

Software Engineering Workshop 1 – Exercise 1

PART 1

Skills

- 1) Communications Skills: The ability to communicate information effectively and in appropriate forms to customers, marketing, managers, and technical staff. Effective communication from the analyst will ensure that customer needs are being met and that any identified concerns are being heard. This skill also is a foundation for many of the other skill required by business analyst, such as interpersonal skills, listening skills, and interviewing and questioning skills
- 2) Learning Skill: The ability to pick up new information quickly is a vital skill for working as business analysis. Due to the large quantity of roles undertaken by the analyst, such as conducting interviews, writing reports, running workshops, etc., they need be able to quickly and efficiently adopt the required knowledge and skills to complete new task. Without effective learning skills the analyst may not be able to complete all set task, or their work may not be of quality.
- 3) Leadership skills: the analyst's ability "to create a collaborative environment and influence people to move toward a common goal" is important in ensuring that team members are actively collaborating to complete the project. This will not only reduce time but will also increase the quality of the product, as problems are detected and solved quicker.

Knowledge Areas

- 1) The analyst must have "knowledge of existing tools for requirements development and requirements management to be able to choose appropriate tools for a given project and environment" as it guarantees that the analyst is comparing different tool and choosing one that will be the most effective and efficient in achieving the desired outcome.
- 2) The analyst must have "an understanding of contemporary requirements elicitation, analysis, specification, validation, and management practices and the ability to apply them in practice" because they need to be able to effectively elicit the needs for the product from the customer. Additionally, the analysis must be able to validate the requirements by clarifying any unachievable or ambiguous requirements with the customer.
- 3) The analyst must have "an understanding of how to practice requirements engineering according to several software development life cycles in a team environment" as the analyst must be able to identify what aspects of their job they need to perform, focus on and emphasize depending on the current stage and environment the project is in.

Responsibilities

- 1) The analyst needs to be able to "decompose high-level business and user requirements into functional requirements, specified in an appropriate level of detail and in appropriate forms suitable for use by those must base their work on the requirements". This is important as it breaks down large concepts into more achievable and workable requirements, whilst, also making it easier to understand and track requirements.
- 2) The analyst needs to be able to "lead requirements analysis and verification, ensuring that requirement statements are complete, consistent, concise, comprehensible, traceable, feasible, unambiguous, and verifiable, and that they conform to standards". This responsibility ensures that the customers' needs effectively translated into workable requirements that the developers can use when creating the software.
- 3) The ability to "track requirements status throughout the project" is vital in ensuring that all requirements are being met to a standard or exceeding level. Without this the

developers may create a software that does not meet these requirements and restart with the project, thus decreasing customer satisfaction and increasing the cost.

PART 2

Skills

- 1) Communication skill: We believe this is an important skill for business analyst because they need to be able to effectively gather and portray information to the team, customers and stakeholders in order to limit failures and misunderstandings.
- 2) Learning skills: This skill will help individuals to quickly adapt to changes that may be made during the project as well as helping them when making appropriate on the spot decisions regarding the project.
- 3) Organizational skills: Organisational skills will help with cohesiveness of the team as well as helping to ensure that everyone remains on task. Furthermore, organisation helps to reduce the cost of projects because comprehensive plans leads to less mistakes and misunderstanding being made.

Knowledge

- 1) An understanding of contemporary requirements elicitation, analysis, specification, validation, and management practices and the ability to apply them in practice ensures that the team is provided with achievable requirements that accurately describe the project.
- 2) An understanding of how to practice requirements engineering according to several software development life cycles in a team environment. This is important as the individual must know how to perform their role regardless of the environment and situation
- 3) Knowledge of existing tools for requirements development and requirements management to be able to choose appropriate tools for a given project and environment. This is important the analysis must decide what tools will be most applicable and effective for the project.

Responsibility

- 1) Elicit requirements using interviews, document analysis, requirements workshops, storyboards, surveys, site visits, business process analysis, use cases or user stories, scenarios, event lists, competitive product analysis, task and workflow analysis. The analyst must be able to elicit requirements from a range of different sources, allowing the requirements to be compared and analysed in order to find the best suited requirements for satisfying the customers needs
- 2) Write requirements specifications according to standard templates, using natural language simply, clearly, unambiguously, and concisely. This responsibility is vital in ensuring that the requirements set by the customer are clearly understood and met by the team.
- 3) Decompose high-level business and user requirements into functional requirements, specified in an appropriate level of detail and in appropriate forms suitable for use by those must base their work on the requirements. This responsibility ensures that large concepts are broken down into small, easily understood requirements.

Group members

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PART 3

Job: IT Business Analyst - Target

The description provided by the company describes looking for an individual who has:

- Knowledge of best practice software development principles and practices, with emphasis on requirements management and stakeholder management.
 - o The following skills, understandings and responsibilities are expected:
 - An understanding of contemporary requirements elicitation, analysis, specification, validation, and management practices and the ability to apply them in practice.
 - Familiarity with contemporary requirements engineering books and resources.
 - An understanding of how to practice requirements engineering according to several software development life cycles in a team environment.
 - Knowledge of product management concepts and how enterprise software products are positioned and developed.
 - Knowledge of existing tools for requirements development and requirements management to be able to choose appropriate tools for a given project and environment.
 - Application domain knowledge is a plus, to have credibility with user representatives and be able to work effectively with them.
- Strong analysis and problem-solving skills with high attention to detail
 - o The following skills, understandings and responsibilities are expected:
 - Analytical skills: to critically evaluate the information gathered from multiple sources, reconcile conflicts, decompose high-level information into details, abstract up from low-level information to a more general understanding, distinguish presented user requests from the underlying true needs, and distinguish solution ideas from requirements.
 - Systems thinking skills: to be able to see the interactions and relationships between the people, processes, and technology involved in an environment.
- The ability to develop strong working relationships with key stakeholders at all levels with excellent verbal and written communication skills.
 - o The following skills, understandings and responsibilities are expected:
 - Communication skills: to communicate information effectively and in appropriate forms to customers, marketing, managers, and technical staff.
 - Identify project stakeholders and user classes. Document user class characteristics. Identify appropriate representatives for each user class and negotiate their responsibilities.

And can:

- Conduct research and analysis, engaging the relevant stakeholders
 - o The following skills, understandings and responsibilities are expected:
 - Analytical skills: to critically evaluate the information gathered from multiple sources, reconcile conflicts, decompose high-level information into details, abstract up from low-level information to a more general understanding, distinguish presented user requests from the underlying true needs, and distinguish solution ideas from requirements.

- Elicit requirements using interviews, document analysis, requirements workshops, storyboards, surveys, site visits, business process analysis, use cases or user stories, scenarios, event lists, competitive product analysis, task and workflow analysis.
- Facilitate workshops with the delivery team and relevant stakeholders
 - The following skills, understandings and responsibilities are expected:
 - Facilitation skills, to lead requirements elicitation workshops.
 - Leadership skills, to create a collaborative environment and influence people to move toward a common goal.
 - Communication skills: to communicate information effectively and in appropriate forms to customers, marketing, managers, and technical staff.
- Create and manage business analysis artefacts, including but not limited to storyboards, user stories, process flows and acceptance criteria
 - The following skills, understandings and responsibilities are expected:
 - Modelling skills: to represent requirements information in graphical forms that augment textual representations in natural language, including using modelling languages already established in the development organization.
- Actively participate in agile ceremonies - daily stand up, planning, showcases, retrospectives
 - The following skills, understandings and responsibilities are expected:
 - Communication skills: to communicate information effectively and in appropriate forms to customers, marketing, managers, and technical staff.
- Work in a highly collaborative environment
 - The following skills, understandings and responsibilities are expected:
 - Participate in peer reviews and inspections of requirements documents
 - Participate in peer reviews of work products derived from requirements specifications to ensure that the requirements were interpreted correctly.

[Target, 2020]

According to Seek Business Analysts “are responsible for reviewing and analysing business processes, creating efficiencies, leading project teams and communicating technical information back to the business” [Seek, 2020]. My own understanding of the role is that a business analyst leads the elicitation, analysis, development, management, standards, and completion of a project’s requirements. They are the key pathways of communication between stakeholders and are responsible for conveying information between parties in an appropriate manner.

In order to successfully secure a position as a business analyst, I will need to develop a range of knowledge, skills, and experience. I believe that the most important skill that I will need is high levels of communication. A high level of communication is the foundation to a range of other vital business analyst skills, understandings and experiences. Firstly, communication is important in gaining listening skills because an analyst needs to clearly comprehend what the customer is requesting and question any detected hesitations or concerns.

Communications are also essential in the formation of effective interviewing and questioning skills. I will need to be able to confidently converse with individuals and groups about their product needs as well as ask appropriate questions to ensure that crucial requirements are identified. Furthermore, communication is key in establishing effective leadership skills, as a leader you need to be able to communicate with your team in a constructive and collaborative manner. Effective leadership will create a positive work environment, in turn, the team will be more effective and overall will produce better software. Finally, communication skills are the foundation to developing interpersonal skills. These skills are vital in helping the analyst to negotiate priorities with the stakeholders and project team, as well as, helping them to resolve conflicts amongst stakeholders. Communication is also the foundation to many of the responsibilities of a business analyst, such as, working with the product manager or project sponsor to document the project's business requirements, participating in peer reviews of work products derived from requirements specifications and inspections of requirements, eliciting requirements through interviews and workshops, and writing requirements specifications using clear, unambiguous, and concise natural language.

I will need to undertake a range of experiences in order to gain the required knowledge for this role. Most importantly, I need to learn, practice and familiarize myself with contemporary requirements elicitation, analysis, specification, validation, and management practices, as well as, requirements engineering books and resources. This practice and familiarization will ensure that I have the knowledge and experience to identify and apply the appropriate requirements engineering tools to the project. Furthermore, I need to gain experience in writing requirements specifications to the standards, to guarantee that requirements are written in an unambiguously and concise manner that clearly portrays them to the stakeholders.

Overall, I need to develop all these skills, understandings, and experiences before undertaking the responsibilities of a business analyst. This course will help me to achieve this through a range of avenues. Firstly, this course encourages collaboration and communication in order to achieve a goal. This is achieved by setting the course around group task and class discussions, which encourage individuals to speak freely and openly about their thought and opinions. Furthermore, the paper moderation task helps to develop leadership and listening skills. The moderator is in charge of leading the discussion whilst everyone else listens and forms questions and opinions about the papers, which are later discussed after the presentation. The group project, that will be undertaken later in the semester, will help me to gain understanding of contemporary requirements elicitation, analysis, specification, validation, and management practices, as well as, experience with writing requirements specifications to the standards. This is because as a group we will have to talk with the stakeholder to elicit appropriate requirements for their project and properly present these requirements in a standard report.

References

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<<https://www.seek.com.au/job/41195607?type=standout#searchRequestToken=2819a0d1-a3aa-4abe-87a7-9210bef01716>>.