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Software Engineering and Design
Case Study 1 – Task 4

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CS1 Task 4: User and System Requirements

Based on the previous Task (CS1 Task3) of the MHC-PMS, elicit

1. User Requirements
   - Functional user requirements
     - Based on your story boards, define all use cases (at least 4) and depict them in a use case diagram.
     - Select two uses cases and detail them in the provided use case form (Moodle).
   - *Note:* Non-functional requirements related to the use cases at hand are documented in the overall NFR section of the requirements document
2. System Requirements
   - Functional system requirements
     - Use your use case forms from step 1 of this task to add more technical details.
   - Non-functional system requirements
     - including external, organizational and product requirements
     - if possible, formulated as requirement goals and testable requirements

CS1 Task 4: User and System Requirements

3. Create a summarizing requirements document as outlined on script 03.06, slides 5 and 6.

Submission of Results: 23.10.2013 (no presentation required)

- 15 points

Hints

- keep your project diary up to date
- place all work results in your repository under path `...\doc\task04\`

The Structure of a Requirements Document (1)

Chapter	Description
Preface	This should define the expected readership of the document and describe its version history, including a rationale for the creation of a new version and a summary of the changes made in each version.
Introduction	This should describe the need for the system. It should briefly describe the system's functions and explain how it will work with other systems. It should also describe how the system fits into the overall business or strategic objectives of the organization commissioning the software.
Glossary	This should define the technical terms used in the document. You should not make assumptions about the experience or expertise of the reader.
User requirements definition	Here, you describe the services provided for the user. The nonfunctional system requirements should also be described in this section. This description may use natural language, diagrams, or other notations that are understandable to customers. Product and process standards that must be followed should be specified.
System architecture	This chapter should present a high-level overview of the anticipated system architecture, showing the distribution of functions across system modules. Architectural components that are reused should be highlighted.

The Structure of a Requirements Document (2)

Chapter	Description
System requirements specification	This should describe the functional and nonfunctional requirements in more detail. If necessary, further detail may also be added to the nonfunctional requirements. Interfaces to other systems may be defined.
System models	This might include graphical system models showing the relationships between the system components and the system and its environment. Examples of possible models are object models, data-flow models, or semantic data models.
System evolution	This should describe the fundamental assumptions on which the system is based, and any anticipated changes due to hardware evolution, changing user needs, and so on. This section is useful for system designers as it may help them avoid design decisions that would constrain likely future changes to the system.
Testing	This chapter should contain an overview description of what and how you want to test your system.
Appendices	These should provide detailed, specific information that is related to the application being developed; for example, hardware and database descriptions. Hardware requirements define the minimal and optimal configurations for the system. Database requirements define the logical organization of the data used by the system and the relationships between data.
Index	Several indexes to the document may be included. As well as a normal alphabetic index, there may be an index of diagrams, an index of functions, and so on.