COSBAS Architectural Requirements Documentation

Git: `https://github.com/undecidables/Requirements-Documentation`

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1.1 Introduction

The software architecture requirements for the COSBAS system.

1.2 Architectural Scope

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1.4 Integration and Access Channel Requirements

1.4.1 Human access channels

This system will be accessible to humans in the followings ways:

- From a thin client(can be computer with the client program but in this case it will be a Raspberry Pi) which will be installed at each entrance/exit of the building through non-intrusive bio-metrics or keypad.

1.4.2 System access channels

The client(can be computer with the client program but in this case it will be a Raspberry Pi) should be able to access the services provided by the system to authenticate a user who would like to enter or exit the building. This will be done through SOAP based web services.

1.5 Architecture Constraints

2 Architectural Patterns or Styles

2.1 MVC Architectural Pattern

2.1.1 Description

MVC (Model-view-controller) is a software architectural pattern which devides the software application into three interconnected parts, so as to seperate the internal representation from the way the information is represented to the user.

2.1.2 Reason for use

- Client-Server communication
- Reduced code complexity
- Efficient code-reuse
- Decoupled code

2.2 Adapter Design Pattern

2.2.1 Description

The adapter design pattern changes or converts the interface of a class into another interface the client expects. The design pattern makes classes that would normally not be able to work together, interact seamlessly.

2.2.2 Reason for use

- Increased plugability of the system - Because many different biometric access points as well as non-biometric access points will have to interact with the system. This makes it easy for a new type of access point to be added to the system.

3 Architectural Tactics or Strategies

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