Submission of Lab 01 | BITP 2223 Requirement and Design

Semester 2 2023/2023

Project Group Structure

Group No: #23

Team Member

Matric No	Name
B032220041	Muhammad Ikhwan Bin Che Ross
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Project Group Structure

Describe the group structure. The description should include the group structure chart and the role carried out by each team member in the analysis and design phase. Provide the references for the role description.

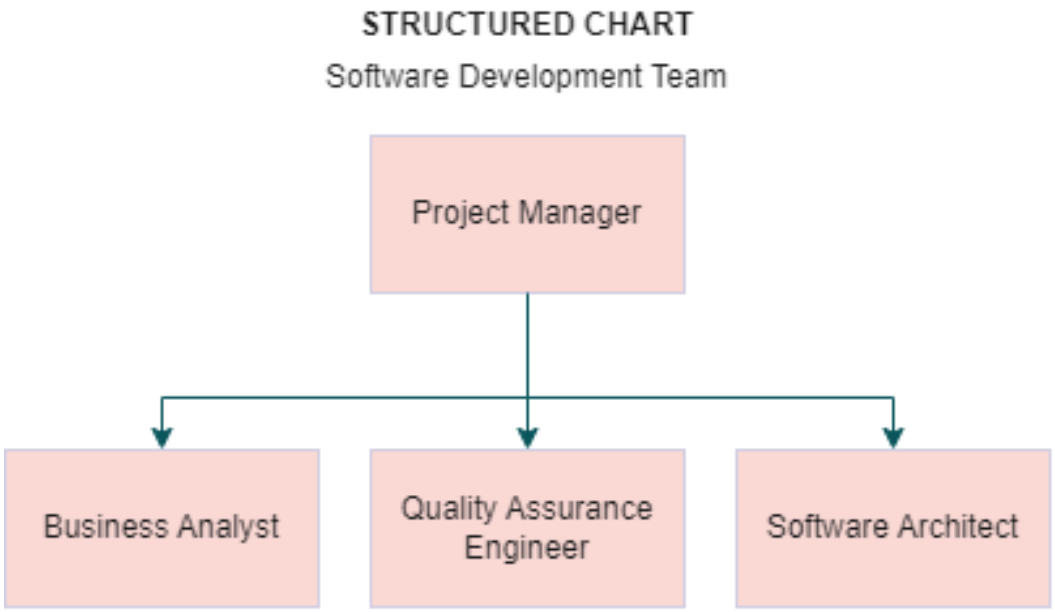

Figure 1: Software Development Team Structured Chart

PROJECT MANAGER

The Project manager is the main crucial role that takes part in the project. The project manager keeps everyone informed consistently and effectively as leading the team to deliver a successful project.

Here are the roles and responsibilities of project manager in the analysis and design phases in Software Development Life Cycle (SDLC).

Analysis Phase:

- **Checks Requirements Thoroughly:** Ensures the project can be built based on what's requested by asking clarifying questions and conducting feasibility studies.
- **Identifies Potential Problems Early:** Holds brainstorming sessions to find things that could be potential as a risk and figures out how to address them before they happen.
- **Makes Requirements Clear:** Works to define clear, what needs to be built and documents them in a project charter for everyone to reference.
- **Sets Up Testing Environment:** Prepares a place to test the software once it's built depend on the project.

Design Phase:

- **Reviews Design for Testing Ease:** Makes sure the software design allows for efficient and effective testing.
- **Ensures Design Meets Needs:** Checks that the design fulfil all the requirements gathered in the analysis phase.
- **Reviews Design Details:** Makes sure everything in the design makes sense, works together logically, and avoids potential issues.

BUSINESS ANALYST

The business analyst is a critical factor in identifying business requirements and converting them into solutions. Business analysts transform customer requested solution features into software requirements that the development team can understand. The business analyst teams take the lead throughout requirements collecting, analysis, and design.

Here are the roles and responsibilities of business analysts in the analysis and design phases in Software Development Life Cycle (SDLC).

Analysis Phase:

- Leads requirements gathering efforts, including stakeholder interviews, workshops, and surveys.
- Records business requirements, user requirements, and functional specifications.
- Examines gathered requirements to find gaps, conflicts, and areas for improvement.
- Generates requirement traceability matrices to guarantee that business requirements and project deliverables are in synchronization.

Design Phase:

- During the design phase, work with user interface and user experience designers and developers to translate needs into comprehensive specifications.
- Creates user stories, use cases, and wireframes to show how the proposed solution works.
- Facilitates design review meetings with stakeholders to validate design choices and collect input.
- Assists in assessing technology solutions and offering suggestions based on company requirements.

SOFTWARE ARCHITECTURE

A software architect is responsible for planning and organizing a software system. In terms of SDLC, they work closely with other project team members to develop a successful product.

Analysis Phase:

- The information gathered during requirements gathering will be analyzed to be transformed into clear, concise and measurable specifications for the software
- In the analysis phase, we will understand What functionality is required by the software and understand how these functions will be implemented considering technical challenges and external factors.

Design Phase:

- Design specific patterns to solve specific software development problems. The process helps ensure that the software system is well, maintainable, and scalable.
- Create the blueprint of software system, ensuring they meet both technical and business requirements.

QUALITY ASSURANCE ENGINEER

Quality Assurance (QA) engineer plays a role for the system development life cycle (SDLC) in ensuring the quality and success of the project as part for the analysis and the designing stages in **SDLC**.

Based on the roles and the responsibilities for the **QA** Engineer, here as for the analysis and the design stages:

Analysis Stage:

- **Catch potential problems early:** Before development even starts, the QA engineer identifies areas in the requirements that could be difficult to build or test.
- **Make sure everything makes sense:** The QA engineer reviews the requirements and asks questions to ensure everyone agrees on what needs to be built.
- **Plan for testing success:** The QA engineer starts thinking about how they'll test the software based on the requirements.

Design Stage:

- **Review more effectively:** The QA engineer reviews the design to see if the software can be effectively tested later.
- **Ensure all meet requirements:** The QA engineer makes sure the design fulfills all the requirements gathered earlier.
- **Think like a user:** The QA engineer puts themselves in the user's shoes and reviews the design for usability.

As summary, during the analysis and design phase of the Software Development Life Cycle (SDLC), key team members such as Project Managers, Business Analysts, Software Architects and Quality Assurance Engineers work together to ensure a thorough understanding of requirements, good design, and technical challenges. A good analysis and design phase management will succeed in the development of a software system that meets all requirements.

References

Kishor Sharma. 2015. Roles of QA in SDLC. https://kishorsharma69.wordpress.com/2015/09/15/roles-of-qa-in-sdlc/

Cprime, 2024. Business Analysts Effect Software Development Life cycle (SDLC).

https://www.cprime.com/resources/blog/how-does-adding-business-analysts-affect-the-software-development-lifecycle/#:~:text=Business%20and%20system%20analysts%20translate,as%20in%20the%20design%20stage.

Nicole Abramowski, 2023, What is a Software Architect?

https://careerfoundry.com/en/blog/web-development/software-architect-guide/#what-does-a-software-architect-do

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