**Theory**

**URL Routing in Django REST Framework**

In Django and Django REST Framework (DRF), URL routing is the process of defining the URLs of your API endpoints and mapping them to the appropriate views. This is an essential step in building web applications and APIs because it determines how incoming requests are processed and which view functions or classes should handle them.

**Key Concepts:**

1. **Defining URLs**:  
   In Django, URLs are defined in the urls.py file. The path() function is used to map a URL to a specific view. In DRF, you can also use class-based views, which can be linked to URLs.
2. **Dynamic URL Patterns**:  
   URLs can be dynamic, meaning they can accept variables in the URL path, which are then passed as arguments to the view. For example, /doctors/<id>/ will pass the id value to the view so that a specific doctor can be retrieved or modified.
3. **View-URL Mapping**:  
   In Django, views are Python functions or classes that receive requests and return responses. When a request comes to a certain URL, Django matches the request to the correct view and processes it.
4. **Rest Framework URL Routing**:  
   DRF provides additional tools, such as routers, to automatically generate URL patterns for views based on standard operations (e.g., creating, reading, updating, and deleting resources).

**Common URL Patterns:**

* **Static URL**: /doctors/ for listing or creating doctor profiles.
* **Dynamic URL**: /doctors/<id>/ for performing operations on a specific doctor profile.