



American University of Beirut

*Final<sub>Math</sub> 287- Fall 01-02*

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It is an Open notes Open books exam as you know. It is an open-ended final. Use your own judgement (a good one) on how detailed your answer should be.

Your intelligent agents- the ones you developed for your projects- played games, organised/controlled 'appliances' in our homes, reasoned with set theory, recognised language, processed English, or sniffed the "smell" of intruders, etc ..Your research papers may have covered even more intelligence!

You all claimed that you have used techniques present in Norvig and Russell ... that you've used some AI technique or another ...

You all have reasoned under certain or Aristotelean environment in the sense that your knowledge representation was not probability theory!

I want you, in this final, to investigate into changing your intelligent agent into one that is capable of reasoning under uncertainty.

1. Define your rules and knowledge base in English
2. Transform them into a suitable representation (probability theory language!)
3. Use Belief networks (or maybe some other proof theory) to reason
4. etc

I leave it to you to explore into the capabilities and limitations of your own "baby" i.e. your project-designed agent.

Note that people who submitted the same project should work on different domains or work on different angles of the reasoning process(in any case I have expected double work for your project and research paper).

**Bonus:** You can investigate into making it a learning agent (if you haven't done so in your project).

Best of luck

