The University of Puerto Rico at Mayagüez

Department of Engineering

Software Requirements-INSO 4115

Project Proposal: Supply Organization Software

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1. **Domain Description:**

   Domain: Aid Distribution - A system that will ensure better aid distribution to people in need.

   Domain entities:
   1) Donor: This is the person that is looking to make donations. They would browse the Software to look where they can give their donations.
   2) Victims: These are the people largely affected by the natural disasters that are in current need of donations.
   3) Donations: The necessities that people are currently seeking. These would be displayed on the Software so the Donor knows which supplies they can help with.
   4) Locations: The places on the Island where Victims are located and where Donations are being sought.

   Domain Functions:
   1) Look at the locations to see where help is needed
   2) Choose a Victim to donate to
   3) Victims input which donations they are actively seeking

   Domain Events:
   1) Donate: the event that describes the donation being made by the Donor to the Victim
   2) Locate Help: the event that describes when the Donor looks into the Locations to find where necessities are needed.
   3) Seek Donations: the event that describes when the Victim asks for necessities.
2. **Current Situation:** Due to the high demand and traffic of donations, many of these articles are getting misplaced or are not distributed properly to the places where they are needed. A high volume of articles is arriving at places where they are not needed and vice versa, some supplies are not arriving at the places where they are needed.
3. **Needs:**

   Need for improvement in communication between parties: As mentioned before, there is a need to significantly improve the communication between victims and donors, such as to provide accuracy, speed, and overall effectiveness in aid distribution.
4. **Ideas:**

   Need for improvement in communication between parties: The idea is to provide simple user-friendly communication between those affected and those who wish to provide aid. To do so means developing an app that provides transparency between these two parties, including location and inventory of what is needed. The system

should be able to store, display, and update itself in order to provide real-time data. It also should provide easy navigation in order to search for specific locations or articles of basic necessities.

5. **Scope:**

   The issue is to understand the affected people such as health, food and other necessities they might encounter. Moreover, receive and update all the data that a donor can give along with the necessities that affected people are facing.

6. **Span:**

   To build a plan of emergency breaking down the category of the needs, to provide efficient inventory management and tracking (location) for the affected people along with the donors to secure the transaction of these exchanges successfully.

7. **Concepts and Facilities:**

   - Providing efficient relief supplies to locations in need
   - The product will serve as a supply optimization system
   - The use of this product will fulfill the need for undersupplied areas to receive supplies from over-supplied areas
   - This product will provide general knowledge of areas with the need for emergency supplies

8. **Stakeholders:**

   a. Affected people: The Puerto Ricans that are being or have been affected by these constant earthquakes are going to be one of the main stakeholders for this project. Since the Software is aiming for a better organization of supplies that are being donated for these people it will improve a lot their current situation. The Software is going to be able to let donors know which things are necessary and where, therefore the people will receive exactly what they are lacking. Also, it will organize the supplies well and make sure everything is efficiently delivered.

   b. Donors: The Donors are going to have a great interest in a software like this one too, in the past years there has been an excessive number of incidents in which the donations are not delivered at all. Donors will want to have a Software like this one, many of them will think it is actually necessary. These

recent incidents have left the donors to take the matter on their own hands and deliver the supplies directly to the people affected; they don't trust the government anymore. The Software will tell what the necessary supplies in each location are and will have contact information for a person who the community trust; this will solve many problems and help save lives.

c. Government: This one is a bit tricky, they are supposed to have a great interest in a Software like this one. It will help save lives and it will reduce the level of responsibilities the government has in situations like this one. Nevertheless with the recent situations of people discovering warehouses full of supplies that the government has kept and not delivered, makes you think that maybe this software is of no interest for them because they can no longer control the majority of these supplies.

9. **Assumptions and Dependencies**

   a. **Assumptions:** For the development of the app the following assumptions are expected to be fulfilled: that there is a mutually accepted domain description between the stakeholders, that the developers have access to professionals possessing the necessary knowledge about the requirements

   b. **Dependencies:** Some dependencies include that the users (affected people and donors) of the developed app adopt the idea of using the app during the supply distribution process and the fulfillment of the assumptions.

10. **Goals**

At the end of development, it is expected that the project helps facilitate the distribution of aid, not just help in reaching the people who need them but also to get them what they need. This should greatly reduce the waste of supplies in terms of storage and errors that can be eliminated by clear communication.