Aufgabe 4

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Contents

Chapter 1

Task 1

a) Are identified the aspects: real-world goals, functions of constraints, software behaviour and to their evolution over time and across software families.
(Second chapter from line 5 to 11)

b) The authors particularly mention the discipline of:

- Cognitive psychology
- Anthropology
- Sociology
- Linguistics

Also, mentioning an important philosophical element inside RE, the Authors identify also: epistemology, phenomenology and ontology as key aspects of the Requirement Engineer work.
(Second page right side of the page)

c) Theoretical computer science provides the framework to assess the feasibility of requirements, while practical computer science provides the tools by which software solutions are developed.
(Second page third paragraph)

d) The authors identify:

- Eliciting requirements: The act of requirement elicitation is directly correlated to the choice of modelling scheme, thus imprinting on the RE the correct elicitation technique to use. This would also mean choosing for the appropriate job the appropriate requirements to elicit, how and when implement these elicitation techniques and the formulation of elicitation process itself.
- Modelling and analysing requirements: Is the process of constructing abstract depiction that are susceptible to understanding.

- Communicating requirements: It's the process in which the RE has to formulate an effective way of communicating the requirements identified; most of the time documenting said requirement in order to express to other stakeholders, either in formal or not formal language, all the important part identified by the RE.
- Agreeing requirements: It's the uninterrupted process in which requirements passed through different stakeholders, often with different and/or divergent goals, should be agreed upon everybody. Often a very complicated process.
- Evolving requirements: The variations of the requirements must be recorded and managed in this key aspect of Requirement Engineering, mainly providing tools of version control and configuration management. Requirements are added in response to changing stakeholder needs, or because they were missed in the initial analysis.

(First page, first lines of the second column)

e) The advantage would be that the RE doesn't need to focus more broadly on what possible solution of a problem would be, rather upper level of business requirements are refine into lower level technical requirement and so helping the RE to only focus on the domani of the problem and thus on the real need of the stakeholders.
(Chapter 4.1, third paragraph)

f) The contextual elicitation technique start on the premise on which local context are vital to fully understand social and organisational behaviour, and the observer must be inserted into this local context in order to gasp the way in which participants organise or create their social structures.
(Chapter 4.2 latter part of the left part of the page)

g) The authors mention:

- Enterprise Modelling: It's the modelling of organizations' structure.
- Data Modelling: It's type of modelling done around large computer-based systems that often generate large amounts of data.
- Behavioural Modelling: Modelling done about the interaction between stakeholders, either future ones or present ones, regarding its dynamic form.
- Domain Modelling: The crucial act of constructing the abstract model in which the system will operate.
- Modelling (NFRs): The modelling of requirement that often cannot be validated.

(All the 5th chapter)

h) The authors mark the similarities between the processes of requirement validation and proofing of scientific theories. Mainly that the act of requirement validation like scientific proof should apply the same principle of refuting: it should devise experiments to attempt to refute the current statement of requirements.
(Chapter 7, beginning of the right part of the page).

Chapter 2

Task 2

10 requirements of the c database:

- It should be possible to store data
- The stored data should only be able to be accessed by authorized people
- It should be possible to retrieve stored data
- It should be able to give information on the stored data
- It should be able to be adapted to varying needs
- It should allow multiple queries at once
- It should be able to be used at different locations
- It should be able to be used easily
- The data should only be stored if it meets requirements given for that type data
- It should be able to store different types of data

a) requirements Companies may have:

- It should be possible to store data
- The stored data should only be able to be accessed by authorized people
- It should be possible to retrieve stored data
- It should be able to give information on the stored data
- It should be able to be adapted to varying needs
- It should allow multiple queries at once
- It should be able to be used at different locations

- It should be able to be used easily
- The data should only be stored if it meets requirements given for that type data
- It should be able to store different types of data

requirements Developers may have:

- It should be possible to store data
- The stored data should only be able to be accessed by authorized people
- It should be possible to retrieve stored data
- It should be able to give information on the stored data
- It should allow multiple queries at once
- It should be able to be used at different locations
- It should be able to be used easily
- The data should only be stored if it meets requirements given for that type data
- It should be able to store different types of data

requirements Students may have:

- It should be possible to store data
- The stored data should only be able to be accessed by authorized people
- It should be possible to retrieve stored data
- It should be able to give information on the stored data
- It should be able to be used easily
- The data should only be stored if it meets requirements given for that type data
- It should be able to store different types of data

b) Functional requirements:

- It should be possible to store data
- It should be possible to retrieve stored data
- It should be able to give information on the stored data

Non-Functional requirements:

- It should be able to be adapted to varying needs
- It should allow multiple queries at once
- It should be able to be used at different locations

- It should be able to be used easily
- The data should only be stored if it meets requirements given for that type data
- It should be able to store different types of data

Security/Safety requirements:

- The stored data should only be able to be accessed by authorized people

Chapter 3

Task 3

a) These are the domain concepts identified:

- There are a number of people to assign to different floors.
- There is a counter per each floor
- Each counter is assigned to one person
- There are lunch breaks that imply break substitutions
- There is a time in which new trainees must be assigned to supervisors, after they have completed their training they can sit alone everywhere except the ground floor.
- The main entrance which is on the ground floor provides WIFI tickets or new IDs.
- Employees can take sick days and communicate it to the person that is in charge of the roaster.
- Employees can express preference for turns either working during the morning shift or the afternoon shift.
- The plan has to be shown to employees, preferably before the week starts.
- There is a new plan every week
- Employess can only work for a given amount of time.

b) These are the questions identified:

- How trainees can see to which supervisor they are assigned?
- How can you see who's assigned to which break turn?
- How can turn preferences be registered by the person that does the turns?
- How can employees submit errors for the roaster?
- Do trainees have different working hours than employees?

- How do you determine whos turn it is to do x?
- How do you keep track of reoccuring events like holidays etc.
- Do sick days need to be counted?

c) There are mainly three groups of people: The management, the employees and the trainees. The management needs to be notified promptly about the employees sick days, and if any error occurs into the roaster, must be able to amend these errors without doing all the work altogether. The employees must be notified before Monday morning about their work turns, and be able to send feedback about their preferences of work turns(morning or afternoon) and about any errors inside the roster itself and. The trainees must be able to identify from the roaster the floor to which they've been assigned and their shift, consequently their supervisor.

- Employees should be able to access the plan.
- Employess should be able to give feedback to the system.
- Trainees should also be able to access plans and info regarding their supervision.
- the Plan needs to be able to be updated

d) These two questions have been formulated:

- Do you have any way to identify employees?
- Who determines who gets vacation?

e) The survey technique mainly implemented the question and answer method. The main problem with this would be that each actor of the library (management/employee/trainee) has their own problems and requirements and often the contrasts between these parties can effect the effectiveness of the questionnaire. Also not gathering enough information from other stakeholders like the trainees could be a problem since the system wouldn't include their requirements into consideration. Maybe a contextual elicitation would be better in order to fully grasp the problems of all the parties, and take every problem into consideration, for example a period of time of a week in which the RE assist the management in doing the roaster and at the same time cover employees and trainees feedback to full formulate a satisfying system for every stakeholder.