

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

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Ex1. Organization of the Document

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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.



- 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();  
}
```