Comprehensive Python course for AI

Final Project

Deadline: 2024 13 January

Score: 1100 + 200

2023 30 December

Comprehensive Python course for AI

Cinema Reservation System

Score: 1100 + 200

Cinema Reservation System (OOP)

- **Create a sophisticated cinema reservation system that enhances movie offerings by integrating an external API to fetch and add movies. This system will manage movie schedules and track availability while offering advanced features like customer feedback.**

Classes and Attributes:

1. **Person (Base Class): Common details for individuals related to the cinema.**
   Attributes: name, email, phone.

2. **User (Inherits from Person): Manages customer-specific actions within the system.**
   Attributes: user_id, reservations.

3. **Employee (Inherits from Person):Handles cinema operations and adds new movies via an API.**
   Attributes: employee_id, position.

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4. CinemaHall: Represents the cinema space, maintaining a list of movies and employees.
   Attributes: name, total_seats, movies_showing.

5. Movie: Contains details about the movies. The specific attributes will depend on the information provided by the external API.
   Attributes: ID, title, runtime, rating, showtimes , status, average_rating, feedback_list.
   Note: The exact attributes may vary based on the API used and should be adapted accordingly.

6. Reservation: Manages booking details, linking a user to a specific movie and showtime.
   Attributes: reservation_id, movie_id, showtime, seat_number, user_name.

7. Feedback: Customer feedback for a movie.
   Attributes: user_id, movie_id, rating, comments.

Cinema Reservation System (OOP)

- **Points:**

External API Integration: **Select a suitable movie database API and plan how to adapt the movie attributes based on the provided data. Ensure the system is flexible enough to accommodate variations in API structures.**

External API Movie Addition: **Employees can add new movies to the cinema's schedule by fetching details from an external movie database API. The integration is designed to be flexible, accommodating different data structures and details provided by various APIs.**

System Design: **Consider the relationships and interactions between different classes.**
User Interface: Design how users and employees will interact with the system.

Error Handling: **Develop strategies for handling potential system errors and user input issues.**

README: **A README file providing an overview of the system, setup instructions, and usage guidelines.**

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❖ Additional Points for Higher Scores:

Team Collaboration: **Form teams of up to 3 members. Collaborate to divide tasks, integrate parts, and peer review code for quality and functionality.**

Version Control with GitHub: **Use GitHub for version control. Each team should maintain a repository for their project, demonstrating regular commits, proper documentation, and usage of branches for feature development.**

Data Management in JSON:Implement **functionality to save and retrieve system data (like movies, schedules, and reservations) in a JSON format. This involves understanding file operations and JSON manipulation in Python.**

Innovative Feature Addition: **Add a useful new feature to the project that improves the system and makes it more enjoyable or efficient for users.**

Thanks

Good Luck!

Don't give up on your dreams ☺