Runtime Architects — Team Meeting Minutes

Date: 2 June 2025

Time: 7:00 PM – 7:30 PM

Location: Online Call

Attendees:

- Pablo Periañez Cabrero
- Aditya Bhargav Akella
- Firose Shafin
- Nithyakamal Ilamurugu

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1. Clarifying Multi-Agent System (MAS) Architecture

- The team discussed the need for **clear definitions of agent interactions** in the architecture.
- **Aditya** raised concerns about:
  - Lack of clarity on how agents communicate under MCP (Model Context Protocol).
  - The importance of defining communication protocols (e.g., auction systems, negotiation systems) between agents, as learned in the MAS module.
- **Pablo** noted the architecture looked more like **microservices with orchestrators**, leading to confusion over its MAS nature.

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2. Containerization & Deployment Concepts

- **Aditya** demonstrated multi-agent architecture from class examples:
  - Agents within a single container communicate internally.
  - External services (e.g., data sources) connect via interfaces.
- **Kamal** explained the current design uses:
  - **Separate containers for each agent**, each with its own **Cosmos DB** instance.
  - **MCP for inter-agent communication**, emphasizing modularity, fault tolerance, and scalability.

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3. Points of Debate and Resolution

- Debate on whether agents should be:
  - Grouped within the same container (as per course teaching).
  - Or split across containers (for scalability and independence).

- Team agreed both approaches have pros and cons; they will raise these uncertainties with mentors.
- Need for a **legend** in the architecture diagram to clarify design elements (e.g., containers, agents, databases).

4. Key Action Points

Task	Responsible	Deadline
Draft questions about MAS architecture and MCP protocol	Aditya	Within 30 mins after the call
Add notes and refine questions	All	Before class on 3 June
Discuss questions with professors after class	Pablo & interested members	3 June, post-lecture
Research MCP's capability for agent-to-agent negotiation	All	Ongoing
Share slides and notes from MAS module with Kamal	Aditya/Firose	ASAP

5. Outstanding Questions for Mentor Review

- How do agents interact under MCP in a MAS architecture?
- Does MCP support agent-to-agent negotiation, or is an external coordination layer required?
- Are separate databases for each agent acceptable, or should a unified context be maintained?
- Is our current architecture compliant with the MAS principles expected by Microsoft mentors?

6. Additional Notes

- Team acknowledged confusion around MCP documentation and inconsistent online resources.
- Members agreed to **continue researching** and revisit architecture design if needed.
- Meeting ended with agreement to prepare for the Microsoft mentor meeting with a clear list of questions and notes.

Meeting Adjourned

Prepared by:

Pablo Periañez Cabrero

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