

Robert A. Conchada

DICT 3 – Software Engineering

Lesson 7

Activities/Assessment

1. Discuss the steps in requirements engineering process.

Requirement engineering is a crucial process in software development that involves identifying, analyzing, documenting, and validating the software requirements. The process involves the following steps:

Feasibility Study:

The feasibility study is the initial step in the requirement engineering process. It involves evaluating the technical and economic feasibility of the software system. The feasibility study aims to determine whether the proposed system is worth developing, whether it can be developed within the available resources, and whether it aligns with the business objectives.

Requirement Gathering:

The next step is to gather the requirements for the software system. This step involves identifying the needs and expectations of the stakeholders, including users, customers, and developers. Requirements can be gathered through various techniques such as interviews, surveys, questionnaires, focus groups, and observation.

Software Requirement Specification:

The third step is to document the gathered requirements in a clear, concise, and unambiguous manner. The software requirement specification (SRS) document serves as a contract between the development team and the stakeholders. The SRS document includes functional and non-functional requirements, use cases, data models, system architecture, and other relevant information.

Software Requirement Validation:

The final step is to validate the software requirements to ensure they are complete, accurate, and consistent. The validation process involves reviewing the SRS document with the stakeholders to ensure that all the requirements are understood and approved. The validation process helps to identify

any gaps or inconsistencies in the requirements and allows for any necessary changes to be made before development begins.

Overall, the requirement engineering process is iterative, with each step building on the previous one. By following a systematic approach to requirements engineering, software development teams can develop high-quality software that meets the needs of the stakeholders.

2. What requirement elicitation technique did you use in order to gather information from your prospective client. Explain why you used it. Provide proof.

One popular requirement elicitation technique is conducting interviews with the stakeholders or potential users. This technique involves asking open-ended questions to gather information about the stakeholders' needs, expectations, and preferences. The benefit of using this technique is that it allows for direct interaction with the stakeholders, which can help to uncover their underlying concerns and requirements. It also provides an opportunity to clarify any ambiguities in the requirements.

Another technique is to use observation to gather information. This involves watching the stakeholders in their natural environment, either through direct observation or by using video or audio recording devices. The benefit of this technique is that it allows for a more accurate understanding of the stakeholders' behavior, which can provide valuable insights into their needs and preferences.

In addition, focus groups, surveys, and document analysis are other commonly used requirement elicitation techniques that can provide valuable insights into the stakeholders' needs and expectations.

In conclusion, the choice of requirement elicitation technique may depend on the specific context and the stakeholders involved. By selecting the appropriate elicitation technique, it is possible to gain a better understanding of the requirements and develop software that meets the needs of the stakeholders.

To implement this technique we follow these steps.

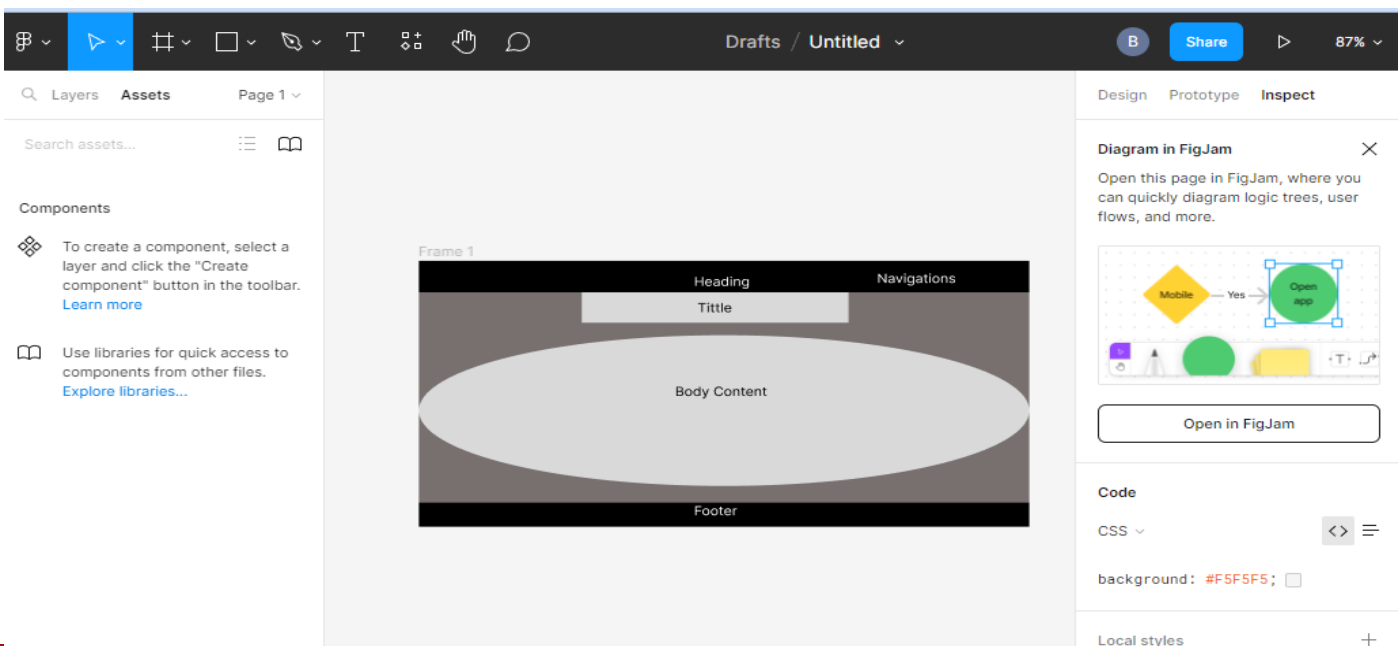
- Prepare a list of open-ended questions that are relevant to the software system you will be developing. These questions should be designed to elicit information about the client's goals, requirements, and constraints.
- Schedule a meeting with the client and explain the purpose of the session. Encourage the client to share as much information as possible, and assure them that their input is valuable and will be used to create a software system that meets their needs.
- Begin the interview by asking open-ended questions and encouraging the client to expand on their answers. Listen carefully and take notes to ensure that you capture all the relevant information.
- Ask follow-up questions to clarify any ambiguities or to gather more detailed information about specific requirements.

- After the interview, summarize the information you gathered and review it with the client to ensure that you have captured all their requirements accurately.
- Use the information you gathered to create a software requirement specification document that captures all the requirements, goals, and constraints discussed in the interview.



Activities/Assessment

1. Based on the user interface requirements, create a mockup design for your system.



Mockup design is an essential step in the software development process that allows developers to visualize the system's user interface (UI) and get feedback from stakeholders before beginning actual development. Here are the general steps to create a mockup design for your system:

- Define the scope and purpose of the system: Before creating a mockup design, it is important to clearly define the purpose and scope of the system. This will help you create a design that is focused on achieving the system's goals.
- Gather requirements: Gather the system requirements that you have gathered from the stakeholders. This information will help you determine the key features and functionalities that the system should have.
- Sketch out the UI design: Sketch out the layout of the user interface (UI) on paper or using a wireframe tool. This will help you create a basic design layout that can be used as a starting point for the actual design.
- Add details and elements: Once you have a basic layout in place, start adding more details such as color schemes, typography, images, icons, and other visual elements. Use design principles such as consistency, balance, and contrast to ensure that the UI design is easy to use and visually appealing.
- Get feedback: Share the mockup design with stakeholders and gather their feedback. Use this feedback to improve the design and make necessary adjustments.
- Create high-fidelity mockups: Once you have incorporated feedback and refined the design, create high-fidelity mockups using a design tool such as Sketch, Figma, or Adobe XD. These tools allow you to create interactive designs that simulate the final product.
- Test and refine: Use the high-fidelity mockups to test the UI design with stakeholders and users. Gather feedback and refine the design until you have a final design that meets the system's requirements and user needs.

Overall, mockup design is an iterative process that involves collaboration with stakeholders and users to create a design that is easy to use and meets the system's goals.

