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Analysis, Design and
Implementation

Topic 6:
Case Study

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Case Study Topic 6 - 6.2

Introduction

- The examples we have been seeing in the lectures are very simple. They have to be, because they are designed to show specific features of UML.

- Today's lecture isn't really a lecture. It's a prompted examination of a more complex case study.

- We do not fully explore the case study in the lecture. You'll have to do some of it in your own time.

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The Scenario

- Look at the scenario in your Student Guide.

- It's your job during this lecture to spend some time thinking about how you would approach the analysis and design of this system.

- For the purposes of this case study, you are required to do the following:
  - Generate use case diagrams
  - Generate class diagrams
  - Generate activity diagrams

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Step One

- Your first step should be to understand the scenario.
  - Read it through
  - Ask for clarification if you need it
  - Resolve ambiguities
- Once you have done that, a good starting point is either NLA or identifying use cases
  - You should do both of these before you progress to the next part of the analysis and design.

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Step Two

- Having identified some use cases and candidate classes, you should assess each for inclusion in your class diagram.
  - Get rid of redundancies
  - Get rid of synonyms
  - Get rid of those things you cannot eventually develop.
- Make a case for inclusion or exclusion for each of the candidates you have.
- Then, construct your class diagram.

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Step Three

- Next, you need to consider how the current system works.
- Design high level activity diagrams for the following processes:
  - Making a reservation
  - Viewing a reservation
  - Cancelling a reservation
- These should be diagrams of how the system currently works.

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Step Four

- Having developed diagrams of the existing processes, you should then design the low-level activity diagrams that will handle the process when it is implemented.

  - Work out how you will handle what was once done by humans.
  - Work out how to improve the flow of logic through each of the processes.
  - Draw the diagrams.

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The Seminar

- During the tutorial, you will be given a worked solution to this exercise.
  - It will very likely deviate from your solutions, but that's okay. It's the process that matters – there are many right answers.

- During your private study time, you should attempt those parts of the system that have not been addressed in the laboratory session.
  - Your solutions to these will be discussed in the tutorial.

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Topic 6 – Case Study

Any Questions?

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