### **Code Overview:**

1. **Database Models (SQLAlchemy)**: Customer and Campaign models represent customer and marketing campaign data.
2. **FastAPI Endpoints**:
   * **POST /webhook**: For receiving webhook data.
   * **GET /data**: Retrieve data with pagination using offset and limit.
   * **GET /sync/{source}**: Trigger synchronization from the specified external API (CRM or Marketing).
   * **GET /tasks**: List all running background tasks.
   * **POST /tasks/cancel**: Cancel a running task.
3. **Background Tasks**: Background sync tasks are handled using FastAPI’s BackgroundTasks class.
4. **Asynchronous HTTP Requests**: httpx is used for asynchronous HTTP requests to external APIs.
5. **Task Management**: An in-memory dictionary (tasks) is used to track the status of background tasks.
6. **Logging**: Errors and events are logged using Python’s built-in logging module.

### **Running the Project:**

1. **Run the application**:

uvicorn filename:app --reload

1. **Testing Endpoints**:
   * Use tools like Postman or cURL to test endpoints like /sync/{source} or /data.

Make sure to adjust the file names and paths accordingly when using Docker or SQLite