**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  Client-Tracker© Information |
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# Application Design

## Summary

In this section there are design documents that were used in the development of this software program.

Each document was created in accordance with the requirements of the company Hardcore Book Publisher. It helps the developers understand what is required in the software by giving them a clear picture to reference. This also helps everybody be on the same page and promotes efficient communication between personal and companies. The design documents include the entity diagram, the class diagram, the wireframe, and the prototype.

Entity Diagram

Diagram

Description automatically generatedThis diagram includes the relational database entities that are used with this software. It provides a picture of the database tables along with information about each table. The name, fields, and types in the tables are described here.

## Class Diagram

This diagram shows the different Java classes that were used to create the software program and how they relate to each other. The classes contain the data that will be retrieved from the database tables. The classes will then be available to deliver, modify, or delete the data. Some classes will have data pertaining to other classes. This will form a relationship between those classes. Some reports will need the extended information that this relationship provides. This also provides an opportunity to split data from certain tables and then distribute them into a smaller number of classes. Other types of data were added to provide easier operation when the software’s backend is working.

Chart

Description automatically generated

## Wireframe

Graphical user interface

Description automatically generatedThis wireframe is provided to the company representatives after the requirements have been discussed and documented. It is used to provide a rough visual outline of how the software is going to look. It will also show the general flow the software is going to take. It mainly shows the different screens it will have. They will have text that describe things in a limited, general way. This wireframe will help communicate to the representatives our design intentions and will also give them a chance to bring up any issues if any requirements were misinterpreted.

Graphical user interface, application, Word

Description automatically generatedA picture containing graphical user interface

Description automatically generatedGraphical user interface

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**Chart

Description automatically generated**Graphical user interface, text

Description automatically generatedGraphical user interface

Description automatically generated

## Prototype

Graphical user interface, application

Description automatically generatedGraphical user interface, application, Word

Description automatically generatedThis prototype is provided to the representatives after the wireframe is approved. This is a higher fidelity than the wireframe and contains some functionality. The screens here will be what the developers will use when they create the software. Simple functionality like traversing between screens and entering text will be available. It describes in more detail what each screen will have. More specific information will be present, describing what each screen will be used for. It provides a better since of the flow and feel of the software program. The representatives will be required to approve this.

Graphical user interface

Description automatically generatedGraphical user interface, application, table

Description automatically generated

Graphical user interface

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Graphical user interface

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Table

Description automatically generated

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# Unit Test Plan

## Introduction

The unit test plan is a system to test out certain sections of code. Testing only a section of code is better because then you can isolate the error if one is found. Testing the whole system at once will be harder if an error is found because sometimes things are connected. Then you would have to figure out where the error is in a long line of execution. Testing is also good in a general sense because you are most likely to make some kind of error. Unit testing consists of writing another piece of code besides the main code. This unit test plan checks if a model’s standard get and set methods work as intended.

### Purpose

This unit test is testing if the model works as intended. It tests if calling the area’s name is the same name that was used to construct it. It tests if calling the area’s count is the same count that was used to construct it. It also tests if calling the set method works when changing the name of the area.

### Overview

In developing this project, several models are needed. The models help by holding data that pertain to a certain subject matter that is needed. Subject matter can be things like an appointment or a customer. They hold and sometimes manipulate their data to produce more data. These subject matters can also be called objects. This object contains data about how many customers are in a certain area. The information it holds are two pieces of data that it gets from somewhere else. It holds the name of the area and the number of how many customers are in that area. This object will then be used in another section of the code. The test will check if the object delivers the correct name and the correct number that it was holding. It also checks if it delivers the updated name after the name was changed.

## Unit Test Plan

### Items

The model holds two types of data that represent the name of the area and the number of customers in that area. The model is also able to change the name of the area after it has been created. This is used in case the name needs to be corrected.

### Features

The test will only be for this object so it can keep track of any mistakes that might arise. This will be easier to troubleshoot the problem. The test will create a new object to use as a sample.

### Deliverables

The test will run on IntelliJ and the outcome will be successful.

### Tasks

Download the program. Open the program with IntelliJ. Then open the QAM2 project. In the src folder, double click the AreaCountTest class. Place the cursor on top of the class name and press Ctrl + Shift + F10. This will run the test automatically.

### Needs

* IntelliJ
* Program files

### Pass/Fail Criteria

The test is successful if there are three green check marks. Three check marks mean that the three different tests ran and all three were successful. If any of the tests failed, the original code would have to be looked at and changed in some way to produce the desired outcome.

### Specifications

A screenshot is provided below of the test in IntelliJ.

Graphical user interface, text, application

Description automatically generated

### Procedures

The program needs to be downloaded and opened by IntelliJ. The QAM2 project will need to be opened. In the src folder, double click the AreaCountTest class. Place the cursor on top of the class name and press Ctrl + Shift + F10. This will run the test automatically.

### Results

A screenshot is provided below of the results of the unit test in IntelliJ.

Graphical user interface, text, application, email

Description automatically generated

# Artifacts

## Source Code

The source code of this project is in a zip archive that was submitted with this document. The zip archive is named “QAM2.”

## Link to Live Version

There is no link to a live version for this project because this is a stand-alone program. The program is contained in the QAM2 zip archive. A test user is provided to operate the program.

Username: test

Password: test

# Application Maintenance Guide

## Installation and Debugging of the Software Program

The program can be installed, debugged, and maintained in the following way.

### Prerequisites

* Windows 10 or higher.
* IntelliJ IDEA Community Edition 2021.1.3 x64 or better.
* A MYSQL database that has been setup already.

### Installation

1. Download the zip archive.
2. Extract the program from the zip archive.
3. Open the extracted program, which should be titled “QAM,” with the IntelliJ IDE.
4. The QAM2 project folder should be located at the top left.
5. Expand the QAM2 project folder by clicking on the arrow to its left.
6. Expand the src folder.
7. Expand the sample folder.
8. Graphical user interface, text, application

   Description automatically generatedDouble click on the Main class to open the class.
9. Make sure the “Main” class is visible in the “Select Run/Debug Configuration” window next to the green arrow run button at the top right of the screen.
10. Click the green arrow run button to run the program.

# User Guide

## Introduction

This user guide is provided to instruct on the operation of Client-Tracker©. The guide is separated into different sections that will give step by step instructions. Some pictures have been provided to help visualize ideas. The guide will explain how to log in, manage customers and appointments, and open reports.

## Installation

Client-Tracker© is meant to be installed by IT personnel. If your computer does not have the software installed, please report this to your IT department or to the proper administrator. They will be able to install the software.

## User Accounts

Client-Tracker© does not allow for the addition of new user accounts. User accounts should be created outside of the software. If you do not have a user account, please contact the IT department or the proper administrator. They will provide you with your username and password. These two things are needed to access your account.

## Login

1. Start the Client-Tracker© software.Graphical user interface, application, Word

   Description automatically generated The login screen will appear.
2. Enter your username in the username field and your password in the password field.
3. Then press the “Login” button to continue.
4. The “Exit” button exits the software and closes it.
5. After logging in, a message pops up indicating if you have any appointments that are within 15 minutes. Press the “OK” or “Cancel” button.

## Main Menu

Graphical user interface, application

Description automatically generated

The main menu screen provides several things. There are three report buttons that take you to its respected report. It also provides the appointments for the current month and for the next month. The current month is on the left side and the next month is on the right side. At the bottom, there are two buttons that take you to the customer and appointment management screen, and a button that exits the software.

## Customer Management

Graphical user interface

Description automatically generated

Pressing the “Customer” button will take you to the customer management screen. The customer management screen provides an option to search for customers, shows the list of customers, and provides the add, update, and delete options for customers.

### Searching for Customers

1. Enter the search criteria in the search field. This can be a customer name, the country ID that the customer is in, or the customer’s ID.
2. Click the appropriate search criteria to search by.
3. Click the “Search” button to show the search results.
4. When done searching, click the “Clear Search” button to reset the list or click the “Back” button to go back to the main menu screen.

### To Add a Customer

1. Graphical user interface

   Description automatically generatedClick the “Add” button. The add customer screen appears.
2. Enter the customer’s name.
3. Enter the customer’s street address.
4. Enter the customer’s postal code.
5. Enter the customer’s phone number.
6. Select the customer's country from the drop-down menu.
7. Select the customer’s state from the drop-down menu.
8. Then click the “Save” button to save the customer or click the “Cancel” button to cancel and go back to the customer screen.

### To Update a Customer

1. Click the “Update” button. The update customer screen appears.
2. Modify the customer’s data in the appropriate field.
3. Then click the “Save” button to save the changes or click the “Cancel” button to cancel and go back to the customer screen.

### To Delete a Customer

1. On the customer screen, select a customer from the list.
2. Click on the “Delete” button.
3. Click on the “OK” or “Cancel” button on the following screens according to your wishes.

## Appointment Management

Graphical user interface, application, table

Description automatically generated

Clicking the “Appointments” button will take you to the appointments screen. Here you can view appointments by all, monthly, and weekly. You can then search for appointments by customer ID, Contact ID, or appointment ID. You can also add, update, or delete appointments. Clicking the “Back” button will take you back to the main menu.

### To View Appointments

Click on the appropriate radial circle to choose how to view appointments.

* All – Shows all appointments.
* Monthly – Shows all appointments by month, starting in current month by default.
* Weekly – Shows all appointments by week, starting in current week by default.

### Searching for Appointments

1. Enter the search criteria in the search field. This can be the appointments customer ID, contact ID, or the appointment ID.
2. Click the appropriate search criteria to search by.
3. Click the “Search” button to show the search results.
4. When done searching, click the “Clear Search” button to reset the list or click the “Back” button to go back to the main menu screen.

### To Add an Appointment

1. Graphical user interface

   Description automatically generatedClick the “Add” button. The add appointment screen appears.
2. Enter the appointment title.
3. Enter the appointment description.
4. Enter the appointment location.
5. Select the appointment type from the drop-down menu.
6. Select the appointment contact from the drop-down menu.
7. Select the appointment customer ID from the drop-down menu.
8. Select the appointment date from the drop-down menu.
9. Select the appointment starting hour from the drop-down menu.
10. Select the appointment starting minute from the drop-down menu.
11. Select the appointment ending hour from the drop-down menu.
12. Select the appointment ending minute from the drop-down menu.
13. Then click the “Save” button to save the appointment or click the “Cancel” button to cancel and go back to the appointment screen.

### To Update an Appointment

1. Click the “Update” button. The update appointment screen appears.
2. Modify the appointment’s data in the appropriate field.
3. Then click the “Save” button to save the changes or click the “Cancel” button to cancel and go back to the appointment screen.

### To Delete an Appointment

1. On the appointment screen, select an appointment from the list.
2. Click on the “Delete” button.
3. Click on the “OK” or “Cancel” button on the following screens according to your wishes.

## Reports

The main menu screen has three buttons that take you to three different reports.

* Table

  Description automatically generatedCustomer Appointments – A report that shows the number of customers in a certain month based on the type of appointment.
* Contact Schedules – A report that shows appointments by contact ID. Select a contact on the drop-down menu to choose a contact.

Graphical user interface, application

Description automatically generated

* Graphical user interface, table

  Description automatically generatedCustomers By Country – A report that shows the number of customers in a certain country

After viewing a report, click the “Back” button to go back to the main menu.