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Computing Project

Topic 2:

Analysis Specifications

V1.0

Scope and Coverage

This topic will cover:

- Structure of an Analysis Specification
- Content of an Analysis Specification

Learning Outcomes

By the end of this topic, students will be able to:

- Carry out the analysis for a computing artefact.

Key Points - 1

- The content of this lecture is not meant to replicate or replace concepts and techniques introduced in other modules associated with this programme.
- It is meant to compliment concepts and techniques introduced in other modules associated with this programme.
- This lecture should help YOU decide how YOU will document the analysis for YOUR project.

Key Points - 2

- Every text book, academic paper or Web site that you look at will put forward a different structure for an analysis specification.
- The structures are not right or wrong – they are different.
- They are different because of the context within which they are to be used.
- The structure presented here is the structure YOU are required to use for YOUR project.
- This argument also applies to the contents of an analysis specification.

Structure of an Analysis Specification

Structure

- Requirements
- Use Cases
- Architecture

Requirements

- This section presents the functional and non-functional requirements of YOUR system

Use Cases

- This section presents the use cases that support the requirements of YOUR system

Architecture

- This section presents a high level overview of the system architecture and an initial class diagram

Content of an Analysis Specification

Important

- The contents presented here are the contents YOU are required to produce for YOUR project.

Requirements

- This section presents the functional and non-functional requirements of YOUR system and should contain:
  - A list of functional requirements with supporting non-functional requirements where appropriate
  - A list of system-wide non-functional requirements
- The functional requirements should be prioritised using the MoSCoW prioritisation technique.
- A requirements catalogue should be included in an appendix.

Use Cases

- This section presents the use cases that support the requirements of YOUR system and should contain:
  - One use case diagram that models YOUR system
- Use case descriptions should be included in an appendix

Architecture

- This section presents a high level overview of the system architecture and an initial class diagram
  - System Architecture
  - Initial Class Diagram

System Architecture

- This section contains:
  - Interfaces with other systems (human or automated)
  - An overview of the technical architectures to be used for development and implementation
- The above can be modelled by using either appropriate UML notation or appropriate diagrams
- The models should be supported by appropriate narrative that relates to YOUR project

Initial Class Diagram - 1

- This section contains:
  - The initial class diagram derived from the use case diagram for YOUR system
- The above must be modelled using UML notation
- The class diagram should be supported by appropriate narrative that relates to YOUR project

Initial Class Diagram - 2

- At this stage in the project the class diagram will not be complete:
  - It will only show classes and the relationships between them
  - It will not show methods and attributes
  - Some classes may be missing
  - Some relationships may be unclear
- The above should be discussed in the narrative associated with the class diagram and should relate to YOUR project

Important Points

- This lecture provides an overview of the structure and content of the Analysis Specification for the Computing Project.

- Failure to adhere to this structure and content will result in lost marks.

- This Chapter of your report is not just a collection of lists and diagrams – it is a collection of lists and diagrams supported by appropriate narrative.

Topic 2 – Analysis Specifications

Any Questions?