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**Project Name**

Final Project Design Document

Prepared by: Michael Fesser

Date Submitted: May 25, 2014

# Document Change Control

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| --- | --- | --- |
| **Date** | **Authors** | **Summary of Changes** |
| June 4, 2014 | Michael Fesser | Updates |
| June 6, 2014 | BJ MacLean | Comments |
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# Document Sign-Off

The following people have reviewed and approved the entire content of this proposal document.

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| --- | --- | --- | --- |
| **Position** | **Name** | **Signature** | **Date** |
| Instructor | BJ MacLean |  | June 11, 2014 |
| Student | Michael Fesser |  | June 11, 2014 |
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# 1.1 Project Team members

Michael Fesser

# 1.2 Project Description

The purpose of this project is to create a booking system for storage units. The program will provide various functionality related to booking, releasing, and tracking of any number of storage unit of any size.

This product is an online reservation system with specific functionality related to storage units.

Currently it is possible to reserve storage units online, but there are many smaller companies that would benefit from this technology, that might not have to capital to pay a large company to develop this technology for them.

# Primary Functions

I am a bit concerned about the size of the project. A review may be good now that you have completed your thoughts up to this point. Maybe you are making good headway on the project and if so it is great. I just do not want you to be overwhelmed with the scope of the project. Let’s discuss Monday and see where you are with it at that point. Great work.

* + 1. Allow the creation of accounts

Allow a single built in account to add other account types including users, and administrators.

* + 1. Allow users to log in

All users will have an Id and a password that they will use to login into the system.

* + 1. Allow users to book, extend, and release storage units

This functionality will allow a user to book a storage unit. It will also allow them to extent the length of time of each storage unit unless the unit it booked already in the future. Finally a user will be able to release a unit at any time allowing another person to book that unit.

The future reservations will be a complexity for the system. Are you permitting them to add reservations in the future? This would seem like a different function than creating the ‘current’ reservation.

* + 1. Check for any booking overlap

Related to the above functionality check to make sure a unit is not booked by two different users at the same time.

* + 1. Allow administrators the above functions

Allow an administrator all the same functions in 1.3.3 and 1.3.4 that will override any regular user.

* + 1. Display the storage units by size, availability, etc.

This part of the functionality will allow the users to see all the units based sorted by size then by release date. This would show the storage unit regardless if it booked or not. It would also give information as to when the unit was available. Unit booking would be available from this view.

* + 1. Create a calendar that will show the storage units available on that specific day

This would be a basic calendar that when clicked would show all the storage units available that day. It would also give information as to when the unit was available. Unit booking would be available from this view.

This can be taken from Court booking if desired or there are lots online.

* + 1. Hide the details from the users regarding other clients

This is intended to hide any unnecessary information about a booking form other users.

Only showing a user’s own booking information. Good.

# 

# 1.4 Secondary Functions

1.4.1 Update notices

Given the time, automatic or manual update notices regarding the storage unit would be sent to the user or listed within their account.

1.4.2 Payment systems

A basic payment system that would allow the user to pay for the storage unit they booked.

1.4.3 Tracking abandoned storage units

Flag any unit within the system that has not been released but still is in use.

1.4.4 Grading and pricing system for the storage units

This system would allow staff at the storage facility to review the general quality of the storage units and rate them and provide a potential discount for any units that are not ideal.

1.4.5 TOS

Add a terms of service clause.

# 2.1 Class Design

AddStroageUnit class

StorageUnit class

Login class

AddUser class

User class

DatabaseConnection class

DatabaseAdd class

DatabaseDelete class

Would be good to have these classes map to the database tables.

# 2.2 Interface Design

Provide a mockup of the screens that you expect to use in your project. Also provide a brief description (paragraph of two) describing each of the screens to be used in your program.

### 2.2.1 Main Menu

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| Jim’s Storage  Main Menu  Login  View Storage Units  Signup |
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Notes:

* This will be the initial starting page for the website. If time permits it will be formatted with pictures and such to improve the overall feel.

### 2.2.2 Signup

|  |
| --- |
| Jim’s Storage  Signup  User Name:  Password:  Confirm Password:  Email:  Confirm Email:  First Name:  Middle Initial:  Last Name:  Address:  City:  Province:  Postal Code  Phone Number:  Submit Cancel |
|  |

Notes:

* This is the main signup page.
* This page and the related classes will do all the validation.
* Users or administrators will currently user the same page to create customers.
* Employee creation is not in the scope of the project and currently will be done directly in the database.

### 2.2.3 Login

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| --- |
| Jim’s Storage  Login  Username:  Password:  Submit Cancel |
|  |

Notes:

* There will be validation and session control

### 2.2.4 User Page

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| Jim’s Storage  Welcome “User”  View unit View all units View Calendar Update Profile Logout  Display Unit information  Extend Unit Release Unit  Display Unit information  Extend Unit Release Unit |
|  |

Notes:

* This is the main user page.
* This displays all the units the client currently has.
* Update profile – was this in the requirements?

### 2.2.5 Calendar

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Jim’s Storage  Calendar  View unit View all units View Calendar Update Profile Logout   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Sun | Mon | Tue | Wed | Thu | Fri | Sat | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | 11 | 12 | 13 | 14 | | 15 | 16 | 17 | 18 | 19 | 20 | 21 | | 22 | 23 | 24 | 25 | 26 | 27 | 28 | | 29 | 30 | 31 |  |  |  |  | |
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Notes:

* This will be an imported calendar.

### 2.2.6 Calendar View

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| --- |
| Jim’s Storage  Calendar view  May 10, 2014  Unit A 14X15 Available, Date Reserved Reserve  Unit C 10X10 Available, Date Reserved Reserve  Unit D 5X10 Available, Date Reserved Reserve  etc.  Back |
|  |

Notes:

* This will only display available units.

### 2.2.7 Storage Unit Listing

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| --- |
| Jim’s Storage  Storage Unit Listing  View unit View all units View Calendar Update Profile Logout  Unit A 14X15 Available, Date Reserved Reserve  Unit B 14X15 Reserved, Date Available Reserve  Unit C 10X10 Available, Date Reserved Reserve  Unit D 5X10 Available, Date Reserved Reserve  etc.  Back |
|  |

Notes:

* This will display all units.

### 2.2.8 Change Profile

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| --- |
| Jim’s Storage  Change Profile  View unit Release Unit View all units View Calendar Update profile Logout  Password:  Confirm Password:  Email:  Confirm Email:  First Name:  Middle Initial:  Last Name:  Address:  City:  Province:  Postal Code:  Phone Number:  Submit Cancel |
|  |

Notes:

* This will allow a user to update their profile. Administrations will also have this view.

### 2.2.9 Administrative View

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| --- |
| Jim’s Storage  Administrative View  Add New Unit View all units View Calendar Add User Logout  Unit ID:  Username:  User’s Last Name:  Search |
|  |

Notes:

* This is the main administrative view.
* Administrative functions will be based on a search.
* Additional administrative functions are based on the search.

### 2.2.10 Administrative Add New Unit

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| --- |
| Jim’s Storage  Administrative Add New Unit  Add New Unit View all units View Calendar Add User Logout  Unit ID:  Unit Type:  Unit Dimensions: |
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Notes:

* This will add a new storage unit.

### 2.2.11 Administrative Unit/User

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| Jim’s Storage  Administrative Unit/User view  Add New Unit View all units View Calendar Add User Logout  User ID:  Username:  User’s First Name:  User’s Last Name:  Update Profile Remove User  Unit ID:  Extend Unit Release Unit |
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Notes:

* There will be confirmation for all the options on this page.
* Administrative user updates will be done directly in the database.

### 2.2.12 Universal Success

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| Jim’s Storage  What you were trying to do succeeded.  Continue |
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Notes:

* This will be a single page that will report to the user/administration that what they were trying to accomplish succeeded with specific messages.
* It will forward to the correct page.
* This could be provided as a message on the page they are directed to (ie. Main menu)