

PROJECT PART 1.1: IS DESIGN

Large-scale disasters are typically accompanied by the need to effectively manage massive amounts of data. This includes data about victims and about relief personnel; data about damages to buildings, infrastructure, and belongings; weather data; geographical data about roads and other landmarks; logistics data; communication and message data; financial data needed to manage the collection and distribution of donations; data in blogs; etc. Major disasters also involve multiple autonomous organizations (governmental, NGOs, individuals, communities, and industry). This leads to a diversity of client needs that must be coordinated. The rise of information technologies has made it easy. In disaster response, this trend has opened up new possibilities to self-organize, coordinate and adapt.

S.O.S., a voluntary disaster relief supply initiative, has noticed such a deficiency recently. Therefore, they are planning to construct an information system. The main objective is to meet disaster victims' needs either by purchasing items from their budget or through donations. The information system should provide the following services:

- collect victims' requests to determine relief supplies categories and quantities;
- collect donations and categorize them;
- keep track of available relief supplies quantities;
- coordinate logistics operations and manage relief supplies distributions;
- collect relief supplies feedback and run victims' satisfaction analysis;
- manage and monitor relief purchases.

Thus, it can be considered like an online trading system. In order for this system to function, different types of interdependent operations need to be managed. You are expected to determine the necessary modules, i.e., functional areas, and business processes to coordinate these operations.

S.O.S. requires a two-sided platform that enables both the donators and disaster victims to join. Donators can provide different types of items, including cash. Cash donations are kept in S.O.S.' bank account to be used in case of supplies shortage. On the other hand, disaster victims can request their needs. Requests can be classified into five categories: (i) shelter, (ii) hygiene, (iii) food, (iv) clothing, and (v) medical supplies. In some cases, the donator may directly fulfill an exact request, so such donations are automatically matched with those specific requests. Remaining donations are kept in inventory to cover unmatched requests. S.O.S. can cover those requests either directly from inventory or by purchasing.

S.O.S. operates in a wide geographic region and is responsible for distributing the items requested over this region. Therefore, S.O.S. can deliver with its sources, e.g., small trucks, and lorries, or they can outsource this service.

S.O.S. wants to monitor their operations. Therefore, they need to keep track of different performance measures, such as the number of requests met within 1 day. Note that, data for the performance measures can come from different modules.

1. PROJECT PART 1.1

You are required to create a framework for S.O.S.' information system. Specifically, you need to determine the necessary modules, i.e., functional areas, and business processes. For each business process, inputs, resources, and outputs. Note that outputs can also be in the form of performance reports. Business process flowcharts are expected for each business process, and an information flowchart is required to visualize information flow between interdependent processes.

2. SUBMISSION

This is a **group** project of **six**. Deadline is Friday, **13-04-2023, 23:59**.

Upload **an explanatory document** in a pdf file named as "**GroupLetter.pdf**" on ODTÜClass.

* (e.g., GroupA.pdf)

Hint: You can use the following links to draw the required charts easily.

- <https://cloud.smartdraw.com/?nsu=1>
- <https://app.diagrams.net/>
- <https://www.lucidchart.com/pages/>