Department of Computer Science & Engineering
The University of Texas at Arlington

Architectural Design Specification
CSE 4316: Senior Design I
Fall 2015

Team Name
Product Name

Allison Johnsgard
Edward Fankhauser
Narayan Rimal
Victor Garcia
Neelim Haider

Revision History

Revision	Date	Author(s)	Description
0.1	10.01.2015	GH	document creation
0.2	10.05.2015	AT, GH	complete draft
0.3	10.12.2015	AT, GH	release candidate 1
1.0	10.20.2015	AT, GH, CB	official release
1.1	10.31.2015	AL	added design review requests

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1 INTRODUCTION

The Smart Hospital Management Tools website is meant to combine multiple pages in order to allow the Smart Hospital to manage their information in one place. The website is meant to fuflfill key requirements, such as allowing simulations to be scheduling, managing inventory logs, create events and displaoy them on a calendar, and allow the user to log in and log out.

2 System Overview

This section describes our system by presenting it in different layers, illustrating the layer that captures data on the top, and interacting with the lower-level layer on the bottom, the data processing layer. The Data Capture Layer components both obtain information from the Data Processing Layerr, such as current medication stored in the database, and information inputted by the user from the Data Capture Layer into the Data Processing Layer.

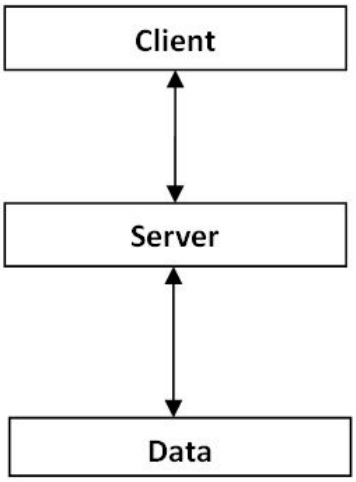

Figure 1: A simple architectural layer diagram

2.1 Client

This layer takes input from the user and stores it in the database. It also takes data from the database as well as static content for the webpages from the server in order to display the graphical user interface , along with their data, if they have any. Take the inventory page, for example. The client presses on the inventory tab. The server obtains data from the database, such as what the inventory items are, and the static content for the webpages from the server, and these are linked together to have data loaded on the actual graphical user interface to the client.

2.2 Server

This layer contains static information for the webpages, such as the CSS, Bootstrap, HTML, and php code needed to display the web page, and contains the interface that is needed to link the webpages with the data, if they needed any, as described in the client layer.

2.3 Data

This layer stores all the information that needs to be used by users of the website, such as the actual inventory items to be stored in the lab.

3 SUBSYSTEM DEFINITIONS & DATA FLOW

This section breaks down your layer abstraction to another level of detail. Here you grapically represent the logical subsytems that compose each layer and show the interactions/interfaces between those subsystems. A subsystem can be thought of as a programming unit that implements one of the major functions of the layer. It, therefore, has data elements that serve as source/sinks for other subsystems. The logical data elements that flow between subsystems need to be explicitly defined at this point, beginning with a data flow-like diagram based on the block diagram.

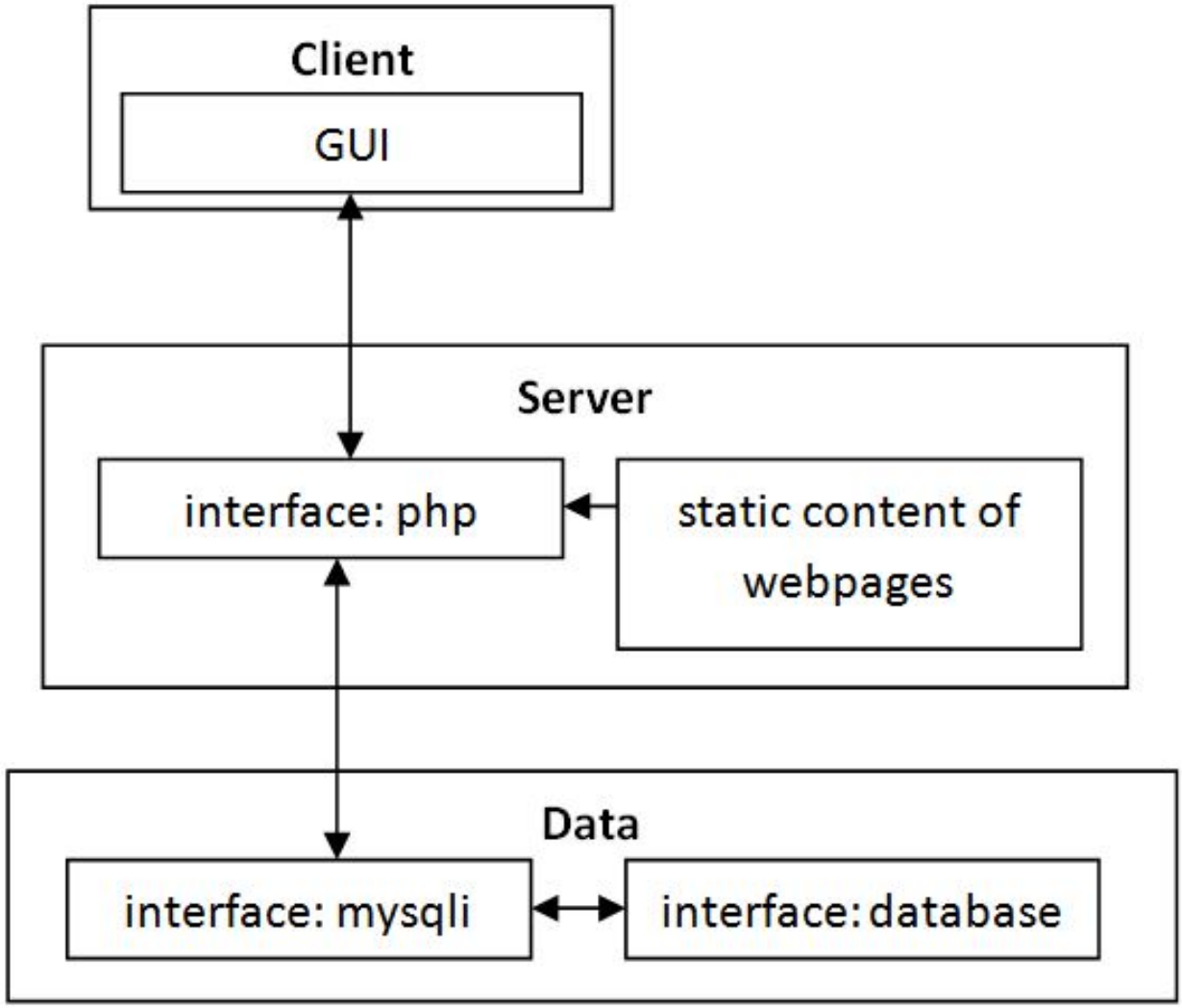

Figure 2: A simple data flow diagram

4 X Layer Subsystems

In this section, the layer is described in some detail in terms of its specific subsystems. Describe each of the layers and its subsystems in a separate chapter/major subsection of this document. The content of each subsystem description should be similar. Include in this section any special considerations and/or trade-offs considered for the approach you have chosen.

4.1 Subsystem 1

This section should be a general description of a particular subsystem for the given layer. For most subsystems, an extract of the architectural block diagram with data flows is useful. This should consist of the subsystem being described and those subsystems with which it communicates.

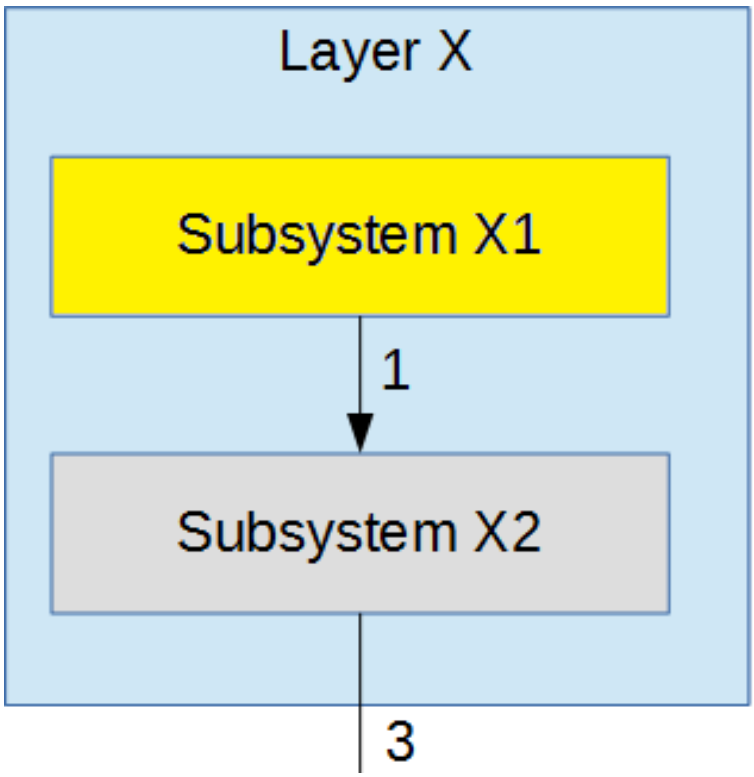

Figure 3: Example subsystem description diagram

4.1.1 Assumptions

Any assumptions made in the definition of the subsystem should be listed and described. Pay particular attention to assumptions concerning interfaces and interactions with other layers.

4.1.2 Responsibilities

Each of the responsibilities/features/functions/services of the subsystem as identified in the architectural summary must be expanded to more detailed responsibilities. These responsibilities form the basis for the identification of the finer-grained responsibilities of the layer's internal subsystems. Clearly describe what each subsystem does.

4.1.3 Subsystem Interfaces

Each of the inputs and outputs for the subsystem are defined here. Create a table with an entry for each labelled interface that connects to this subsystem. For each entry, describe any incoming and outgoing

data elements will pass through this interface.

Table 2: Subsystem interfaces

ID	Description	Inputs	Outputs
#xx	Description of the interface/bus	input 1 input 2	output 1
#xx	Description of the interface/bus	N/A	output 1

4.2 Subsystem 2

Repeat for each subsystem

4.3 Subsystem 3

Repeat for each subsystem

5 Y Layer Subsystems

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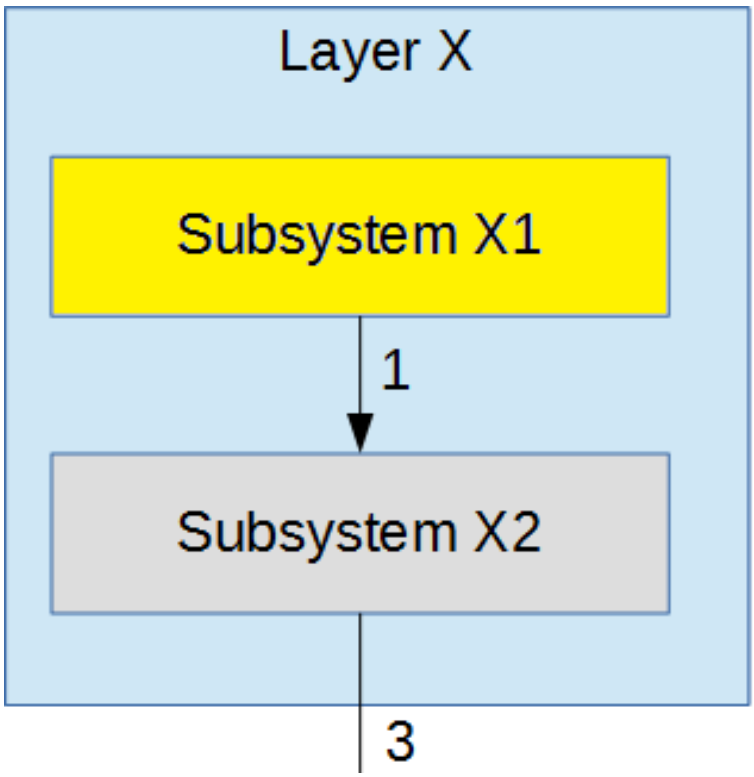

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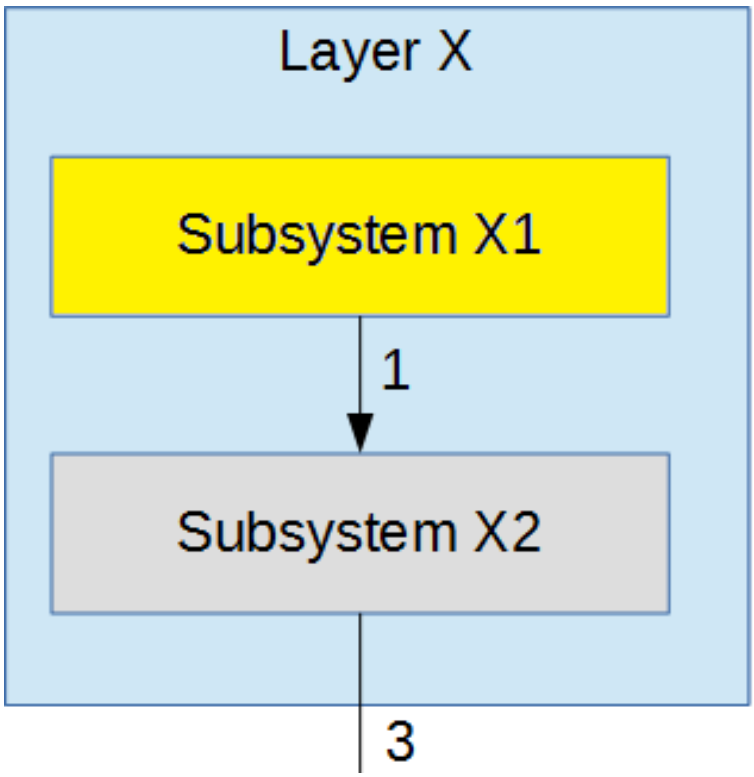

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Repeat for each subsystem

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Repeat for each subsystem