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| Designer drug database |
| Design Document |
| Senior Project, CIS 4911- U01 |
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| **2/2/2015** |

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Nothing yet

Abstract

One or two paragraph

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# Introduction

This document will introduce in detail the design of the system and how each part works.

## 1.1 Problem definition (very similar to RD).

A design needs to be created for a better implementation. I will describe in detail how the system is going to be design for future maintenance and better implementation of the system.

## 1.2 Design methodology used e.g., identify software process model, ease of creating a design from the systems requirements, types of models (UML models) used to represent the design.

The design will be represented mainly by a design diagram.

## 1.3 Definitions, acronyms, and abbreviations.

**HTML:** Hypertext Markup Language, a standardized system for tagging text files to achieve font, color, graphic, and hyperlink effects on World Wide Web pages.

**AJAX:** Ajax (also AJAX; /ˈeɪdʒæks/; short for asynchronous JavaScript and XML) is a group of interrelated Web development techniques used on the client-side to create asynchronous Web applications.

**Javascript:** an object-oriented computer programming language commonly used to create interactive effects within web browsers.

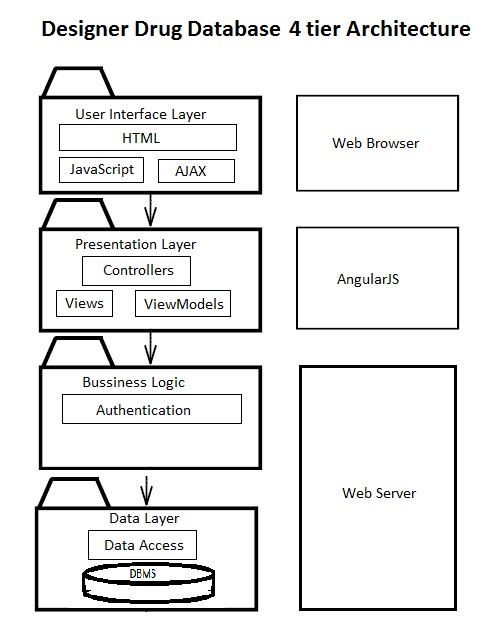
## 1.4 Overview of document

The following document is organized in system design and detail design. In system design, or section 2, we will talk about…., while in detail design we will talk about …

# System Design (i.e., overall system design)

The system decomposition decomposes into two subsystems, user components and compound components. Both of these two components will access a storage component that in term accesses the database.

## 2.1 Overview – high-level description of the system design (architecture) e.g., provides a package diagram showing the major subsystems and briefly describes each subsystem. Relate the system decomposition to the requirements of the system. Use at least two (2) architectural patterns.



The high level description of system design consists of 4 layers. The 4 layers are:

- User Interface Layer

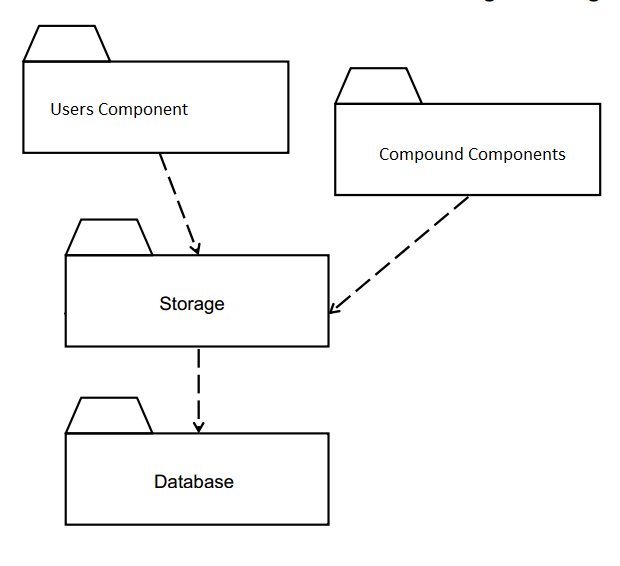
- Presentation Layer

- Business Logic

- Data Layer. On the

The user interface layer is basically the template, made with HTML. This template can be modified using JavaScript, css and other technologies. The Presentation layer consist of the controllers, view and view-models, which represents the business logic on the client. The business logic on the web server is in charge of the authentication and the data layer is in charge of the data.

## 2.2 Subsystem Decomposition – provide a detailed description for each of the major subsystems. Identify the requirements associated with each subsystem.

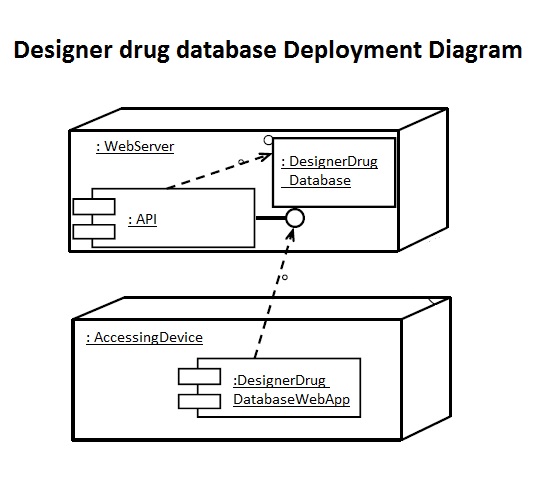


The user component will do all user operations. A user can be added, deleted, and modified. All this is possible given that the user has the appropriate permission. Moreover, the user component must handle request of name, email, and any other data storage in the user table and related tables.

The compound component is in charge of all compound information. It should be capable of adding a compound, modifying it and deleting. The compound component should also be capable of importing data and export data in different formats.

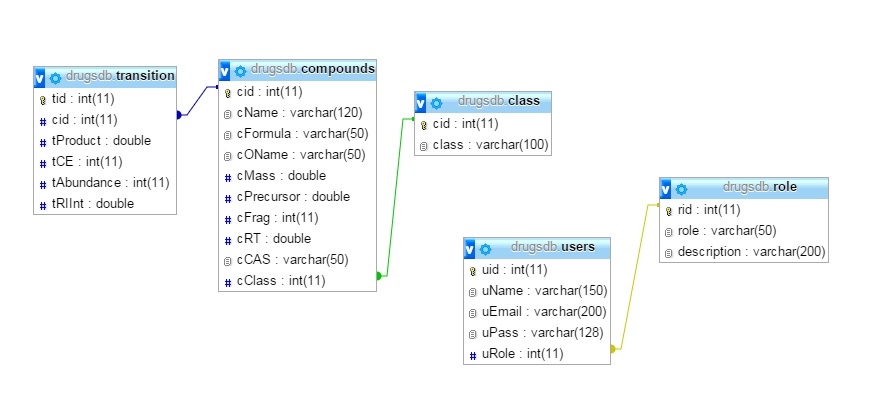
## 2.3 Hardware and Software Mapping – map subsystems to h/w and s/w. The h/w and s/w are for the systems to be implemented. May include a deployment diagram showing the associations between the subsystems and hardware.

The hardware and software mapping as the following figure shows, consist of two hardware devices and all the software running on them. On the device that is accessing the single page application the app is fun and any data request is sent to the webserver, who responds with data, then the requested device process the information and display it.



## 2.4 Persistent Data Management – identify data that needs to be stored and the structure of the data. Use a data dictionary to represent the initial data extracted from the use cases.

The persistent data to be stored will be stored in databases. The following relational tables is the way in which the data is to be stored.



## 2.5 Security/Privacy – describe user authentication processes, encryption of data, and use of firewalls or security servers.

User authentication will use the sessions as a way to maintain persistence between all the pages and as a way to authenticate that a user has the right to access to certain information.

Encryption of data is only used for password and the type of encryption in use will be MD5.

# Detailed Design

The detail design

## 3.1 Overview – briefly describe the behavior and structure of each subsystem.

The user component will do all user operations. A user can be added, deleted, and modified. All this is possible given that the user has the appropriate permission. Moreover, the user component must handle request of name, email, and any other data storage in the user table and related tables.

The compound component is in charge of all compound information. It should be capable of adding a compound, modifying it and deleting. The compound component should also be capable of importing data and export data in different formats.

## 3.2 Static model – detailed description of the structure for each subsystem. May include detailed class diagrams. Place diagrams (e.g., minimal class diagram, detailed class diagram per subsystem) inline. Use at least four (4) design patterns.

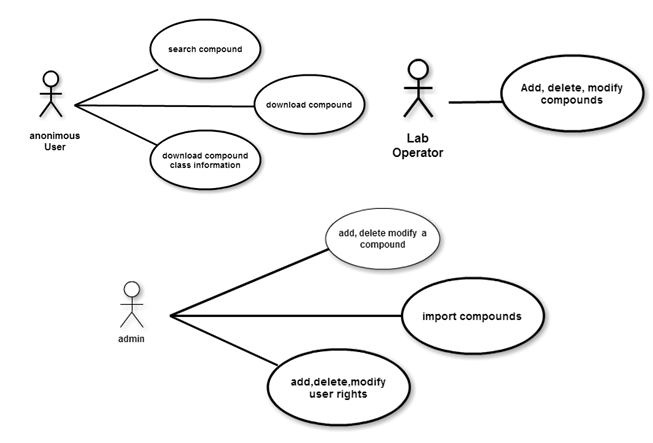
## 3.3 Dynamic model – state machine diagram for the main control object in each subsystem. Include the design of the *main algorithms* used in the problem solution. Refinement of the sequence diagram from the analysis model. Place diagrams inline.

## 3.4 Code Specification - describe the class interfaces (attributes and method signatures) and constraint (invariants, pre-condition and post-conditions) for the main control object in each system. Code should be in Appendix C.

# Glossary - define terms used in document, especially domain specific terms.

# Appendix

## 5.1 Appendix A - Use case diagram for use cases being implemented.



## 5.2 Appendix B - Use cases being implemented (from the RD).

## 5.3 Appendix C – Documented class interfaces (code) for the subsystem(s) you will implement and the constraints.

## 5.4 Appendix D - Diary of meeting and tasks.

# References