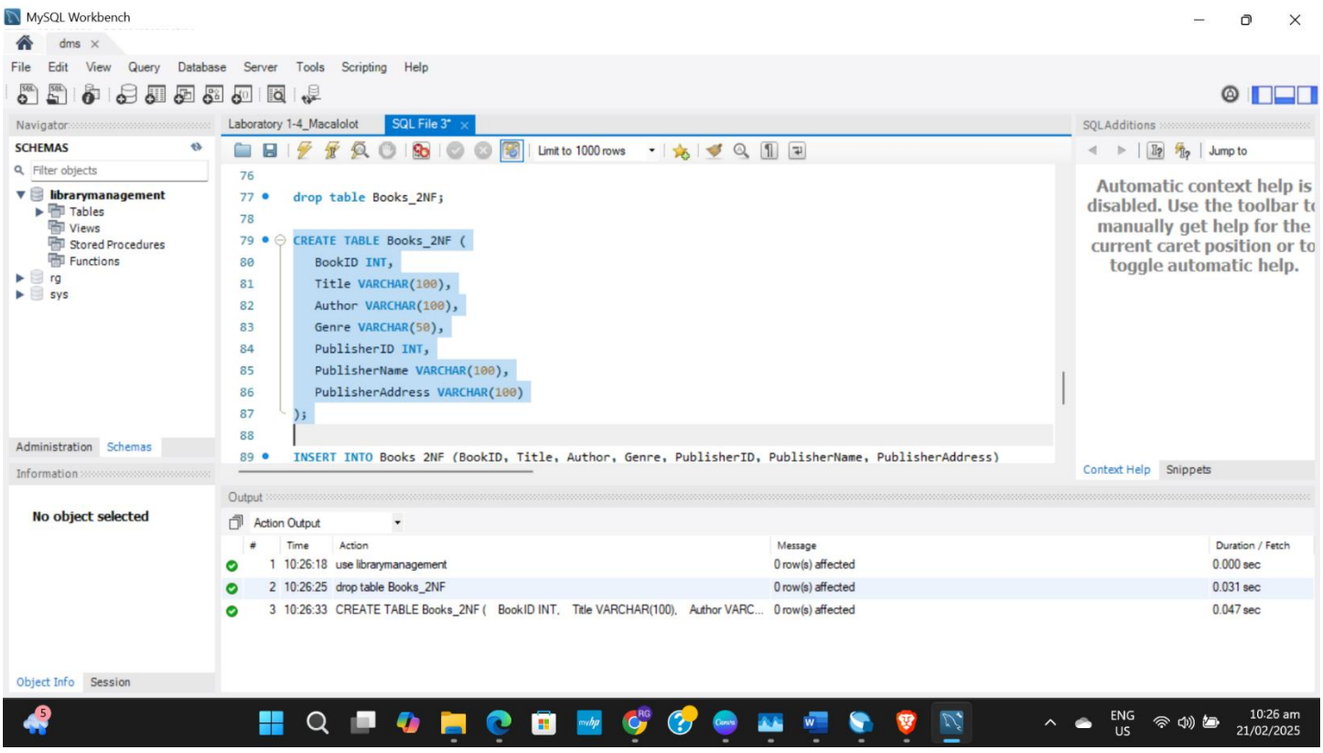
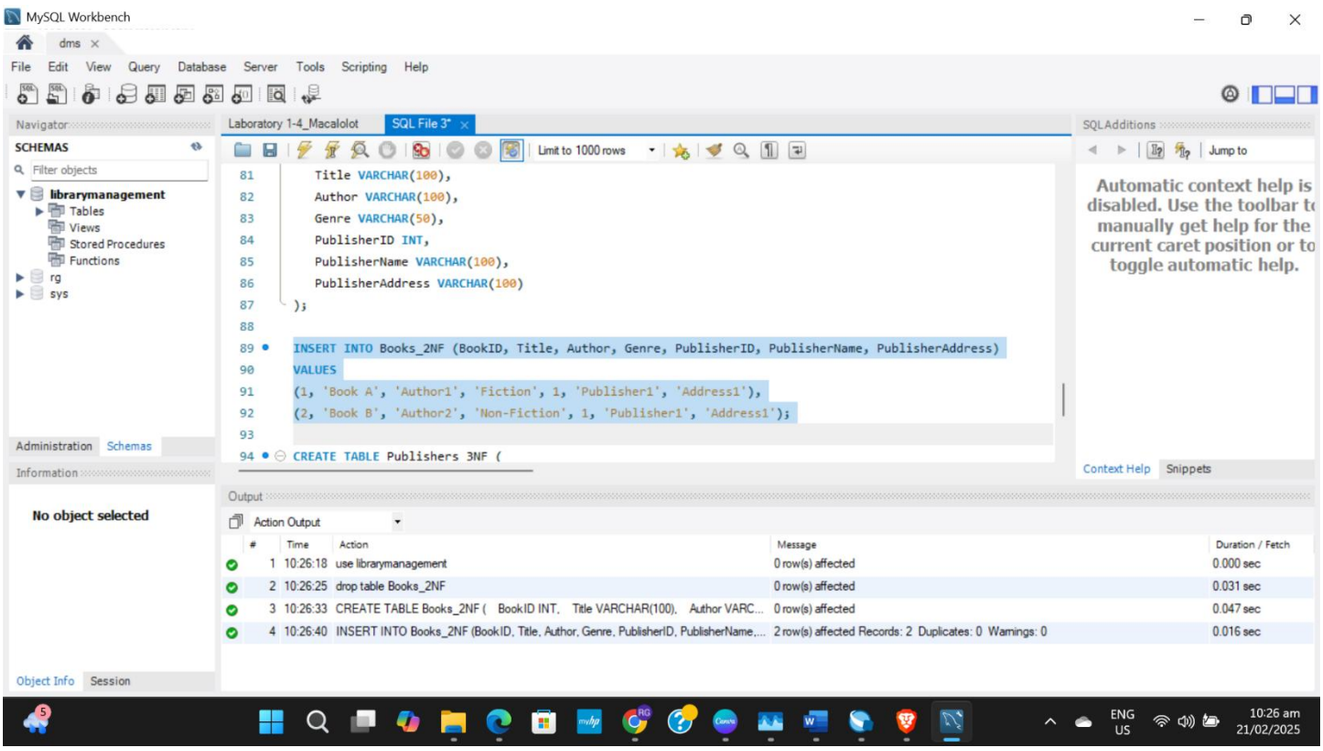
Laboratory Activity 7: Normalization - Third Normal Form (3NF)

```
CREATE TABLE Books_2NF (
  BookID INT,
  Title VARCHAR(100),
  Author VARCHAR(100),
  Genre VARCHAR(50),
  PublisherID INT,
  PublisherName VARCHAR(100),
  PublisherAddress VARCHAR(100)
);
```




```
INSERT INTO Books_2NF (BookID, Title, Author, Genre, PublisherID, PublisherName, PublisherAddress)
VALUES
(1, 'Book A', 'Author1', 'Fiction', 1, 'Publisher1', 'Address1'),
(2, 'Book B', 'Author2', 'Non-Fiction', 1, 'Publisher1', 'Address1');
```



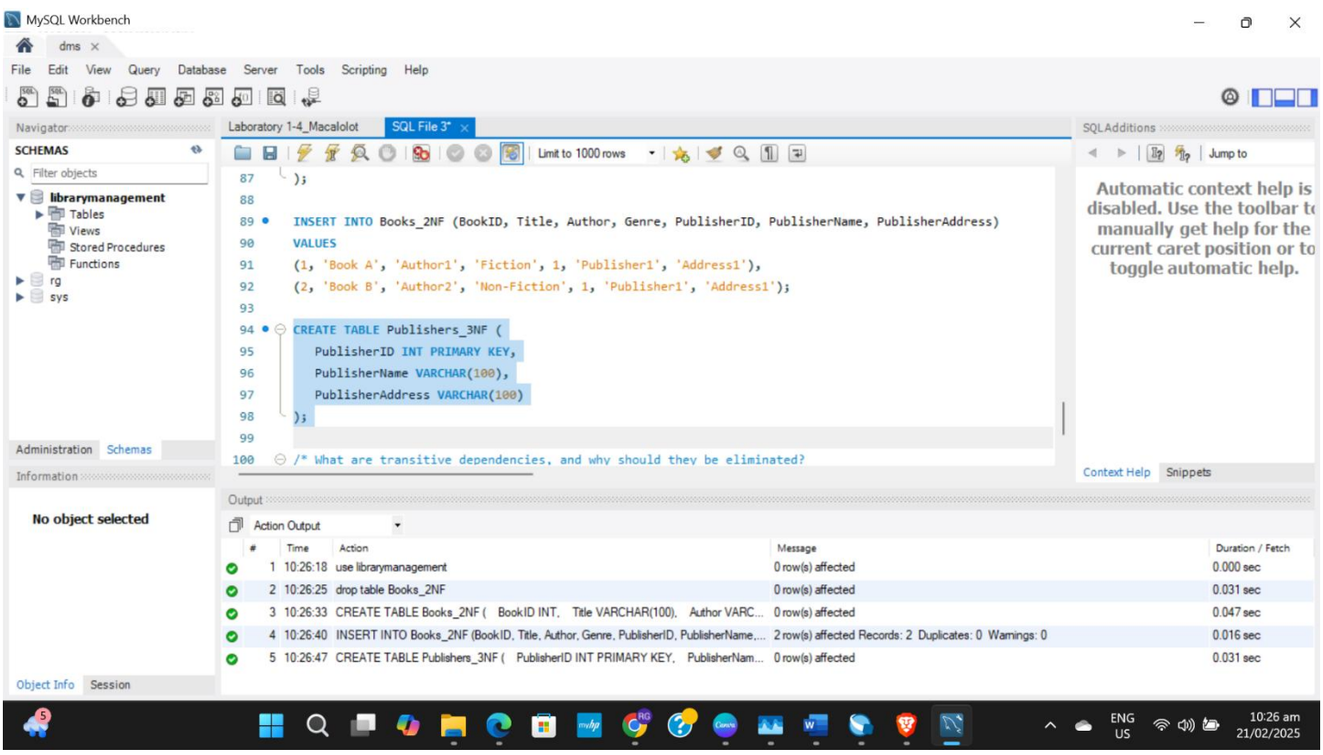
CREATE TABLE Publishers_3NF (

PublisherID INT PRIMARY KEY,

PublisherName VARCHAR(100),

PublisherAddress VARCHAR(100)

);



What are transitive dependencies, and why should they be eliminated?

Transitive dependency occurs when a non-key attribute depends on another non-key attribute, and it should be eliminated because it leads to data inconsistencies and redundancy, making it difficult to manage and maintain accurate data.

How does 3NF improve data integrity?

3NF (Third Normal Form) improves data integrity by eliminating transitive dependencies, ensuring that each non-key attribute depends only on the primary key, and preventing data inconsistencies and redundancy, making it easier to manage and maintain accurate data.

Conclusions: By normalizing a table to 3NF, we have successfully eliminated transitive dependencies and improved data integrity by ensuring that each non-key attribute depends only on the primary key, making it easier to manage and maintain accurate data.