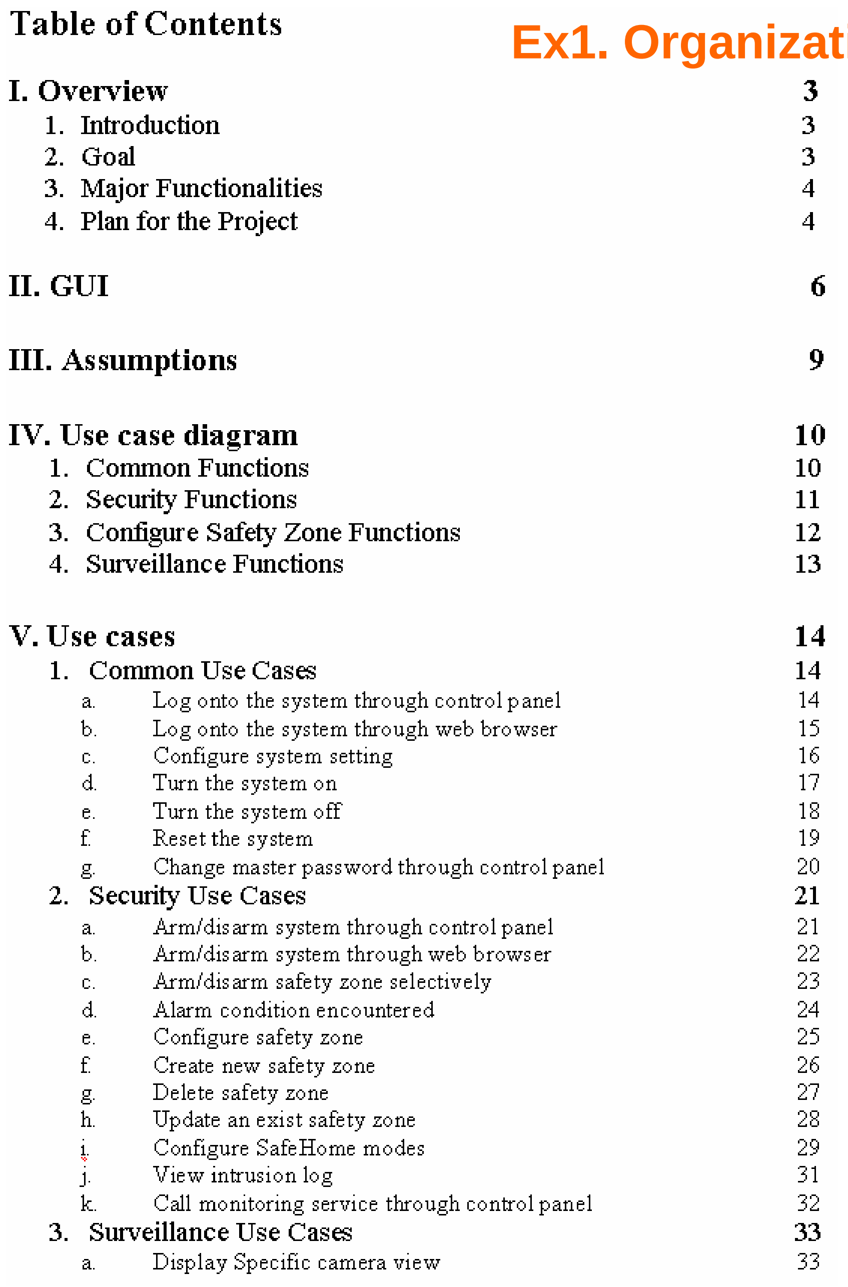
Comments on the SafeHome Project

- All teams did good job in general.
  - So you do not need to have a team interview with me
  - However, you could improve your requirement specification document in detail
- You should present your design on the class of May 17, which is also the deadline of the 2nd part of the SafeHome project
  - Demonstrate how good your design is based on the design principles
  - Also, explicitly show that your design can be traced back to the requirement specification and the analysis model

Ex 0. Think Carefully

- You have to think carefully to define right requirements of the target system which may not explicit in the source document (in our case SEPA)
  - Ex. You have to allow 5 min delay for activating/arming the sensors. Otherwise, a homeowner cannot leave his/her house; if a homeowner opens the door to leave, the SafeHome will raise alarm.
  - Ex. The SafeHome should not require password to activate “panic” function because “panic” button will be pressed in an emergency

Ex1. Organization of the Document



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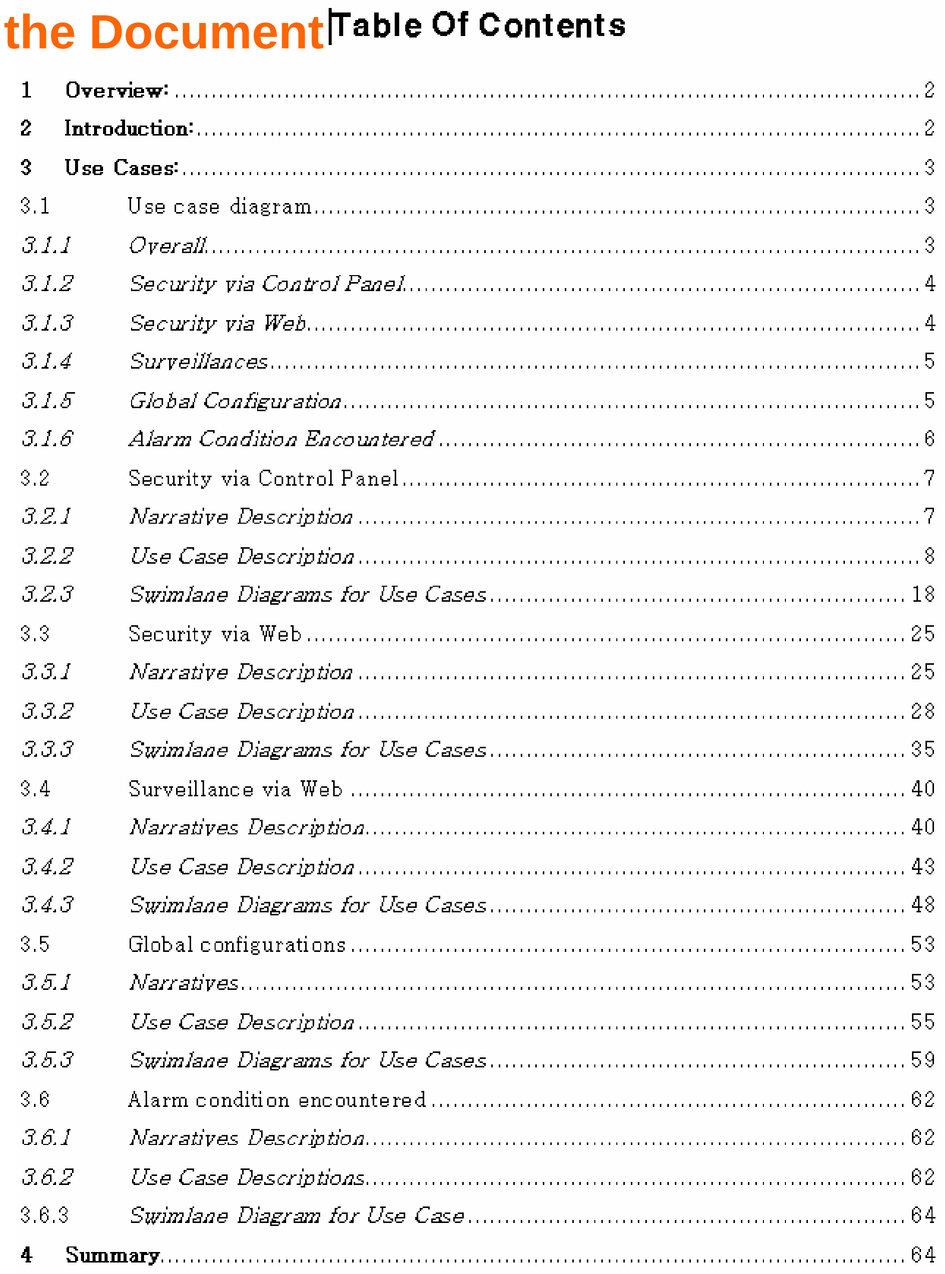

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Ex2. Use Cases

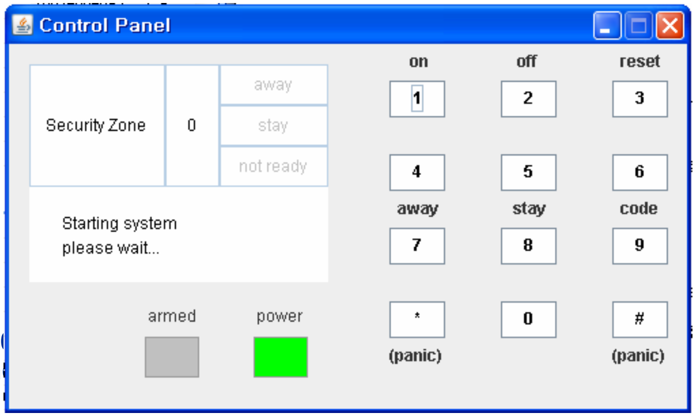
- Describe who wrote the use cases. Authorship is important
  - It helps you figure out whom you should talk to when you need to modify use cases
    - This rule applies for all types of document including code
- Exception # should be from success scenario
- Differentiate exceptions from different use-cases
- Open issues are important as well
  - Your requirement specification is always incomplete
  - Explicit description of what to be resolved in future helps detailed design

Ex 3. Cosmetics

- One of the most important goals for documents is to help reader to access necessary information easily. Cosmetics matters
  - Pay attention to English grammar!
    - Singular/plural
    - Articles
    - Pronoun
  - Right indentation
  - Be sure that texts in your diagram are large enough to be read
  - When you refer use-cases, add page #.
  - Hypertext link is recommended

Classes for HW Device Drivers

- A list of HW in the SafeHome system
  - Control panel
    - An abstract class **`SafeHomeControlPanel.class`**
    - You can extend it and fill out the callback methods for the buttons and use display APIs.



Starting system
please wait...

- Window/door sensors
  - **`WinDoorSensor.class`**
  - You can use it through the **`Sensor`** interface
    - See SEPA 331pg
- Motion sensors
  - **`MotionDetector.class`**
  - You can use it through the **`Sensor`** interface
- Cameras
  - **`Camera.class`**
  - You can instantiate the class and use it through **`InterfaceCamera`** interface

SafeHomeControlPanel.class

- Callback functions for the Control Panel's buttons
  - `abstract public void button1();`
  - `abstract public void button2();`
  - `abstract public void button3();`
  - `abstract public void button4();`
  - `abstract public void button5();`
  - `abstract public void button6();`
  - `abstract public void button7();`
  - `abstract public void button8();`
  - `abstract public void button9();`
  - `abstract public void buttonStar();`
  - `abstract public void button0();`
  - `abstract public void buttonSharp();`
- Control Panel's visual display
  - `public void setSecurityZoneNumber(int num)`
  - `public void setDisplayAway(boolean on)`
  - `public void setDisplayStay(boolean on)`
  - `public void setDisplayNotReady(boolean on)`
  - `public void setDisplayShortMessage1(String message)`
  - `Public void setDisplayShortMessage2(String message)`
  - `public void setArmedLED (boolean on)`
  - `public void setPoweredLED (boolean on)`

CameraInterface

```
public interface CameraInterface {
  // Note that recording/playback operations
  // are excluded for the sake of simplicity
public int getID();
   public void setID();
   public Object getView();
   public boolean panRight();
   public boolean panLeft();
   public boolean zoomIn();
   public boolean zoomOut();
}
```