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| CMPS453 – University of Louisiana at Lafayette |
| Design |
| UL Housing Project |

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# ABSTRACT

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# INTRODUCTION

The purpose of the detailed design document is to provide a low level description of the change room system, providing insight into the structure and design of each component. This document is meant to equip the reader with a solid understanding of the inner workings of the room change system.

* 1. Goals and Objectives

The purpose of the room change system is to facilitate the process of requesting room change for both the occupants and the housing employee in charge. Thus, the occupant can request a room change on the webpage and his/her request will be send to a queue where it will be review by the UL housing employees based on the requested date and the availability of the rooms. The system will also allow the housing worker to update he database by adding, removing and switching occupants. Finally, it will keep track of room availability.

* 1. Projects overview and scope

The room change system will be composed of 2 main components: the database and the interface. The system will have 2 user interfaces, one for the occupants to request room change and one for the UL housing workers to access and modify the databases. The system will also have a 4 major databases: one for the occupants’ information, one for the queue of requests, one for the administrators and one for the building and rooms.

The detail design document will cover 3 primary parts. These include the GUI Design, the static model diagrams, and the dynamic model diagrams. In addition to these are explanations for the designs and an explanation of how the models connect with the original architecture.

# GUI (Graphical User Interface) DESIGN

//Brandin – I can do this if someone else does Dynamic

# STATIC MODEL SEQUENCE DIAGRAMS

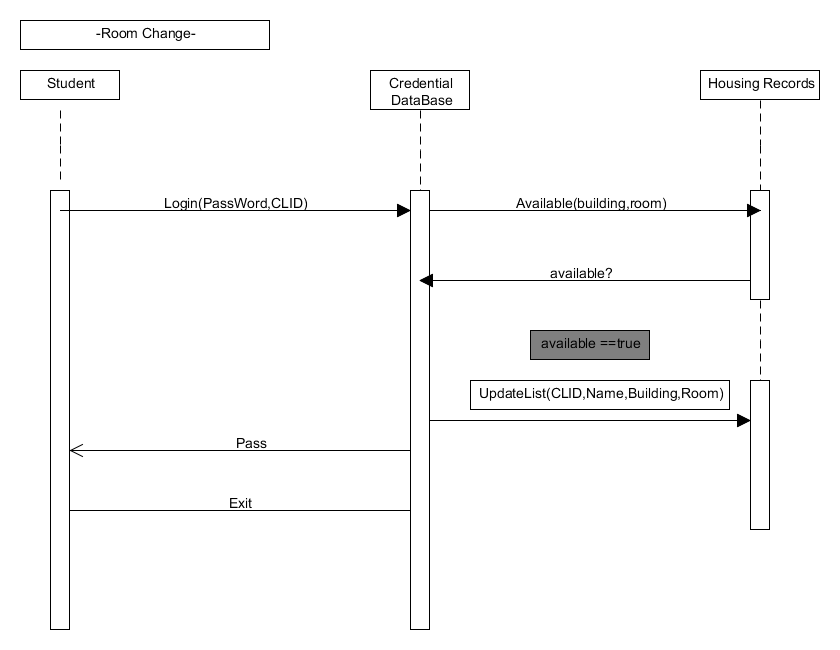


Figure 1 - Static Diagram: Room Change (Student)

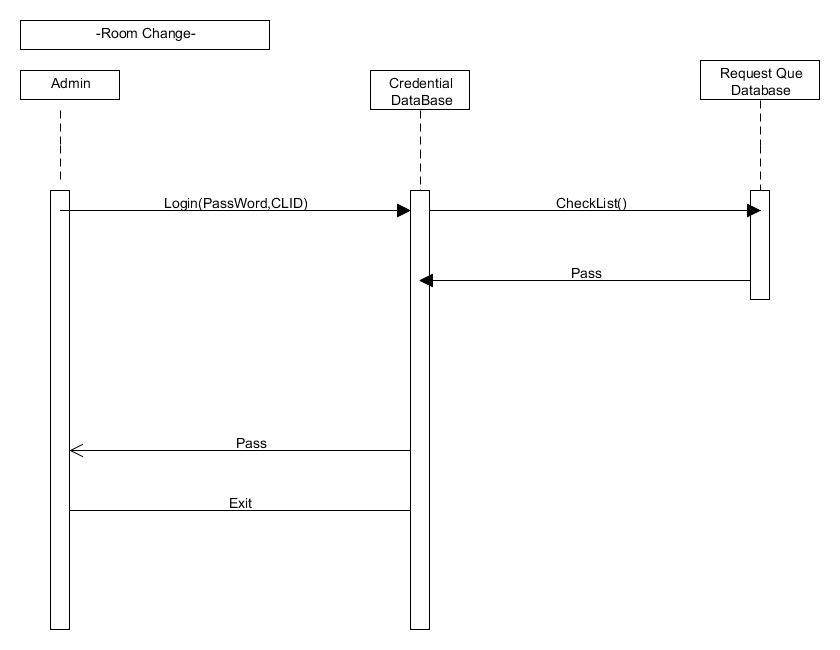


Figure 2 - Static Diagram: Room Change (Admin)

# DYNAMIC MODEL SEQUENCE DIAGRAMS

sd Create New ID (void) : void

recordlist : StudentRecord

ids : StudentID

verifyID (id, password)

: boolean

*exists*

alt

[exists == false]

Login (id, password)

: void

mail : MailVerifier

createID(email, password)

: void

verifymail(email):

boolean

*valid*

alt

[valid == false]

notvalid() : void

errorMsg()

: void

else

AddID(): void

else

displayPage() :

void

Figure 3 – Dynamic Diagram: Create New ID

sd Request Room Change (void) : void

holder : Interface

db : HousingRecord

selectRoomChange

displayOptions

available(building, room)

*available*

alt

[available == true]

updateAvailability(id)

successMsg

exit

[else]

updateAvailability(id)

notFirstMsg

exit

Figure 4 - Dynamic Diagram: Request New Room

sd View Floor Map

ref

Login Admin

Option Manager

House DB

display options:void

*floors*

Map Interface

selection (floor)

exit : void

displaymap

(floor)

Figure 5 – Dynamic Diagram: View Floor Map

sd Decide Room Requests

Interface Manager

DisplayRequests

Request Queue

*Request Queue*

DecideRequest

removeRequest

loop

Figure 6 – Dynamic Diagram: Decide Room Requests

# RATIONALE FOR DETAILED DESIGN MODEL

# TRACEABILITY FROM REQUIREMENTS TO DETAILED DESIGN MODEL

# REFERENCES

Bell, Donald. *UML basics: The sequence diagram*. IBM Corporation, 14 Feb. 2004. Web. 26 Oct 2014.