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**Objective:** Replace the existing Langchain REACT Agent in the L3AGI framework with the XAgent

Tasks:

1. Understand the Existing Implementation: - Review the L3AGI framework, focusing on areas where Langchain REACT Agent(https://python.langchain.com/docs/modules/agents/agent\_types/react) is currently implemented. - Key files to examine: test.py, conversational.py, dialogue\_agent\_with\_tools.py.

2. Plan the Replacement: - Document the functionalities of the Langchain REACT Agent within L3AGI. - Outline how these functionalities will be replicated or replaced by XAgent.

3. Implement the Replacement: - Remove the Langchain REACT Agent from the L3AGI framework. - Integrate the XAgent framework, ensuring it fulfills the roles previously handled by the Langchain REACT Agent. - Ensure that the integration is seamless and maintains the integrity of the L3AGI framework.

4. Testing and Documentation: - Thoroughly test the framework to ensure that all functionalities work as expected with XAgent. - Document the changes made, including any new functionalities or alterations to existing features. Deliverables:

**Result and Explanation:-**

**test.py**

The changes needed to integrate XAgent into **test.py**. We'll replace the use of the Langchain REACT Agent and related code with XAgent. Note that the exact implementation details will depend on how XAgent is designed to work, so you'll need to adapt this example based on the XAgent documentation.

Explanation of Changes

1. Remove Langchain Imports:
   * Comment out or remove the imports from Langchain and related libraries.
   * Import the XAgent library.
2. Agent Factory Function:
   * Replace the Langchain REACT Agent creation with the creation of an XAgent instance.
3. Evaluation Configuration:
   * Modify the eval\_config to fit the format expected by XAgent.
4. Run on Dataset Function:
   * Implement the run\_on\_dataset function to use XAgent for running the evaluation on the dataset.
5. Run and Print Results:
   * Use the agent\_factory to create an XAgent instance and run the evaluation on the dataset.
   * Print the results to verify the integration.

**conversational.py**

Let's go through the conversational.py file and update it to use XAgent instead of the Langchain REACT Agent.

Explanation of Changes

1. Remove Langchain Imports:
   * Comment out or remove the imports from Langchain and related libraries.
   * Import the XAgent library.
2. Agent Initialization:
   * Replace the Langchain REACT Agent initialization with the creation and configuration of an XAgent instance.
3. Agent Executor:
   * Create an agent executor using XAgent and replace the existing agent executor logic.
4. Streaming Handler:
   * Use the existing AsyncCallbackHandler for streaming, if necessary.

**dialogue\_agent\_with\_tools.py**

To integrate XAgent into dialogue\_agent\_with\_tools.py, we'll replace the Langchain REACT Agent with XAgent. We'll modify the initialization and usage of the agent to fit XAgent's API.

Explanation of Changes

1. Remove Langchain Imports:
   * Comment out or remove the imports from Langchain and related libraries.
   * Import the XAgent library.
2. Agent Initialization:
   * Replace the Langchain REACT Agent initialization with the creation and configuration of an XAgent instance.
3. Agent Executor:
   * Create an agent executor using XAgent and replace the existing agent executor logic.
4. Memory Handling:
   * Use the existing ZepMemory class for memory handling if is\_memory is True.
5. Callbacks:
   * Append the callback handlers to the XAgent instance if run\_logs\_manager is available.