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**Lifeguard Application**

Final Project Design Document

Prepared by: Andrew Reid

Date Submitted: June 4, 2014

# Document Change Control

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| **Date** | **Authors** | **Summary of Changes** |
| 6/2/2014 | Andrew Reid | Initial designs |
| 6/4/2014 | Andrew Reid | Classes added and jsp mockups updated |
| 6/9/2014 | BJ MacLean | Comments: Project looks good. Should be a user friendly app. Some of the hyperlink functionality may provide some challenges, but the court booking example should provide you with some useful material Let me know if you need access to that project. |
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# Document Sign-Off

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

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| **Position** | **Name** | **Signature** | **Date** |
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# 1.1 Project Team Members

Andrew Reid

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# 1.2 Project Description

For this project I will be creating a lifeguard information program. For the last few years I have been working as the Lifeguard Supervisor for the City of Charlottetown. The program I have in mind will be designed for the two pools I run, but may be able to be reused for other facilities. The struts framework will be used alongside file and database storage.

Currently, shift changes are made with a paper and pen and can be inconsistent. This program would allow for all shift changes to be entered into a database and end the problem of variance between employees’ paper schedules. This program would also digitally store all of the employee’s information. Currently all information is stored in paper files/folders. Because the program is web based, an employee could theoretically access it on any computer and view their schedule.

Employees will be able to view their own schedule, but not modify it. This functionality will be reserved for the administrator.

# 1.3 Primary Functions

* Account creation/modification:
  + Allow accounts to be created and modified by administrator(s)
* Ability to login with a username and password
  + Account will be created by the administrator for the user
* Modify lifeguard schedule
  + This functionality will only be given to the administrator(s)
* View current schedule
  + Allow all users to see the current lifeguard schedule for the two pools

# 1.4 Secondary Functions

* Allow event bookings for the pool
* Validation to ensure a lifeguard does not exceed the maximum hours before reaching overtime
* View statistics on each lifeguard: View number of hours worked in total over the summer, number of overtime hours worked, and number of private booking hours worked
* Make a publically viewable pool schedule

# 2.1 Class Design

The following classes will be used to provide the functionality of the system. These classes will correspond to the database tables which will be used to store the information.

Action Classes: UserLoginAction (used during login action/validation), ScheduleAction (Deals with the scheduling functionality. This will be used to both view and schedule shifts), ViewLifeguardAction (Will be used to view lifeguard’s information), UserLogout(simple redirect to the login page).

Form Classes: UserLoginForm(gets/sets the username and login), LifeguardForm(used while viewing lifeguard information and possibly entering it in the future), ScheduleForm(used for scheduling shifts and viewing the schedule)

Business Classes: Login, DatabaseUtility

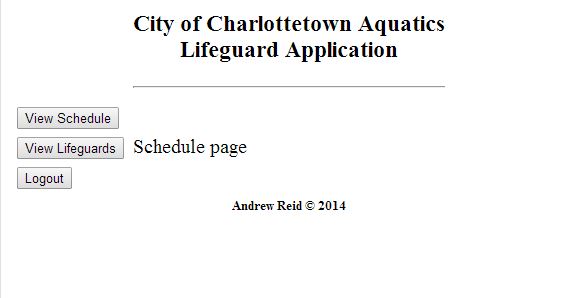
Utility: DatabaseUtility/connectivity classes

# 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.

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| City of Charlottetown Aquatics  Lifeguard Information  Login  Member Id  Password:  Submit Cancel |

Notes: The default page the website will load into is the login page. If a login is successful, the user will proceed to the schedule tile. If not, the page will reload with an error message



Notes: This is an initial screenshot of the screen that will load for a successful login. There will be a schedule on this page similar to the one below. The final product will be a merge of these two examples

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| City of Charlottetown Aquatics  Lifeguard Information  Monthly Schedule  Month   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | | [1](http://www.bbc.com/news/) | 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 |  |  |  |  |   Main Menu Logout |

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| City of Charlottetown Aquatics  Lifeguard Information  Schedule for DATE   |  |  |  | | --- | --- | --- | | Simmons | Split | Victoria Park | | LIFEGUARD | LIFEGUARD | LIFEGUARD | | LIFEGUARD | LIFEGUARD | LIFEGUARD | | LIFEGUARD |  | LIFEGUARD |   Main Menu Logout |

Notes: This is the page that will appear when someone clicks on one of the hyperlinked schedule pages.

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| City of Charlottetown Aquatics  Lifeguard Information  Lifeguards  **Lifeguard Supervisor**  Andrew Reid  **Lifeguards**  Emma Brown  Nathan Brown  Main Menu Logout |

Notes: This is the lifeguard page. Each of the names will be hyperlinked to the lifeguard’s information page

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| City of Charlottetown Aquatics  Lifeguard Information  Lifeguard Info  Name: Andrew Reid  Phone Number: 314-4730  NLS Expiration Date: 01-01-2014  CPR-C Expiration Date: 01-01-2014  Main Menu Logout |

Notes: This page will show a lifeguard’s information if they click on that lifeguard in the lifeguards page.