**SCOPE**

Backend Module Scope Document  
ToDo Application - Asynchronous FastAPI Implementation

### 1. main.py - Application Launcher

Core Purpose: System initialization and production-grade server orchestration  
Responsibilities:

* Hosts Uvicorn ASGI server configuration
* Sets runtime parameters (port, workers, reload behavior)
* Initializes application lifespan events
* Triggers api.py application bootstrap sequence

### 2. api.py - Application Core

Core Purpose: Central FastAPI instance and router federation  
Responsibilities:

* Instantiates primary FastAPI() object
* Mounts sub-routers from routers
* Declares root endpoint health checks
* Manages global dependency injections
* Configures exception handlers  
  Boundaries:  
  ❌ No database operations  
  ❌ No endpoint implementations  
  ✅ Pure architectural orchestration

**All Database scripts will be allocated in the folder ToDoBD**

Inside this folder there should be an \_\_init\_\_.py file in order to set the entire folder as a package.

### 3. database.py - Database Core

**Core Purpose:** Creates and connects to the database and sets the task table

**Responsibilities:**

* validates and creates the folder to locate the BD
* Connects to the BD
* Validate and create the Task table
* The task table has the following configuration:
  + ID integer primary key
  + TASK -Text can not be null
  + Description -Text
  + creation\_time Text is set automatically
  + end\_time -Text
  + Finished -Text possible values (‘Y’ or ‘N’), default ‘N’
* Boundaries**:  
  ❌ Contains no API awareness  
  ❌ Implements no business rules  
  ✅ Pure database interaction**

**4. crud.py – Database – Core**

**Core Purpose:**  Performs de CRUD operations directly to the data base for the tasks entity

**Responsibilities:**

* Inserts new task
* Reads individual and all information in the bd
* updates the current information of the bd
* deletes individual registries.

Boundaries**:  
❌ Contains no API awareness  
❌ Implements no business rules  
✅ Pure database interaction**

**5. models.py – Database-Core**

**Core Purpose:**  Set the data model of the responses needed in the CRUD operations

**Responsibilities:**

* Only Classes in this package

**6. crud\_router.py – Database Router**

**Core Purpose:**  Creates the API router to handle the CRUD operations, this method uses crud.py and models.py to handle the logic, it also uses JSONResponse from fastapi for the answers of each operations.

**Responsibilities:**

* POST operation in the creation of new tasks
* GET operation for the get all information query.
* PUT operation for update tasks
* DELETE operation to delete information from the data base.