Title: CLI Application Documentation

Getting Started:

To swiftly experience the CLI application, follow these steps:

Clone the Repository:
Begin by cloning the repository containing the CLI application source code to
your local machine. Use the following command:

git clone <repository_url>
Navigate to the Project Directory:
Move into the project directory using the command:

cd <project_directory>
Create and Activate Virtual Environment:
The CLI application relies on a virtual environment to manage dependencies. Use
the Makefile provided to create and activate the virtual environment. Execute
the following command:

make install
Run the CLI Application:
Once the virtual environment is set up and dependencies are installed, launch
the CLI application using the following command:

make run
This command initializes the virtual environment, sets up any required
directories, and executes the main.py script.

Navigation within the CLI Application:
Upon launching, you will be prompted to either log in or register. Use the arrow
keys to navigate the provided options. Press the left and right arrow keys to
move through the navigation bar. Select "Join Game" to queue for multiplayer
gameplay with other users.

Overview:

The CLI application is a robust and efficient Command Line Interface designed to
provide users with a seamless experience for interacting with a backend server.
Built with Python, asyncio, and curses, the CLI application leverages
asynchronous programming to achieve non-blocking I/O operations, ensuring
responsiveness and optimal resource utilization. The application offers two main
functionalities: user authentication and registration, and a feature-rich
interactive interface.

User Authentication and Registration:

The CLI application begins by prompting users to either log in or register. Upon
selecting the login option, the application prompts the user for their username
and password. Utilizing the aiohttp library, the application sends an HTTP
request to the backend server, verifying the user's credentials. In the case of
successful authentication, the application transitions to the main interactive
mode. Conversely, if the user is not found or the server does not respond,
appropriate error messages are displayed.

The registration process follows a similar workflow. Users provide essential
information such as username, password, full name, and email. The application
sends a registration request to the backend server, handling responses
accordingly. A successful registration seamlessly transitions the user to the
interactive mode, while any errors are promptly communicated to the user.

Interactive Mode:

The heart of the CLI application lies in its interactive mode, which showcases a

sophisticated user interface built with curses. The UI is divided into various views, each responsible for rendering specific components and handling user input. The application utilizes asyncio tasks to manage concurrent processes efficiently. The keyboard input task captures user keystrokes, the UI draw task controls the frame rate of UI updates, and the UI input task manages the processing speed of user inputs.

The UI provides a dynamic and engaging experience, allowing users to navigate through different views seamlessly. Asynchronous tasks enable real-time updates and responses to user actions, enhancing the overall responsiveness of the application. The UI controller orchestrates the communication between tasks, ensuring a smooth flow of data.

Conclusion:

In summary, the CLI application represents a harmonious blend of cutting-edge technologies, incorporating asyncio for asynchronous programming, curses for a sophisticated command line UI, and aiohttp for efficient communication with the backend server. The application's modular architecture, powered by asyncio tasks, enables a responsive and interactive user experience. Whether logging in, registering, or navigating through the rich interface, users can expect a seamless and efficient interaction with the CLI application. This documentation serves as a guide for users and developers, outlining the core functionalities and technologies that make this CLI application a powerful and user-friendly tool.