**Laboratory Activity No. 2:**

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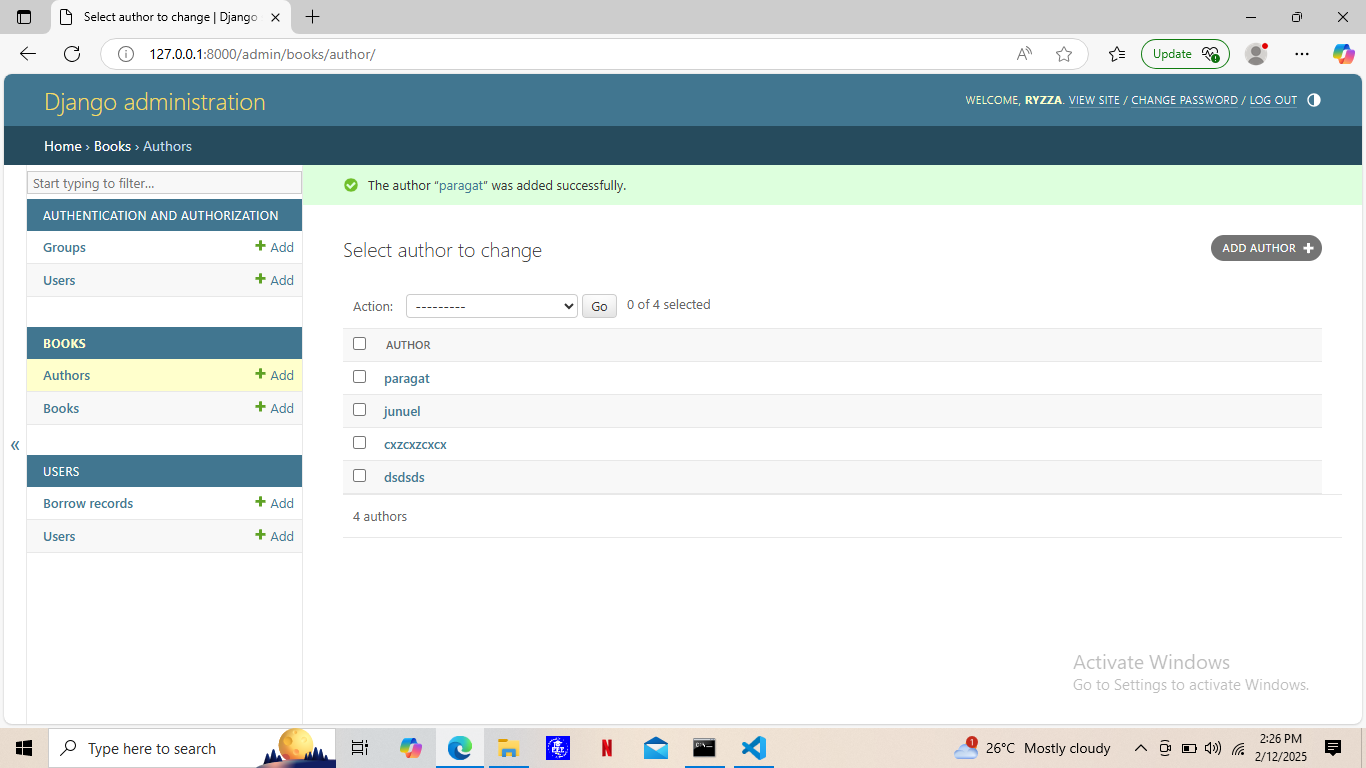
**Topic belongs to**: **Software Design and Database Systems**

**Title**: *Designing the Database Schema for the Library Management System*

**Introduction**: In this activity, you will design the database schema for the Library Management System. The database will include tables for books, authors, users, and borrowing records. You will also learn how to use Django’s ORM (Object-Relational Mapping) to define the models.

**Objectives**:

* Design the database schema for the Library Management System.
* Create Django models to represent the schema.
* Use Django’s ORM to interact with the database.

 **Results**: By the end of this activity, you will have successfully defined the database schema using Django models, created the corresponding database tables, and registered the models in the admin panel. (print screen the result and provide the github link of your work)

https://github.com/RYZZACADZ/ryzza\_django

**Follow-Up Questions**

1. **What is the purpose of using ForeignKey in Django models?**  
   ForeignKey establishes relationships between tables, enabling efficient data linking and retrieval. In this case, it connects books to authors and borrowing records to users and books.
2. **How does Django’s ORM simplify database interaction?**  
   Django ORM abstracts SQL queries, allowing developers to interact with the database using Python objects instead of raw SQL commands.

**Findings**

* The Django ORM provides an efficient way to manage relational databases.
* ForeignKey relationships maintain data integrity and facilitate complex queries.

**Summary**

This activity guided the design and implementation of a Library Management System using Django. The database schema was successfully created, and Django’s admin panel was used for data management.

**Conclusion**

By leveraging Django’s ORM, we successfully designed a structured database schema for a Library Management System. The process demonstrated how Django simplifies database operations, making development more efficient.