**Theory: CRUD API (Create, Read, Update, Delete)**

**What is CRUD?**

CRUD stands for **Create**, **Read**, **Update**, and **Delete**, which represent the four basic operations used in database management. These operations are fundamental to most backend development, particularly when creating APIs that interact with a database. These operations are often mapped directly to HTTP methods in RESTful APIs:

* **Create (POST)**: This operation creates a new record in the database. In the context of a doctor profile API, this would mean adding a new doctor to the system.
* **Read (GET)**: This operation retrieves one or more records from the database. For example, fetching a list of all doctors or getting details of a specific doctor.
* **Update (PUT/PATCH)**: This operation updates an existing record in the database. It could mean updating a doctor's name, specialty, or contact information.
* **Delete (DELETE)**: This operation removes a record from the database. In the case of a doctor profile, it would mean deleting the doctor profile from the system.

CRUD operations are essential because they represent the core functionality needed to interact with data in a database, which is the foundation of backend systems.