

## Seminar 2 Summary: Introduction to First Order Logic (FOL)

In this session, Dr. Stelios Sotiriadis guided students through **Unit 2**, which introduces **First Order Logic (FOL)**—a foundational concept in computer science and AI. The seminar highlighted the significance of logic in representing knowledge and reasoning about agent behaviour in intelligent systems.

Key takeaways from the seminar:

- **Introduction to FOL:** Dr. Stelios explained that First Order Logic, also known as **predicate logic**, is a formal system used to express statements, relationships, and rules in a structured way. It forms the basis for logical reasoning in intelligent agents.
- **Relevance in AI:** FOL is essential in enabling agents to understand and interpret facts about their environment. The use of variables, predicates, quantifiers, and logical connectives helps agents draw conclusions and make decisions.
- **Practical Applications:** Students were encouraged to think about how logic is applied in real-world scenarios, including automated planning, inference systems, and AI-based decision-making.
- **Team Formation and Project Planning:** The seminar also emphasized the importance of beginning team collaboration. Students should now be aware of their assigned groups and begin planning for the first group project.
- **Assignment Brief Overview:** A short introduction to the first assignment was given, along with advice on preparing early and using this unit's concepts to support project work.

Dr. Stelios encouraged students to engage with the **Lecturecast**, complete the unit readings, and start interacting with their teams. The seminar emphasized that strong foundations in logical reasoning will be crucial for developing effective agent-based systems in future units.