DS Assessment

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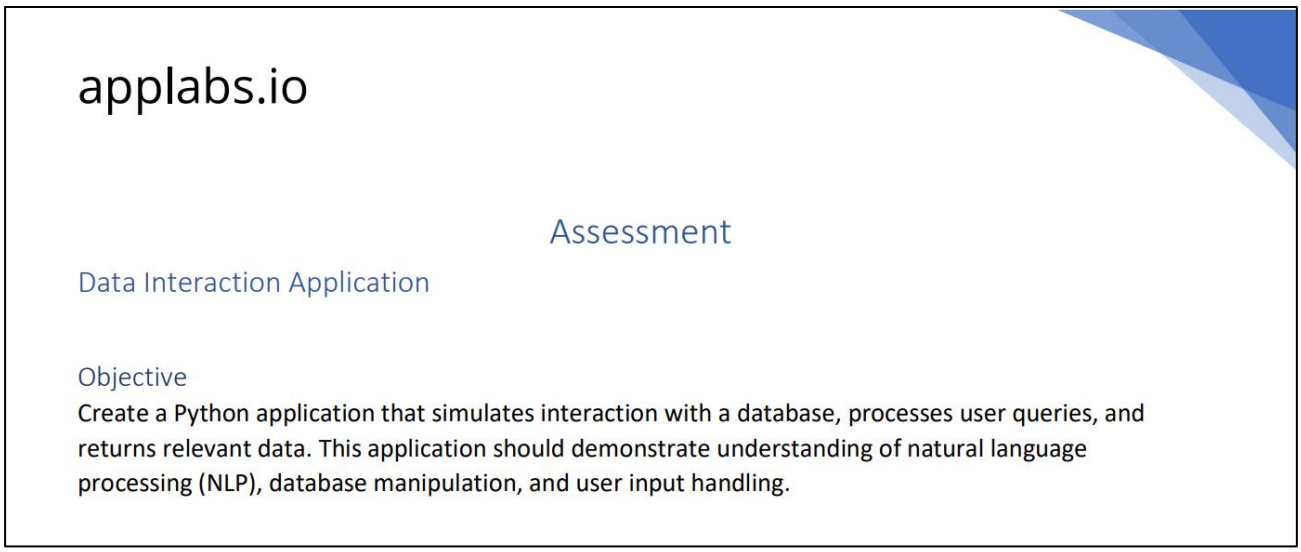

Project Overview: Ecommerce Catalogue with NLP Integration

Introduction:

The Ecommerce Catalogue project is designed to provide users with an intuitive interface for browsing and searching through a catalogue of products. The application employs natural language processing (NLP) techniques to interpret user input and retrieve relevant product information from a mock database. With a userfriendly graphical interface, users can easily search for products, view product details, add reviews, and more.

Key Features:

1. **Graphical User Interface (GUI):**
    a. The application features a Tkinterbased GUI, offering users an interactive platform to navigate the ecommerce catalogue seamlessly.

2. **Search Functionality:**
    a. Users can search for products by entering textual queries such as product names or keywords.
    b. The application utilizes NLP to analyse user input and retrieve matching products from the database.

3. **Product Information Display:**
    a. Retrieved product information, including name, price, and description, is displayed in a structured format for easy viewing.
    b. Users can browse through search results and select specific products to view detailed information.

4. **Adding Reviews:**
    a. Users have the option to add reviews for products they have purchased or used.
    b. Reviews include a rating (from 0 to 5) and a short description provided by the user.

5. **Database Simulation:**
    a. The application incorporates a mock database containing sample product data stored in a JSON file.
    b. Product information is retrieved from the database based on user queries and displayed in the GUI.

How It Works

1. **User Input Processing:**
    a. When a user enters a search query or interacts with the application, the input is processed using NLP techniques to determine the user's intent.
    b. The application identifies keywords and patterns in the input to understand what action the user intends to perform (e.g., searching for a product, adding a review).

2. **Database Querying:**
    a. Based on the interpreted user input, the application queries the mock database to retrieve relevant product information.
    b. Products matching the user's search query or selected criteria are fetched from the database and displayed in the GUI.

3. **GUI Interaction:**
    a. Users interact with the application through the graphical interface, where they can input search queries, browse product listings, and add reviews.
    b. The GUI provides a userfriendly experience, allowing users to navigate the catalogue effortlessly and access detailed product information.

Installation and Running Instructions

1. **Prerequisites:**
    a. Python 3.x installed on your system.
    b. Ensure that the required Python packages (Tkinter, spaCy) are installed. You can install them using pip:

```
pip install tk

pip install spacy
```

2. **Clone the Repository:**
   Clone or download the project repository from GitHub to your local machine.

3. **Setup spaCy Model:**
    a. Download and install the English language model for spaCy by running the following command:

```
python m spacy download en_core_web_sm
```

4. **Navigate to Project Directory:**
    a. Open a terminal or command prompt and navigate to the directory where the project files are located.

5. **Run the Application:**

Execute the main Python script to launch the application:

```
python shopwise.py
```

6. **Interact with the Application:**
    a. Once the application is running, you will be presented with the graphical user interface (GUI).
    b. Use the provided buttons and input fields to perform actions such as searching for products, viewing product details, and adding reviews.
    c. Follow onscreen instructions and prompts to navigate through the application and explore its features.

7. **Exit the Application:**
    a. To exit the application, simply close the GUI window by clicking the close button or using the window manager's close functionality.

Note:

- Ensure that the mock database JSON file (`mock_db.json`) is located in the same directory as the main Python script (`ds_assessment.py`).
- You may customize or extend the project by adding more features, refining the GUI, or modifying the database structure as needed.

Conclusion:

The Ecommerce Catalogue project demonstrates the integration of NLP techniques with a graphical user interface to create an intuitive and interactive ecommerce browsing experience. By leveraging natural language processing, users can easily search for products and access relevant information, enhancing their overall shopping experience. With its straightforward interface and robust functionality, the application offers a glimpse into the potential of NLPdriven solutions in the realm of ecommerce and beyond.