KIMO SWE Assignment

Description

As a software engineer at KIMO, you are tasked with implementing a back-end API to serve courses. This API will be responsible for handling requests from the front-end application, retrieving course information from **MongoDB**, and returning the relevant data in a standardized format.

All course information is present on the file `courses.json` *(as a list of courses)*. Specifically, each course has the following structure:

- `name` The title of the course.
- `date` Creation date as a unix timestamp.
- `description` The description of the course.
- `domain` List of the course domain(s).
- `chapters` List of the course chapters. Each chapter has a title `name` and contents `text`.

Deliverables

1. Script to parse course information from `courses.json`, create the appropriate databases and collection(s) on a local instance of **MongoDB**, create the appropriate indices (for efficient retrieval) and finally add the course data on the collection(s).
2. A containerized application of the back-end endpoints using **FastAPI**. Endpoints that need to be included:
    1. Endpoint to get a list of **all available courses**. This endpoint needs to support 3 modes of sorting: *Alphabetical* (based on course title, ascending), *date* (descending) and *total course rating* (descending). Additionaly, this endpoint needs to support optional filtering of courses based on domain.
    2. Endpoint to get the **course overview**.
    3. Endpoint to get specific **chapter information**.
    4. Endpoint to allow users to **rate each chapter** (positive/negative), while aggregating all ratings for each course.
3. **Tests** for all created endpoints to validate that they are working as intended.