Development Environment Setup

Please refer to the Development Environment Setup document for detailed instructions on setting up your development environment in Python and Unity.

Playing the Game

1. Open Unity Project:
   - Open the Unity project after completing the setup steps.
2. Play the Game:
   - Click the play button at the top center of the Unity window.
3. Enjoy playing the Snake game!

Training Machine Learning Agents

1. Open Unity Project:
   - Open the Unity project after completing the setup steps.
2. Open Command Prompt:
   - Open a command prompt after completing the setup steps and activating the environment.
3. Run Training Command:
   - Run the following command to train ML agents:
     mlagents-learn Snake\Assets\ML-Agents\snake_training_config.yaml
     --run-id=<name_of_run>
4. Start Training:
   - Go to the Unity editor and click the play button at the top center of the window.
   - Watch the ML agent learn and improve its performance.
5. Analyze Results:
   - Navigate into the results folder from the command prompt.
   - Run the following command to open the TensorBoard data of the training session:
     Tensorboard –logdir .
   - Open localhost:6006 in a web browser and look at the model's training results.

LLM Analysis

1. Open Command Prompt:
   - Open a command prompt after completing the setup steps and activating the environment.
2. Run LLM Game Analysis Command:
   - Run the following command to use chat-gpt to analyze a single game of Snake:
     python senior_design/LLM/chat.py

Additional Suggestions

For any further assistance or troubleshooting, please refer to the respective documentation of Python, Unity, or the installed packages.