

# Requirements Projects

## Goal

Develop and assess your ability to follow a requirements engineering process and use appropriate techniques and tools to specify the requirements for complex software systems.

## Due Dates

1. April 4 at 4:00pm (AEST): User Stories
2. May 30 at 4:00pm (AEST): Use Case Modelling

## Projects

**Disaster Response System** – You are to develop a set of user stories that capture the user requirements for a Disaster Response System (DRS). Disaster response consists of warning/evacuation, search and rescue, providing immediate assistance, assessing damage, continuing assistance and the immediate restoration or construction of infrastructure, etc.

Different activities may be involved for different disasters. For example, the activities for a typical hurricane response would include assessment, restoration, and demolition of buildings; removal of debris and waste; repairs to land-based and maritime infrastructure; and providing public health services.

This project is to develop a disaster response system that needs to:

- Allow users to report different kinds of disasters, which could be a hurricane, a fire, an earthquake, etc.
- Provide quick and accurate assessment of the reported disasters, and provide prioritized responses accordingly;
- Coordinate different departments and people for efficient & effective responses.

The system would need interfaces to other departments & organizations such as fire and emergency, hospital, electricity, transportation, waste management, water supply, schools, and law enforcement.

**Visa Processing System** – You are to develop a use case model that describes the user requirements for a Visa Processing System (VPS). A VPS would be used by the Department of Immigration to process visa applications. It handles all stages of processing, approval and review for all classes of visas.

A VPS should support both applications by mail and online applications. For online applications, certain documents, e.g., original passports, need to be verified in some way. When visas are issued, the electronic visas are associated with ePassports, while paper visas are stamped into ordinary passports. The system may need interfaces to other departments & authorities to process visa applications. The system should also provide interfaces for paying visa application fees, and scheduling and conducting interviews for certain types of visa applications, etc.

For inspiration you may wish to look at the existing visa processing website:

<https://immi.homeaffairs.gov.au/home>

<https://www.ustraveldocs.com/>

## **Perspective**

You are developing the requirements for these systems as members of a private company. The development of these requirements is part of the tendering process to win the contract to build these systems. This means that you need to deliver descriptions of a system that will impress the project sponsors. Keeping in mind that the development of these systems needs to be cost effective and able to be delivered in stages.

Like with a real tendering process, if you have ideas that go beyond what is described above, you should clarify with your client (your tutor) before spending time to describe those requirements.

The descriptions above are purposely vague. They are meant to provide you with a starting point to generate ideas for your system.