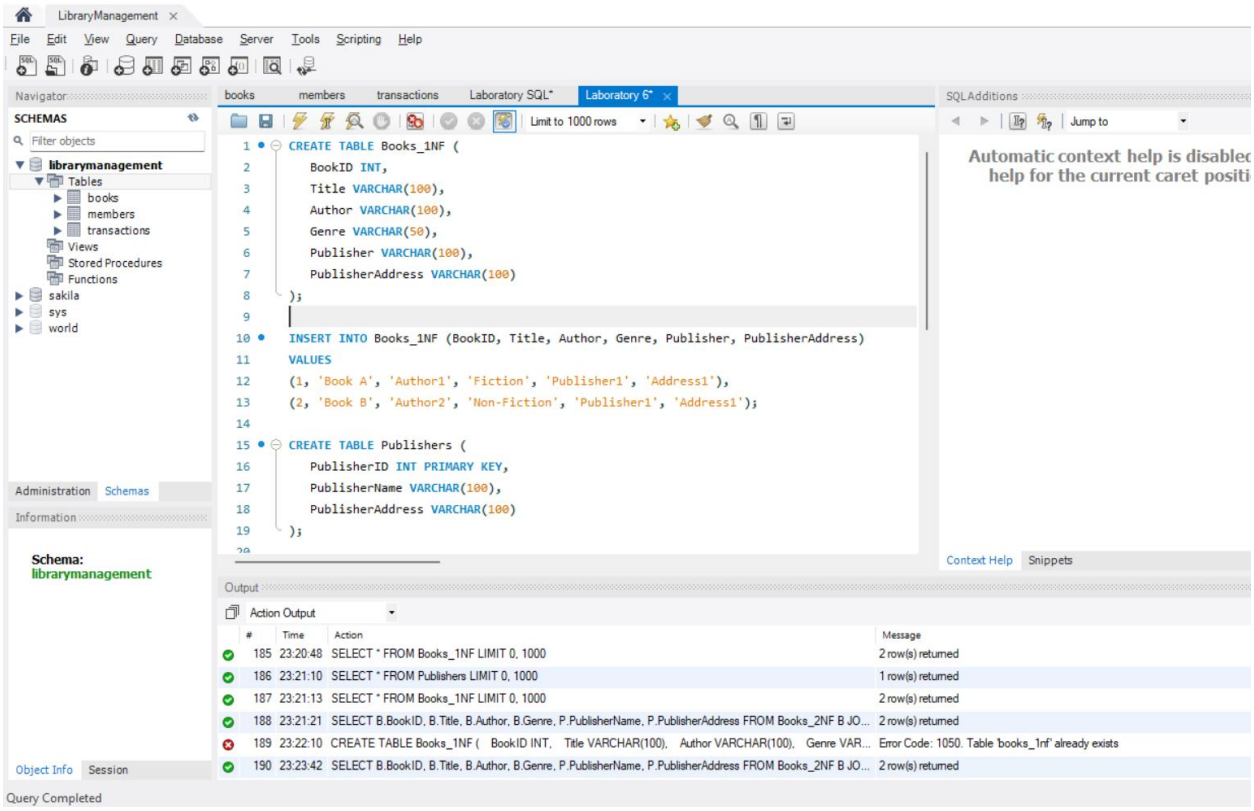
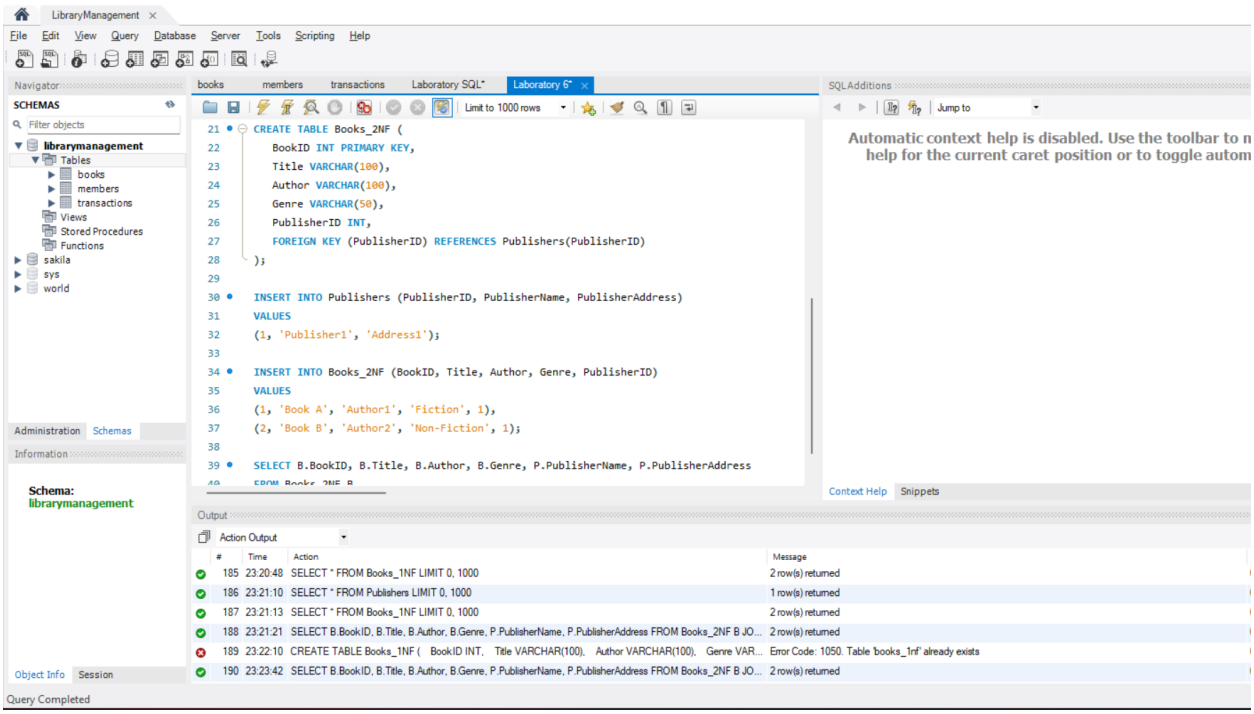
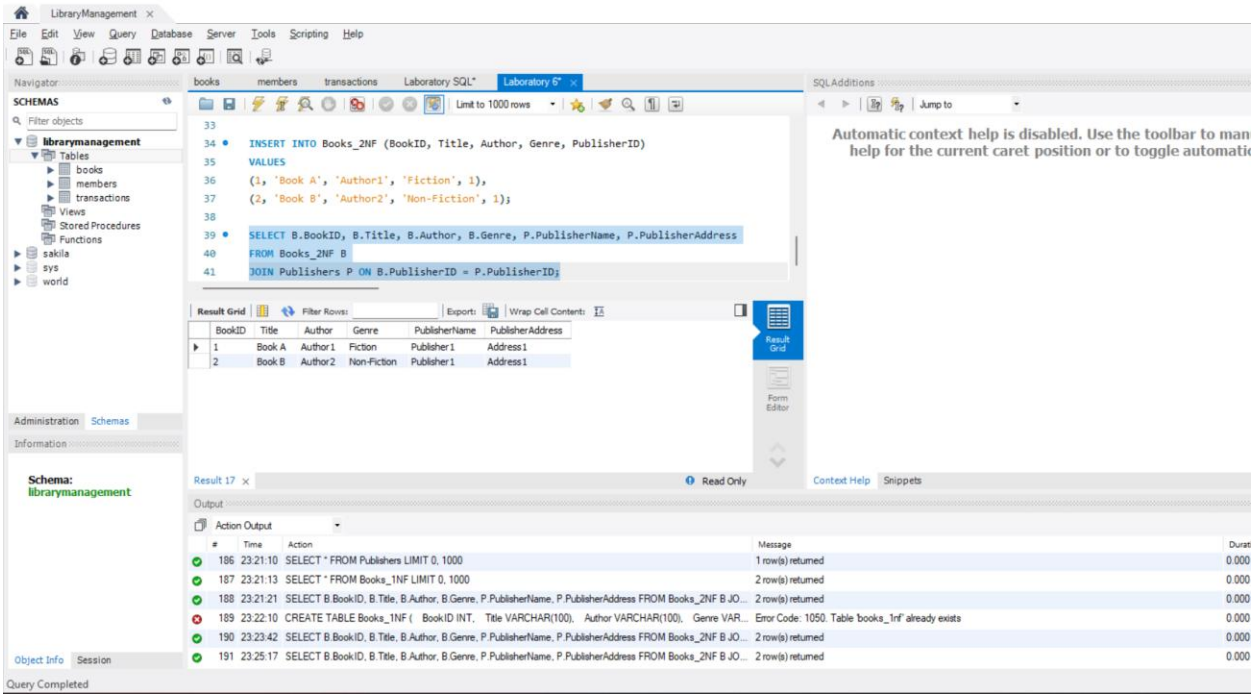
JOHN CARLO S. GUMAOD

Laboratory Activity 6:







Additional Questions/Discussions:

- What is a partial dependency, and how does 2NF eliminate it?
    - When a non-key characteristic only depends on a portion of a composite primary key rather than the entire key, this is known as a partial dependency. All non-key attributes must be completely reliant on the entire main key in order to remove partial dependencies using Second Normal Form (2NF). In order to reduce redundancy and improve data integrity, the dependent data is moved into several tables and linked together using foreign keys.

- How do foreign keys help maintain data integrity?
    - Through the enforcement of referential integrity between related tables, foreign keys aid in the maintenance of data integrity in Second Normal Form (2NF). They avoid orphaned records by guaranteeing that a value in a foreign key column must exist in the referenced primary key column of another table. This maintains table relationships, guarantees consistency, and prevents data duplication. A structured and dependable data model is maintained by databases utilizing foreign keys to stop unintentional deletions or updates that can destroy dependencies.

Conclusions:

- In order to remove partial dependencies, Second Normal Form (2NF) makes sure that every non-key attribute depends entirely on the complete primary key. This increases database efficiency, improves data integrity, and decreases redundancy. A better organized and manageable database design is guaranteed by 2NF, which divides related data into distinct tables and makes use of foreign keys.