Requirements Elicitation

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Requirements elicitation is the process of gathering and identifying the features and needs for a software product directly from stakeholders. It is a key responsibility of business analysts, product owners, and scrum masters, and has evolved into a well-structured practice with numerous established techniques. This process is integral to the software development lifecycle (SDLC), fitting within the Analysis or Requirements Definition phase. As one of the first steps in defining project requirements, elicitation sets the foundation for the system's design and development.

When selecting a technique for requirements elicitation, it's crucial to consider the specific context of the project. For instance, if the project involves a large number of end users, surveys might be an effective method to gather new feature ideas and identify quality-of-life improvements. On the other hand, if you are in the early stages of development and just beginning to engage with stakeholders, techniques such as brainstorming sessions or prototyping could be more appropriate for exploring broad concepts and gathering initial feedback (Nicholas, 2024).

My project with Heartland Escapes, a bookstore in Lincoln, Nebraska, falls into the latter category. They aim to develop an e-commerce platform and currently have an inventory API and a corresponding inventory database, a point-of-sale system, and an accounting database. Their public website already allows users to search for products to check availability at store locations. After discussions during the planning phase, the decision was made to start small with a product cataloging system and iterate over the e-commerce system in phases to meet the business's evolving needs.

Since this is early in the development process, the first requirement elicitation method used will be facilitated brainstorming sessions with stakeholders. These brainstorming sessions will use liberating structures to ensure participation from all stakeholders. This can also gamify the process, potentially making it more enjoyable for everyone involved. The primary reason for this approach is to engage stakeholders directly and help prioritize their needs for the software product. It also enforces collaboration between stakeholders, reducing the risk of conflicting requirements. Facilitating these sessions with an agenda and a skilled facilitator, combined with the free-flowing nature of brainstorming, should help establish direction and uncover unknowns. This will be a good

way to extract functional requirements from different stakeholders, and possibly nonfunctional requirements as well (Sruthy, 2024).

One major disadvantage of brainstorming is groupthink, but this can be mitigated through the use of liberating structures like 1-2-4-All, Quarantine and Combine, and Conversation Café, which encourage individual input and ensure all stakeholders are engaged. Another disadvantage is that it requires a skilled facilitator to keep the conversation on track and avoid tangential discussions. It also depends on stakeholders being open to the idea of brainstorming in this manner (McCandless & Lipmanowicz, n.d.-a)(McCandless & Lipmanowicz, n.d.-b).

The second elicitation technique that will be used is prototyping, which fits well with the needs of Heartland Escapes because this project is highly user-experience oriented. Thankfully, there are tools available that can reduce the time and resources needed to produce quality prototypes, such as Figma. Figma is a user experience design tool that allows individuals to design user interfaces without the need for code. This makes it ideal for quickly creating interactive, high-fidelity (hifi) prototypes that stakeholders can interact with to provide immediate feedback on the look, feel, and functionality of the system. By using Figma, we can address both functional and non-functional requirements, ensuring that the interface is intuitive, responsive, and accessible, which are essential for a user-facing platform like the one Heartland Escapes is building.

However, there are some disadvantages to prototyping. It can be time and resource-intensive, even with a tool like Figma. Creating high-fidelity prototypes can take time, and stakeholders may misinterpret the polished prototype as being closer to completion than it actually is. This can lead to unreasonable expectations regarding development timelines and the readiness of features. Additionally, prototypes often lead to scope creep, as stakeholders may generate new ideas from seeing visual representations of the system, resulting in additional requirements. To mitigate these risks, it's important to communicate clearly with stakeholders and manage scope creep through a change request process (Sruthy, 2024).

For my engagement with Heartland Escapes, I believe that brainstorming sessions and prototyping will be the best requirements elicitation methods. Because we're early in the development process, face time with the stakeholders and prioritizing their input is crucial for building client trust. Additionally, prototyping will give stakeholders something tangible to interact with in this user-experience-heavy project. Although both techniques have their disadvantages, I am confident that the strategies discussed will effectively mitigate those challenges and facilitate a successful elicitation process.

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