12th PSITS XII regional competition
Problem Analysis and Solution Making Competition

Note: Do not put your name(s) or your school's name on anything that you turn in! This will result in disqualification of your team. Only use your school **assigned color** .

Help Pinoy: Resource Management System for Support Services to Displaced Communities in the Philippines

The Philippines faces various challenges such as natural disasters, armed conflicts, and economic displacements, leading to numerous individuals and families being displaced from their homes. Access to essential resources like food, shelter, and healthcare becomes critical for these communities. Without timely support, displaced individuals may find it difficult to return to normalcy, resulting in prolonged vulnerability. While many organizations across the Philippines are dedicated to providing aid, the distribution of resources can be uneven due to constraints in space, volunteers, and overall resource availability. Sometimes, certain services are overprovided, while others experience shortages. A centralized system to manage and disseminate information about available services would significantly improve resource distribution and accessibility.

Your team is tasked with creating a system that not only facilitates information sharing among aid providers but also makes it easier for displaced individuals to find the support they need. The system will cater to three primary user groups: providers, users, and administrators, each with specific functionalities.

System Functionalities:

1. Providers:

Providers are NGOs, local government units, community centers, and other organizations offering support services.

Validation Required: Providers must provide organization details such as a description, contact information, operating hours, and types of services offered for validation before they can post on the system.

Optional Information: Additional details like websites, photos, directions, and reservation requirements can also be added.

System Access: Once validated, providers receive credentials to log in, update their profiles, post details about their services under categories like Healthcare, Shelter, and Food, and manage availability.

Reservation Capabilities: For services requiring prior booking, such as temporary housing or medical appointments, providers can manage reservations, including posting requirements, accepting bookings, updating or cancelling reservations, and sending out confirmation and reminder messages.

2. Users:

Users are the displaced individuals and families in need of services.

No Login Required for Browsing: Users can freely access the system to view available services, and search using keywords or filter by categories, distance, and availability.

Optional Account Creation: Users can opt to create accounts to book services, receive confirmation emails or texts, and get push notifications for updates from their preferred providers or on specific types of resources.

3. Administrators:

Administrators are responsible for maintaining the system's integrity and functionality.

Duties: They validate new providers, manage user and provider accounts, and ensure that listings are accurate and up-to-date.

Technical Specifications:

The platform will be available both as a web-based portal and mobile app to ensure accessibility for all users, accommodating the varying levels of technology access across different regions.

Security Measures: Robust security protocols will be implemented to protect personal data and ensure the system's reliability, especially important as multiple users will access the platform simultaneously.

This initiative aims to streamline the coordination and delivery of essential services to displaced communities across the Philippines, making resource access more equitable and effective in times of need.

YOUR ASIGNMENT IS to use only **one** technique (either Object Oriented OR Structured/Traditional Technique) to specify how the system should operate. If you use a structured technique you must specify the flow of data inside the system. If you use an OO technique then you must specify the classes inside the system and how they are used in order to achieve the system's objectives.

WHAT TO TURN IN:

If you are using the structured/traditional approach, then you are expected to turn in the following:

1. A Context Diagram.
2. A level 0 (zero) Dataflow Diagram.
3. A Level 1 DFD for each one of the processes that you identified in your Level 0 System DFD.
4. Process descriptions for the processes contained in your DFD's.
5. An Entity Relationship Diagram (ERD) showing the 3rd Normal Form Database that will support the
system you designed.
6. Prototype with Windows Forms and/or Web Pages.

If you are using an Object-Oriented approach, then you are expected to turn-in the following:

1. Use-case Diagrams.
2. Use-case Descriptions.
3. Sequence and/or Activity Diagrams.
4. A Class Diagram (for objects in persistence storage).
5. State machine diagrams.
6. Prototype with Windows Forms and/or Web Pages.

For creating models, use your own business modeling software. This could include any CASE, I-CASE or other model-based development product.

The prototype must be developed based on your models. It does not have to be fully implemented; however, a system design that provide mocked up screens with window form/web page interaction will be considered in the over-all grading.
The screens can be created using any graphical drawing software (such as Microsoft Paint or Photoshop) or you can take screen shots from development tools (such as Microsoft Visual Studio, Access or Eclipse).

When submitting your work, make sure to submit one PDF file named with your school color as the filename. Do not include any information about yourself or your college. Write only your team number on your submission.