

Describe the process of requirements analysis for a software project in general.

The purpose of requirement analysis is to detect and resolve conflicts between requirements and discover the limits to the software and how to implement it within the organization. Requirement analysis is the process that helps define the expectations of the users for an application that is built or modified. It also helps Software Engineers focus on identifying the needs and conflicting requirements of various stakeholders. Requirement analysis includes the following steps the initial being to list the requirements given in an interview or gain by observing, the process of gathering information to develop requirements by communicating with stakeholders is elicitation requirements. Then there is analyzing the requirements which is the step that helps determine the quality of the requirement and identified whether the requirement is unclear, incomplete, ambiguous and contradictory. The following step is known as requirement modeling, that can be documented in many different forms such as use cases, user stories , natural language documentation and many more. The final step would be to review the requirements in order to make improvements to the process going forward.

Address why requirements need to be analyzed after being elicited.

Analyzing requirements after they are elicited is very important as it helps Software Engineers to assess the quality of the requirements. It ensures that no requirements conflict with one another as well as give us the necessary information we need in order to develop a successful product. Analyzing the requirements also helps software engineers to determine which requirements require further improvement. It also helps software engineers determine the requirements importance whether it's a high priority or of low priority. This is a key step in order to start the development of a software engineering the project.

Include information about requirements classification and conceptual modeling.

Requirement classification involves a number of different categories, with requirement classifications we can determine if the requirement is functional or non-functional, whether the requirement is derived from other requirements, whether the requirements are classified as more essential or less. A requirement to be categorized as a higher priority should be one that meet the overall goals of a software being developed. Whereas, the least important requirements are classified as low priority and are not essential to the function of the software early on in the development process. Other classifications include mandatory, highly desirable, desirable or optional requirements. The priorities of the requirements are mainly determined by the requirements cost of the development, implementation and other. With classification we are also able to look at the scope of the requirement which means we look to what extent the specific requirement affects the software. During the software development process, it's important to note that some requirements are bound to change. Therefore, we look at the validity of the requirement as it is useful to estimate the likelihood that a requirement will change. This helps software engineers prepare for changing requirements throughout the development phase. Another key step to requirement analysis is the development of a conceptual model. The purpose of the model is to help us understand the points in which problems or issues arise in a software. Conceptual models also help software engineers and stakeholder to visualize possible solutions for specific issues in the project. There are several models to choose from that include use cases, diagram data flow model, goal base model user interface and many more.

Describe the process you took in analyzing requirements for your project including classification and modeling.

In order to analyze the requirements that we were able to develop, the business and I created, I first had to gather all the information from the various stakeholders and put the information into one document. From this one document I was able to read all the information and separate the given information into categories depending on what the information was in reference to the different aspect of the software. With the information separated accordingly it was easier for me to evaluate the information and develop clear, verifiable, and consistence requirements. Then the requirements were able to be classified as non-functional and functional requirements as well as requirements that are of high priority or low priority depending on the level of need and cost. The next step was to develop a model such as a use case model that would help determine how the requirements are to interact for the user benefit and be implemented into the organization to help reach its goals. Developing a data flow model also help determine which requirements were truly necessary and fit into the system and which requirements weren't of any use at the moment.

Provide evidence of critical thinking related to the requirements, such as using the Elder Paul Critical Thinking Model.

Point of View

When starting this project, I wanted to help resident assistants improve the way they have to do their jobs. As I myself although not a resident assistant, I am a desk assistant and have been one for almost two years. Therefore, I've seen the many tasks and roles RAs are responsible for during the semester. During some time, I was able to observe the RA in their roles as RA, what stood out to me was the difficulty the RA had while attempting to interact with their residents. As most residents refuse to interact with their RAs and this was base on the low number of attendee of residents at the programs RAs would host.

Purpose

The goal of the software project is to help the Office of Housing and Residence Life staff specifically, resident assistant accomplished there task of creating a more social and interactive environment in the resident hall. In order to do this, we believe that it will help if we focus on increasing residents' attendance to programs hosted by the RAs. As the more involve residents are the more active the community becomes overall.

Question at issue

The questions I have include:

Why are residents not attending these programs?

Do residents not know that these programs are in place for them to interact and meet new people?

What would encourage residents to attend programs?

How are our RA developing the programs they host throughout the semester?

What are the various methods that our eyes have been using to communicate with the residents?

What are successful past programs that have been done?

How are these programs advertised to residence?

Information

The information I know is that Resident assistant are student staff that live in the residence halls and are responsible in assisting residents whether it be helping them seek academic or social resources.

South Village specifically is design for first year in college students as well as transfer students who have never attended FGCU.

Students choose to live in residential housing because it allows them to gain that college experience. As well as freedom from their parents and it give them a chance to build a life away from home. They essentially want to meet new people make new friends to gain fun experiences.

Other information I would need to obtain to move forward would be information based on why a majority of residents choose not to attend socially events or communicate with their resident assistants.

Assumptions

In living in South Village for the past three school years I am able to assume that residents view resident assistant as strong authority figures. A majority of college students do not appreciate having an authority figure especially when in college. As usually finally feel free from the people who once had authority (parents/guardian) over them . Other times it is simply that there are many college students who have social anxiety or are very introverted that they have a difficult time adjusting to the college environment. Making it difficult to interact with others and therefore leads to a refusal to attend event and programs provided by housing. I am able to

assume that since this is a college setting and the RA are undergraduate students that it may help if residents were to see their RA simply college students. Also, it would be important to implement or create programs that pique the interest of not only some group of people but all groups of people. Whether it be creating an art and crafts program or hosting a sporting competition.

Describe how you recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

Given any professional career whether it be in education, health and even engineering every individual must recognize ethical and professional responsibilities within their field. I believe the ability to recognize ethical and professional responsibilities as well as making informed judgment stems from the home one grows up in. At home parents are the ones to instill core values on their children. Core values are the fundamental belief of a person or organization which guides the principle of behavior and can help people understand the difference between what is right and what is wrong. Core values may include but are not limited to equality, diversity, respect, honesty and kindness. These core values may have started at home, but they are able to be transferred to different phases of a person's life which could cause them to be altered or expanded. In school we learn about academic honesty the meaning of teamwork, the value of friendship and other connections made along the way. With experience comes knowledge, knowledge about how to handle certain situations and how to let go of others.

It's important to know that engineering solutions have always had a major impact in society. As every engineering solution is creative but not all of them are helpful, some can lead to fatal injuries such as the case with the collapse bridge near FIU, or the software malfunction related to the control of airplanes which have cost businesses greatly. Other times engineering solutions can be great and can truly help improve societies living condition for instance the creation of mobile devices help improve communications not only within a small community but worldwide as well. The with big solutions that may extend globally may come to a huge cost in order to develop these engineering solutions. These funds cover the cost of material, labor and other

needs. In a social context not, everyone is going to agree on a certain solution because no solution is perfect and often comes with dilemmas. For instance, the creation of mobile devices is seen as having cause an environment in which people are having less physical interaction leading to people underdeveloped social skills.

Therefore, to recognize ethical and professional responsibilities as well as making informed judgment I will use my personal, educational and life experiences to help guide me through my professional career. When developing engineering solutions and making decisions I understand the importance of taking into consideration many different aspects that would be affect by the development and implementation of an engineering solution. These aspects include the effect that would occur globally, socially, economically and environmentally. Standing by the core values, the idea of being ethically correct and continue with have a professional behavior when making an informed judgement.

