**C868 – Software Capstone Project Summary**

**Task 2 – Section C**

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| **Capstone Proposal Project Name:** | http://www.idevnews.com/views/images/uploads/general/wgu_logo.png |
| **Student Name:** |  |

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Task 2 Part C – C868 Software Development Capstone

# Application Design and Testing

## Summary

This section includes the design documents used in the creation of the software. Included design documents are the entity diagram, the class diagram, low-fidelity wireframes, and prototype. These documents were created to document and validate the project meets the defined requirements. The documents are then used by the development team to begin development. These documents define the structure that the development team will use as framework for developing the software.

# Design Document

## Entity Diagram

Graphical user interface

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## 

## Class Design

This is a diagram of the classes as they are used in the software. The data used from the database is mapped into these classes before being operated on. The consultantObject class aligns to the user table, the scheduleObject class aligns to the appointment table, and the customerObject collects the data of the customer, address, city, and country tables. The Person class defines some default data shared by both customerObject and consultantObject.

Diagram

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## Wireframe

The wireframe is a low-fidelity view of the planned look of the application. It gives an early view of what the finished application will look like and an idea of the flow of the application.

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A picture containing diagram

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# Unit Test Plan

## Introduction

Testing is an important part of an application. One type of testing strategy developed to validate functionality for this project is a unit test. A unit test is a type of test that isolates a specific function of the application for testing. The unit test here is focused on testing the function of a user signing in.

### Purpose

For a user to sign into the application, several things need to be in place. The user must supply valid credentials, those credentials most correspond to an entry in the database and the password entered must match the password stored in the database.

### Overview

When a user provides log in credentials and clicks the button to log in, the SignIn windows form page calls the login function from DatabaseAccess. This function retrieves a list of users from the database and compares to see if the log in credentials, both username and password, match an entry in this list. If it does it returns the user from that list and that user will be considered authenticated and signed in, otherwise it returns null and will trigger a login exception.

## Test Plan

### Items

There are three fields included for this unit test. The first two are strings that contain a test username and test password. The third is an exception that will catch any exceptions thrown during the unit test.

### Features

A unit test should test functions of the application without relying on other components of the application. To test just the login function a user list is supplied in place of the one generated by reading the database.

### Deliverables

The generated test will be run in Visual Studious with successful results.

### Tasks

First load the solution files in Visual studios. Then right click on ScheduleUnitTest and select run test. If the project hasn’t been built on the computer the test is being run on, the project will build and download necessary dependencies.

### Needs

* Microsoft Visual Studio
* The solution and program files

### Pass/Fail Criteria

The test passes if all portions of the test show a green checkmark. It fails if any of the test show a red x. The green checkmark shows that the test passed and the red x shows that test is a fail.

## Specifications



## Procedures

To run the test, I opened the Schedule App solution in Visual studios. Once the solution is opened, I right clicked on ScheduleUnitTest and select Run Test. This opened the test panels and began running the test. Once the tests finished it shows the results in the open panel.

## Results

A screenshot of a computer

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# Source Code

The source code is available in the included zip archive title “capstone.zip”.

## Link to live version

The application is standalone and not hosted as a live version. The code is included in the zip file and should be run through visual studios. Please note that it will be necessary to install the required MySQL Connector/NET as outlined in the installation instructions. A test user is available with the following credentials:

Username: test

Password: test

# User Guide

## Prerequisites

These are the requirements needed to set up and use the software

* Windows 10
* Microsoft Visual Studios
* .NET 4.72
* A MySQL database, either local or remote
* MySQL Connector/NET 8.0.25 available here:   
  [https://downloads.mysql.com/archives/c-net /](https://downloads.mysql.com/archives/c-net%20/)

## Installation

*The installation is handled by the companies IT department, this section is for them to install the software.*

1. Extract zip file to known location on your hard drive
2. Navigate to the extracted file
3. Double click the solution in the extracted file
4. IF needed, open App.config to configure the connection to the database
   1. The line to edit is enclosed in <connectionString> tags
   2. The specific parts to edit are highlighted in yellow below
5. The data base needs to be set up in advanced
   1. It can be set up by running the script included titled: DBSetup.sql on the database to be used then the testUser.sql to insert a user to use for testing
6. Once the database is set up and the application is configured to connect to it, the application should be ready to run.

## Login

*This and the remaining section of the user guides are for the users*

1. A username and password will be provided for each user.
2. Enter the username and password into their respective spots
3. Click Sign in to enter the application, this will take you to the menu  
   Graphical user interface, application

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## Menu

This menu lets the user navigate to other pages of the application. Each of the buttons go to pages explained in order of the next sections. The x in the top right returns to the Sign In page. The x on any page that is entered through the Menu returns to the Menu.

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## Schedule

This page shows the full list of the company scheduled appointments. In addition to displaying this list this page has several other functions available. Those functions include:

* Filtering by customer name using the search bar
* Filtering to Week or Months using the selection box next to the title
* Viewing the customer info from the currently selected client
* Adding or editing appointment using the Add and Edit buttons. These two both navigate to the add/edit page with to edit page having information of the customer filled into the form.
* Deleting an appointment removing them from the databaseGraphical user interface, text, application

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## Add/Edit

This page is for adding new or editing appointments. If it is being used to edit appointments, all fields will show the information for that appointment. Once done filling any information needed for the appointment or changing information if editing, press save to save the new appointment to the database or update the appointment with its new information. If the new appointment is not needed or the edit needs to be cancelled, just press the x in the top right corner.

Table

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## Consultant Schedule

This allows the view of just specific users schedules. The first page allows the selection of which users schedule you want to view. The next page shows a simple view of that consultant’s schedule.

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Description automatically generated A picture containing graphical user interface

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## Customer records

This page shows a list of customers recorded in the database. The add and edit buttons take you to the Add/Edit Customer page to either add a new customer or edit the selected customer. The delete button removes the customer from the database.

Table

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## Add/Edit Customer

This page allows entering information for a new customer or updating the information of a customer already in the database. Once the data has been entered or edited, press save to save the information to the database.

Graphical user interface, application

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## Reports

This shows two reports that can be switched between in the drop-down box. One shows a count of how many of each type of appointment in each month. The other shows the total number of appointments each consultant has in the database.

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