

## TP SI2 3ISIL SectionB

**Scenario:** You have been hired to develop a comprehensive management system for a surgical clinic. The clinic has five departments: cardiology, neurology, urology, rheumatology, and ENT (Ear, Nose, and Throat). The management system should streamline patient appointments, medical records, and department-specific processes.

### Tasks:

1. Conduct a detailed analysis of the clinic's current processes and requirements for each department. Identify the key entities, relationships, and processes involved in managing patient appointments, medical records, and department-specific tasks.
2. Utilize the MERISE model to create an Entity-Relationship Diagram (ERD) that represents the entities, attributes, and relationships within the clinic's management system. Consider entities such as patients, doctors, appointments, medical records, and department-specific tasks.
3. Based on the analysis, design a relational database schema using the MERISE model. Define the tables, fields, and relationships necessary to store and manage patient information, appointments, medical records, and department-specific data.
4. Implement the management system using a web development framework such as Django. Utilize Django's ORM capabilities to create the database models, views, forms, and templates required to support the clinic's functionalities.
5. Develop a user-friendly interface for the management system, allowing staff members to easily schedule patient appointments, access and update medical records, and perform department-specific tasks. Make sure the interface is intuitive, responsive, and accessible across different devices.
6. Implement features that enable efficient appointment scheduling, such as checking physician availability, sending appointment reminders to patients, and managing waitlists.
7. Integrate security measures to protect patient data, including user authentication and authorization.
8. Create comprehensive documentation that outlines the management system's architecture, database schema, code structure, and django-based web page deployment process.