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## Task 2 Part C – C868 Software Development Capstone

**Application Design and Testing****Design Document****Class Design**

The images below are diagrams that are designed to show a visual depiction of the classes that are housed within the application. The model consists of various classes that perform a variety of functions such as querying information from the database, triggering alerts, or managing appointments. The screenshots below show a brief illustration of the structure used to create the functionality in the application.

The first diagram shows the process of the application from when it is first opened. The program begins like most applications, launching the Main class which establishes a connection with the database, and sets the log-in scene for the user. The LoginScreen class will gather the location of the user and display the time zone in the bottom left-hand corner of the screen. Additionally, upon login, the Class has a method used to query the database to verify if the credentials are correct. If they are correct, the scene will switch to the main screen.

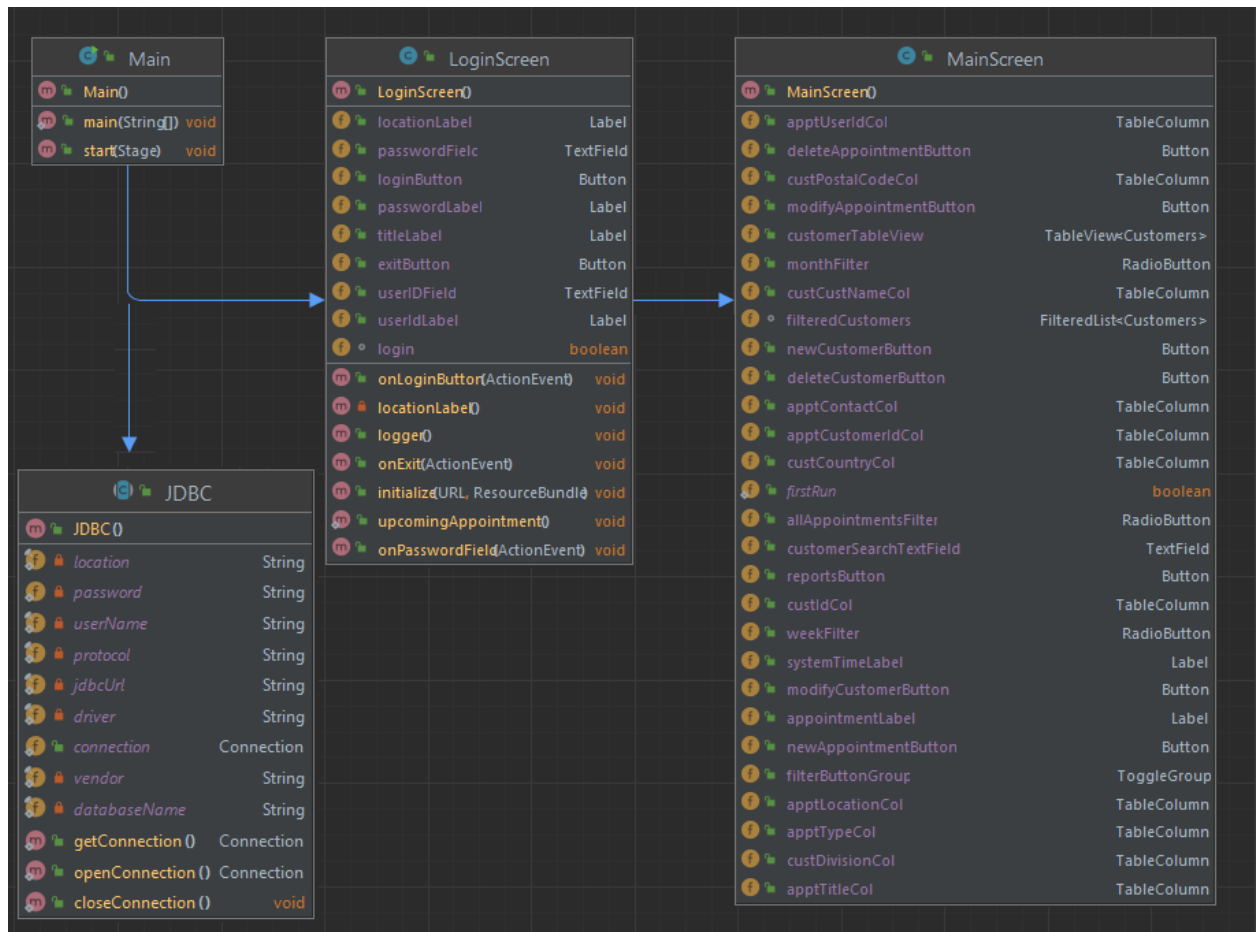


Figure 1- Diagram showing the initial login process from Main -> LoginScreen -> MainScreen

The second diagram is the structure of the modeling classes. The classes are broken up into the following categories: Appointments, Customers, Contacts, Countries, Divisions, and Users. As seen in the diagram, each of the modeling classes is dependent on their respective DB class, for example, the Customers class is dependent on `DBCcustomers`. The DB class performs all the querying for the customer model in the database.

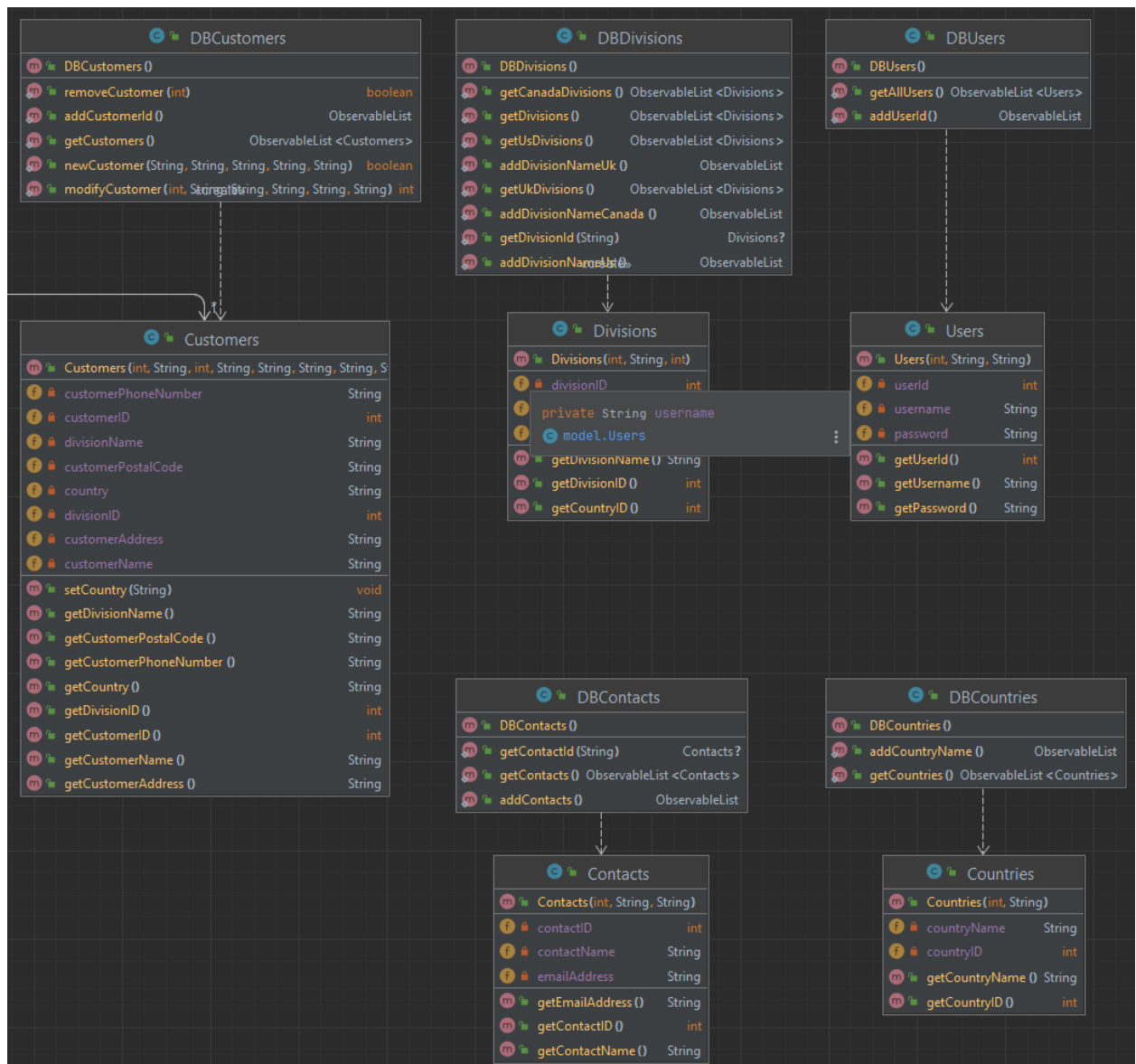


Figure 2- Diagram showing the relationship between each DB class and the modeling classes

The third diagram is the layout displaying where the scene changes take place. From LoginScreen, the user is sent to the MainScreen. Once the user is on the MainScreen, there are a few selections the user can make. The MainScreen directs the user to the NewAppointment or NewCustomer controller if an addition is being made to the database. If a modification is being

made, the user is sent to the ModifyCustomer or ModifyAppointment controller. Lastly, if the user is just looking to view reporting, the MainScreen will also direct them to that screen.

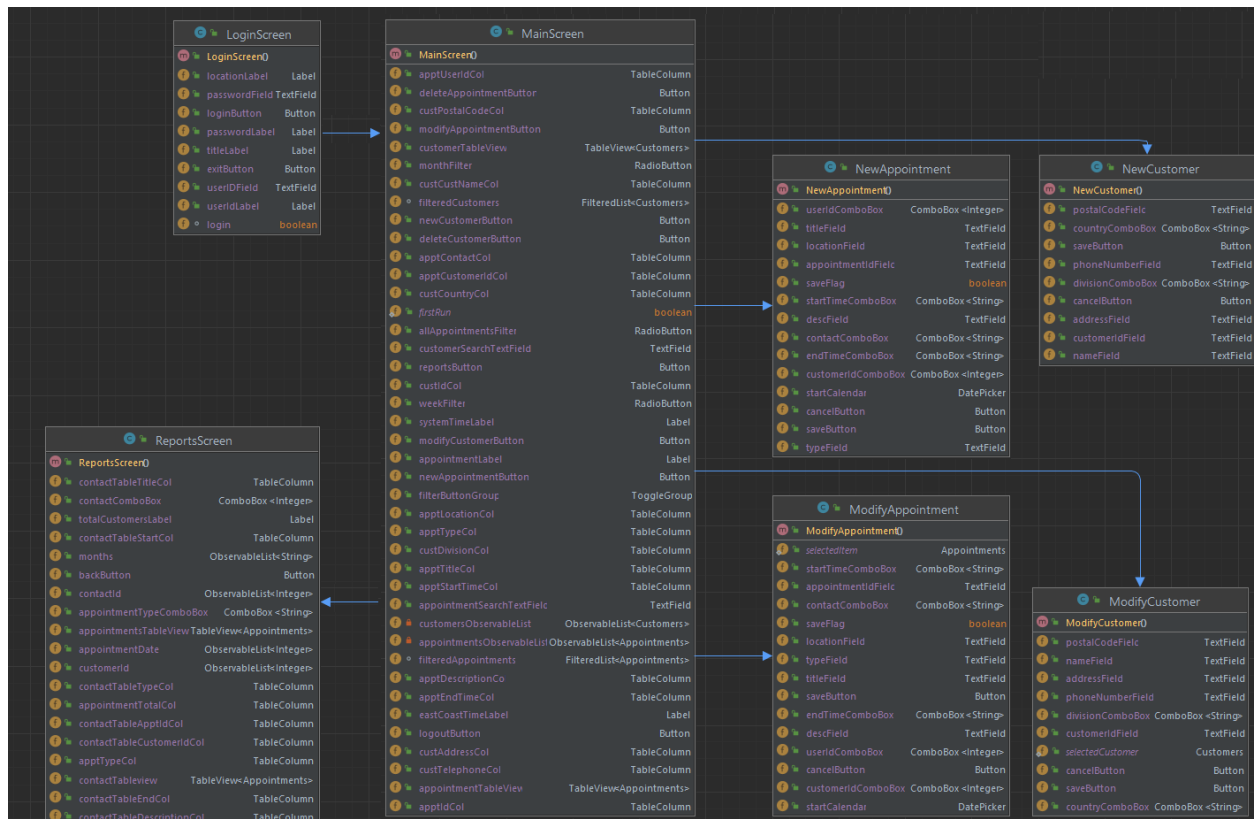


Figure 3- Application navigation diagram showing the MainScreen controller's navigation paths

## UI Design

Below is the graphical user interface which was created in JavaFX. The first screen that the user will experience is the login screen. Upon entering their credentials and logging in, the user will be redirected to the “main screen” where most of the functionality takes place. There are two tables, the top one displaying the appointments and the bottom one displaying the

customers. Each table has a button to add/modify/delete which will take the user to another scene. Lastly, there is a reports button that will redirect the user to a different screen that will display various reports.

### Login Screen

The login screen consists of a username and password field, a login button, and an exit button. The login button will take the user to the main screen provided the credentials entered are valid. Exit will close the application. On the bottom left corner of the screen is a label that will display the user's time zone.

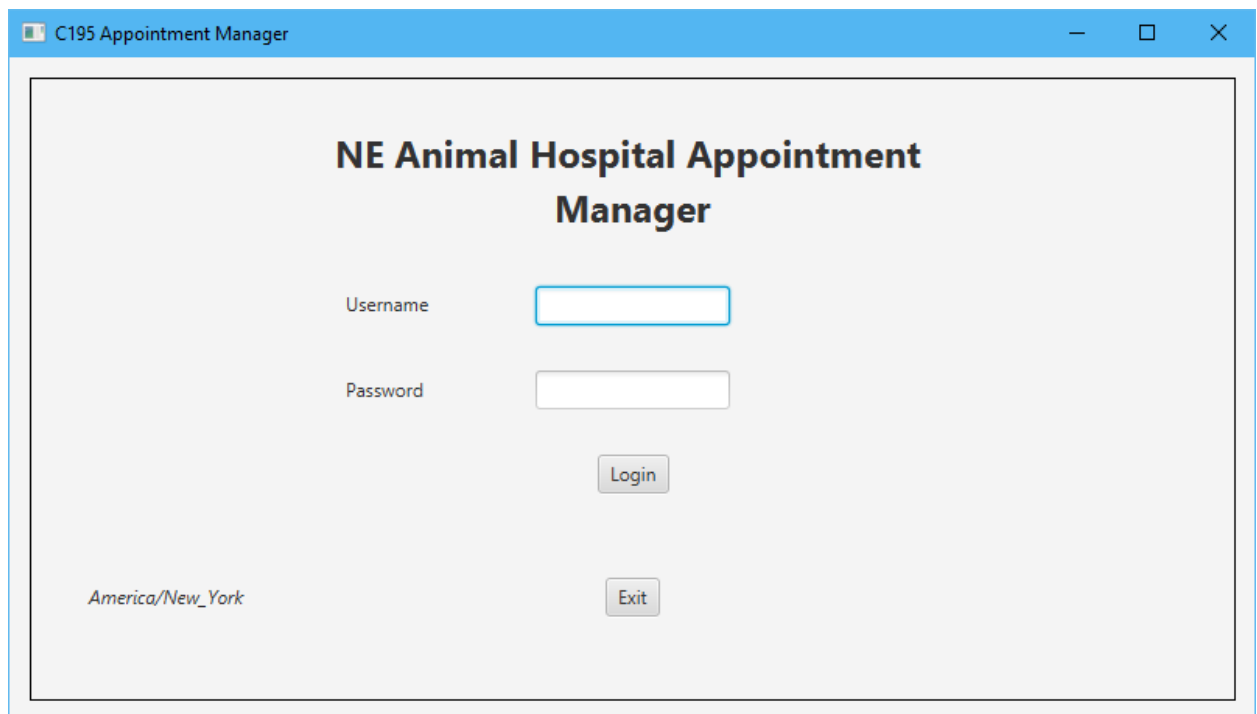
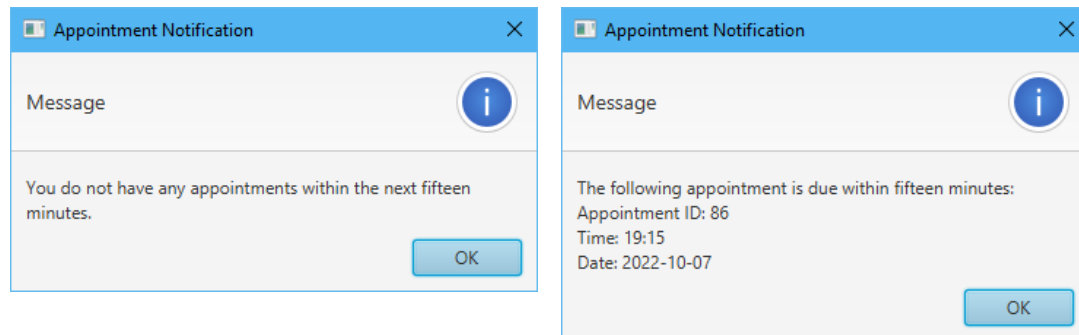


Figure 4 - Sign in screen

When the login button is pressed, there are a few alerts that may display to notify the user if there is an upcoming appointment or not:



*Figure 5 - Appointment Notifications for both no future appointments and upcoming appointments.*

## Main Screen

On successful log-in, the user is redirected to the main page. Two tables will be displayed: one for appointments, and one for customers. Each table has a button to “Add”, “Modify” and “Delete” a customer or appointment. There is also a search functionality to easily locate a specific entry. The appointments table shows all appointments by default but allows radio buttons to sort by week or month as well. On the top right of the application, there is a time display that displays Eastern time (company time), as well as the user’s current location time, if working in a different time zone. On the bottom right there is a button to take the user to the reports screen and a log-out button that redirects the user back to the login screen.



**C195 Appointment Manager**

Current System Time: 18:55  
Current East Coast Time: 18:55

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
85	Broken Leg	Kitten	Room 6C	Emergency	2022-10-10T09:00	2022-10-10T10:00	2	2	2
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-25T09:45	2022-10-25T10:30	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1

☒ View All
 ☐ Weekly
 ☐ Monthly

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

Figure 6 - Main screen that displays appointment and customer tables

**C195 Appointment Manager**

Current System Time: 18:55  
Current East Coast Time: 18:55

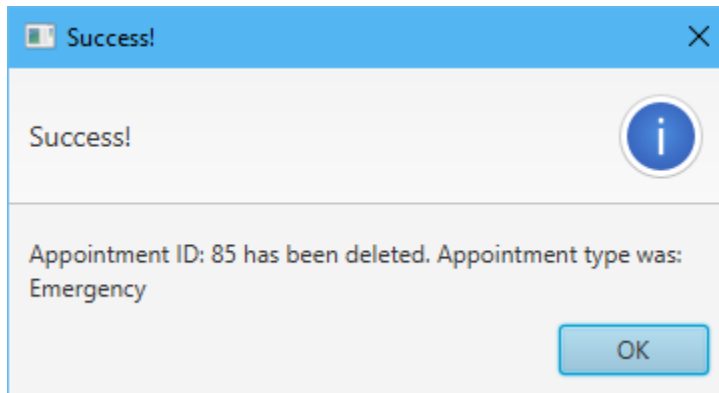
### Weekly Appointments

ID	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
85	Broken Leg	Kitten	Room 6C	Emergency	2022-10-10T09:00	2022-10-10T10:00	2	2	2
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1

☐ View All
 ☒ Weekly
 ☐ Monthly

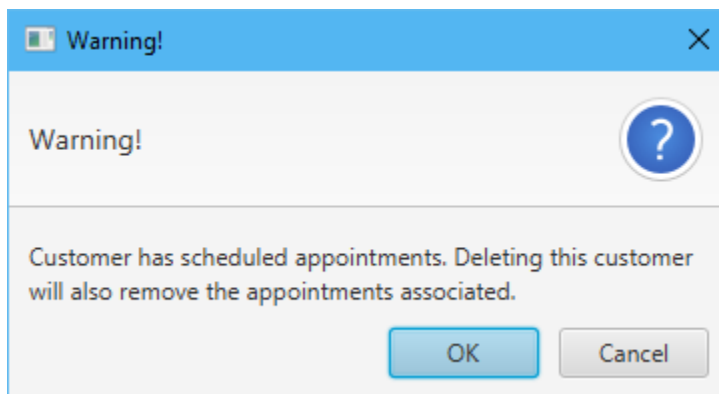
Figure 7 - Appointments sorted by week

Deleting an appointment/customer will show the following dialog box:



*Figure 8 - Appointment deletion dialog box*

Deleting a customer will display the following dialog box if a customer has scheduled appointments. This dialog box if “OK” is clicked, will delete both the customer and the appointments associated with the customer.



*Figure 9 - Customer and related appointment deletion confirmation dialog box*

The appointment table is broken down into the following columns:

Appointment ID	System-generated Appointment ID
Appointment Title	The appointments title/subject
Appointment Description	Description of the appointment
Appointment Location	Location of the appointment
Type of Animal	Type of animal being seen
Start Time	Time the appointment starts
End Time	Time the appointment ends
Customer ID	The ID of the customer
User ID	The ID of the user creating the appointment
Contact ID	Name of the contact (veterinarian) seeing the animal

The customer table is broken down into the following columns:

Customer ID	System-generated Customer ID
Customer Name	The Customer's name
Customer Address	The Customer's address
Postal Code	The Customer's Postal Code
Phone Number	The Customer's Contact Number
Country	The Customer's Country (options for outside of United States are available)
Division	The Customer's Division/State

### **Add / Modify Appointment Screens**

When clicking the “add” or “modify” button for an appointment, the following screen will display with fields identical to what is seen in the table above. This screen is a basic form with two buttons to save or cancel. All fields must be populated before saving.

The screenshot shows a window titled "C195 Appointment Manager" with a "New Appointment" form. The form is organized into two columns. The left column contains fields for Appointment ID (set to "Auto-Generated"), Title, Description, Location, Contact (a dropdown menu), Type, Customer ID (a dropdown menu), and User ID (a dropdown menu). The right column contains fields for Appointment Date, Start Time, and End Time. The Appointment Date field includes a calendar icon. At the bottom right of the form are "Save" and "Cancel" buttons.

Field	Value / Type
Appointment ID	Auto-Generated
Appointment Date	[Calendar Icon]
Title	[Text Input]
Description	[Text Input]
Location	[Text Input]
Contact	[Dropdown Menu]
Type	[Text Input]
Customer ID	[Dropdown Menu]
User ID	[Dropdown Menu]
Start Time	[Dropdown Menu]
End Time	[Dropdown Menu]

Figure 10 – Add new appointment screen

**Modify Appointment**

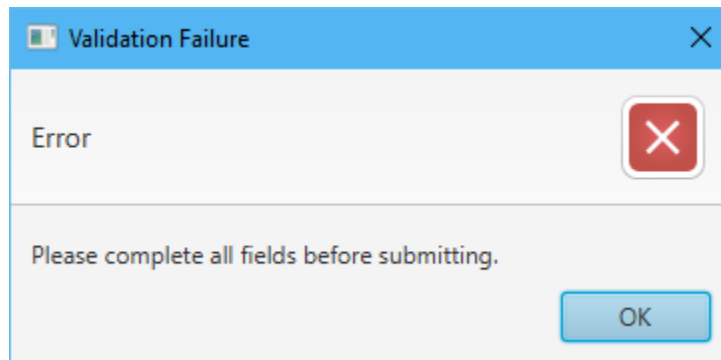
Appointment ID	86	Appointment Date	10/25/2022
Title	Kitten Spay		
Description	Kitten		
Location	Room 2B		
Contact	Li Lee	Start Time	09:45
Type	Scheduled Appointment		
Customer ID	3	End Time	10:30
User ID	2		

Save Cancel

Figure 11 - Modify appointment screen

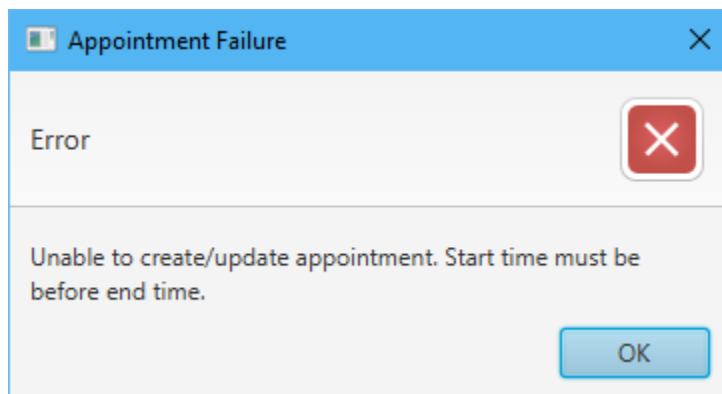
Error messages that may occur when adding or modifying an appointment:

1. All fields are not populated. All fields must be completed before saving.



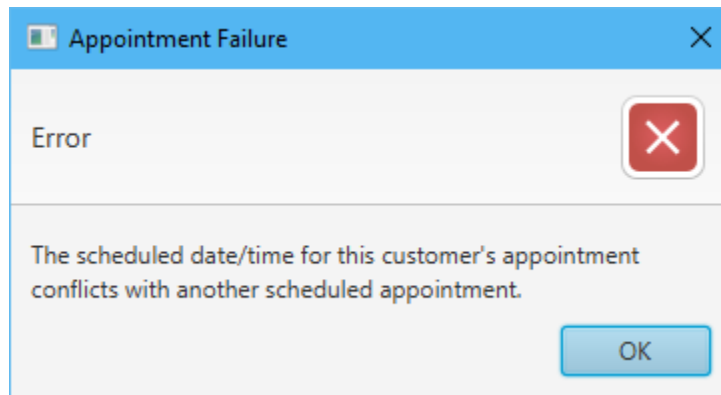
*Figure 12 - Field validation failure*

2. Start time or end time do not align (start time is after end time, end time is before start time)



*Figure 13 - Start or End Time Logic Check*

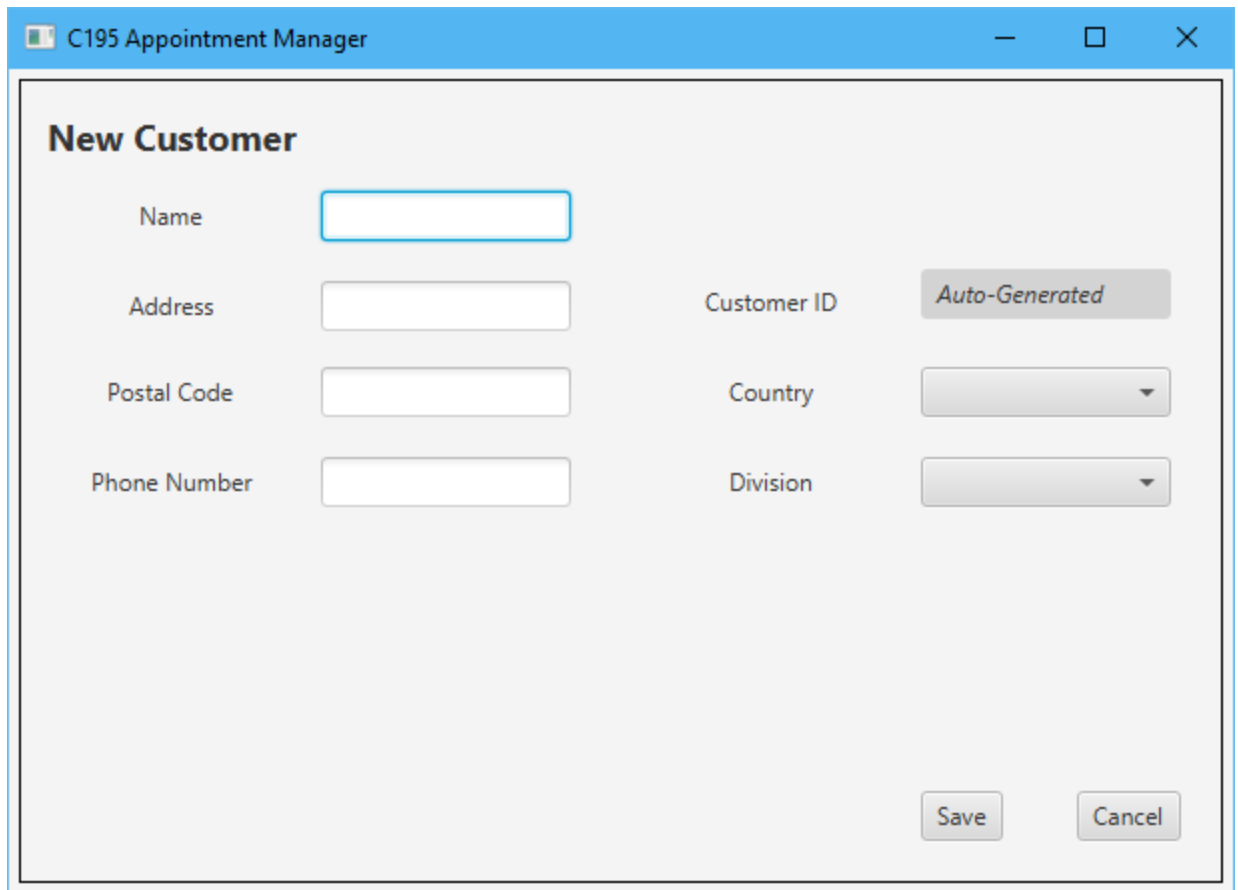
3. Appointment conflicts with an already existing appointment. A new date/time must be selected, or the existing appointment needs to be deleted.



*Figure 14 - Conflict with an existing appointment*

### **Add / Modify Customer Screens**

When clicking the “add” or “modify” button for a customer, the following screen will display with fields identical to what is seen in the table found on page 12. This screen is a basic form with two buttons to save or cancel. All fields must be populated before saving.

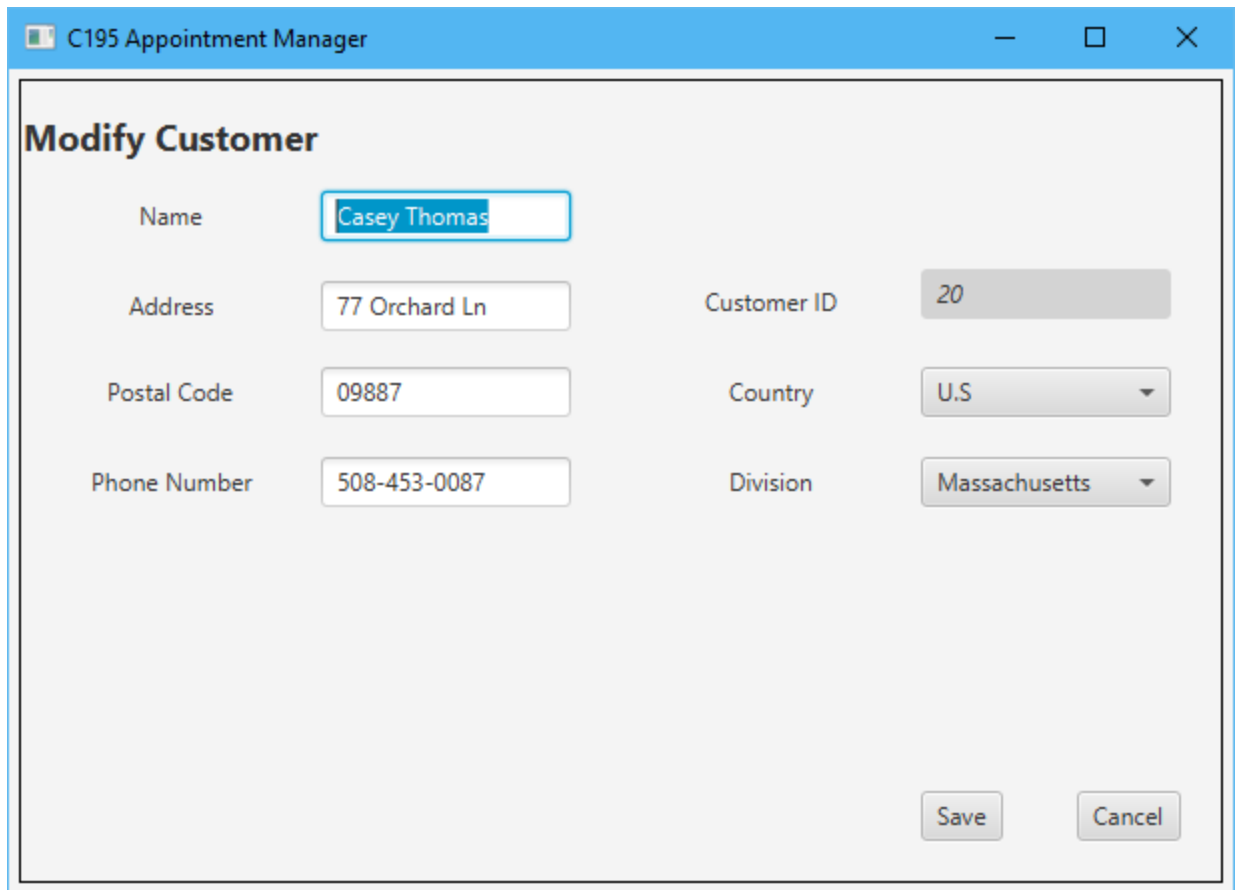


The screenshot shows a window titled "C195 Appointment Manager" with a standard Windows-style title bar (minimize, maximize, close buttons). The main content area is titled "New Customer" in bold. It contains a form with the following fields and controls:

- Name:** A text input field.
- Address:** A text input field.
- Postal Code:** A text input field.
- Phone Number:** A text input field.
- Customer ID:** A button labeled "Auto-Generated".
- Country:** A dropdown menu.
- Division:** A dropdown menu.
- Save:** A button at the bottom right.
- Cancel:** A button at the bottom right, next to the Save button.

Figure 15 - New customer creation screen





The screenshot shows a window titled "C195 Appointment Manager" with a standard Windows title bar (minimize, maximize, close buttons). Inside the window is a form titled "Modify Customer". The form contains the following fields:

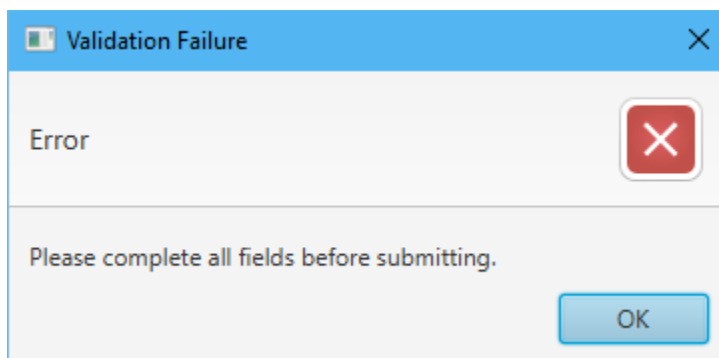
Field Label	Value
Name	Casey Thomas
Address	77 Orchard Ln
Postal Code	09887
Phone Number	508-453-0087
Customer ID	20
Country	U.S.
Division	Massachusetts

At the bottom right of the form are two buttons: "Save" and "Cancel".

Figure 16 - Modify existing customer screen

Error Dialogs that may display:

1. All fields are not populated. All fields must be completed before saving.



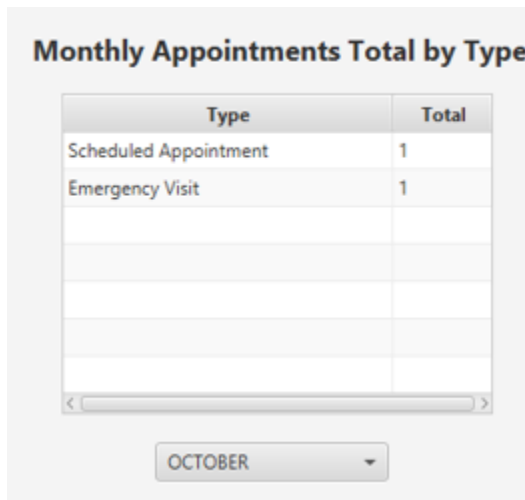
The screenshot shows a small error dialog box titled "Validation Failure". It has a blue header bar with a close button (X). The main area is light gray and contains the text "Error" followed by a red square icon with a white X. Below this, the message "Please complete all fields before submitting." is displayed. At the bottom right is an "OK" button.

Figure 17 - Field validation check

## Reports Screen

The reports screen contains 3 reports: monthly appointments total by type, the total number of customers, and the contact's schedule.

Monthly appointments total by type report is broken down by the month selected. There is a drop-down box with all twelve months available. Upon selection, a table will populate and show what type of appointment has been or is currently scheduled for the month.



**Monthly Appointments Total by Type**

Type	Total
Scheduled Appointment	1
Emergency Visit	1

OCTOBER ▼

*Figure 18- Total appointment type for October*

Contact Schedule works similarly to the monthly appointments by type report, however, for this instance, the user is selecting the Contact ID to view their schedule.

Contact Schedule						
Appt ID	Title	Type	Description	Start Time	End Time	Customer ID
87	Vomiting Dog	Emergency Visit	Dog	2022-10-10T08:00	2022-10-10T10:00	1

1

Figure 19- Current schedule for contact ID #1

Additionally, there is a third report that shows the total current number of customers in the database. This report requires no user intervention and will display automatically once the user opens the reports screen.

Current Total # of Customers
4

Figure 20- Total number of customers report

## **Unit Test Plan**

### **Introduction**

#### **Purpose**

One of the main features that went through a rigorous amount of testing was the passing of data when adding or modifying an appointment. The application does not store any internal information and gathers all records from the server, so making sure everything was being saved accurately was a necessity.

#### **Overview**

The application passes the information for appointment data either via the NewAppointment controller (if it's a new appointment) or the ModifyAppointment controller (if it's an existing appointment). When a user completes filling in all the fields to schedule a new appointment, they are required to hit the 'save' button. The save button goes through a rigmarole of validation steps before that data is pushed to the server. The first step taken is validating that all the fields are required. The database does not allow for a null field to pass, so checks are performed to make sure that the data is not null, and that it's the correct variable type. Should a field return null an alert will prompt the user to make changes to the field. Until the field validation error is resolved, the user will be unable to save any data to the server. The validation checks on the NewAppointment and ModifyAppointment controllers use the same code since they both pass the same data.

**Test Plan****Items**

1. NewAppointment/ModifyAppointment Controllers
2. Alerts class
3. Connection to the database
4. IntelliJ IDE 2022.1.2 using SDK Java 11.0.14
5. JavaFX 18.0.1

**Features**

When the save button is pressed, an `ActionEvent` called 'onSaveButton' goes off and lets the applications know it needs to start the validation process. The `ActionEvent` process runs through each field, dropdown box, and calendar value on the screen to validate that everything is in the correct order. Should the validation process find an anomaly, it calls an alert dialog from the Alerts class to display. This dialog displays the text title as "Validation Failure" and the text description as "Please double check all fields have been completed before submitting." When the user clicks "OK" on the dialog box, the application returns to the form where the user can make the necessary changes to correct the data that may have been missed.

**Deliverables**

If the task fails, a dialog box appears and informs the user that the field validation check has failed. If the task passes, the data is saved and added to the server and will redirect the user back to the main screen where the information is now stored in the Appointments table.

**Tasks**

1. Log in to the application using the username "test" and password "test"

2. Navigate to the NewAppointment scene by clicking the “New” button under the appointments tableview.
3. Reference the following data when creating the new appointment:

**C195 Appointment Manager**

### New Appointment

Appointment ID	Auto-Generated	Appointment Date	10/10/2022
Title	TestTitle		
Description	TestDescription		
Location	TestLocation		
Contact	Anika Costa	Start Time	21:00
Type	TestType		
Customer ID	1	End Time	21:30
User ID	1		

Save Cancel

Figure 21- Test data for a new appointment

4. Fill in the fields as shown above (do not click save)

5. Remove data from the title field and click save. A dialog box should pop up notifying the user that the field is empty.
6. Re-add the data that was removed from the field in step 5 and delete the data from the next field. Click save again – the same dialog should display again.
7. Repeat steps 5 and 6 until all fields, including appointment data, start time, and end time are validated.
8. Populate all fields exactly as shown in step 3, leaving no fields empty this time. Click save.
9. Validate the newly created test appointment appears in the Appointments tableview and that the information displayed is accurate.

Appointment List									
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1

Figure 22 - Successful addition of test data to the new appointment tableview

Expected Results: All fields should successfully pass validation checks. Appointments should be added to the database and shown on the tableview once saved.

### Needs

1. IntelliJ IDE 2022.1.2 using SDK Java 11.0.14
2. JavaFX 18.0.1
3. Connection to the active database
4. Application login credentials

### Pass/Fail Criteria

Pass - All fields will display an alert dialog if data is not present. Upon saving, the appointment is successfully added to the database and is viewable on the tableview.

Fail –

1. Dialog boxes do not pop up for one or multiple fields when clicking save
2. The application throws an SQLException error when save is clicked
3. Data is not present in the tableview once save is clicked

### Specifications

```
public void onSaveButton(ActionEvent actionEvent) throws IOException, SQLException {  
  
    saveFlag = true;  
  
    if (titleField.getText().isEmpty() ||  
        descField.getText().isEmpty() ||  
        locationField.getText().isEmpty() ||  
        typeField.getText().isEmpty() ||  
        startCalendar.getValue() == null ||  
        startTimeComboBox.getSelectionModel().isEmpty() ||  
        endTimeComboBox.getSelectionModel().isEmpty() ||  
        customerIdComboBox.getSelectionModel().isEmpty() ||  
        userIdComboBox.getSelectionModel().isEmpty() ||  
        contactComboBox.getSelectionModel().isEmpty()) {  
  
        Alerts.emptyFields();  
        saveFlag = false;  
        return;  
    }  
}
```

Figure 23- onSaveButton method used to validate the fields on the NewAppointment scene

```
public static void emptyFields(){  
    Alert alert = new Alert(Alert.AlertType.ERROR, "Please double check all fields have been completed before submitting.");  
    alert.setTitle("Validation Failure");  
    Optional<ButtonType> option = alert.showAndWait();  
}
```

Figure 24 - Alert called if field validation fails



## Procedures

The following test case has been created to test the validation feature:

1. Log in to the application using IntelliJ using the username “test” and password “test”
2. Navigate to the NewAppointment scene by clicking the “New” button under the appointments tableview.
3. Enter data for all fields except for one. Click save. Ensure that the dialog box displays correctly.
4. Continue entering data for all fields except one until all fields have been tested, ensuring that the validation test is working properly for each specific field.
5. When all fields have been tested successfully, complete all fields to save a test appointment to the database.
6. Validate the newly created test appointment appears in the Appointments tableview and that the information displayed is accurate.

**Expected Results:** All fields should successfully pass validation checks. Appointments should be added to the database and shown on the tableview once saved.

Appointment List									
Current System Time: 14:5									
Current East Coast Time: 14:5									
ID#	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1

Figure 25- Successful addition of test data to the new appointment tableview

**Failed Results:**

1. A dialog box does not appear and an SQLException displays in the IDE.
2. A dialog box does not appear but accepts null values for one/multiple fields.
3. A dialog box appears but saves the incorrect data anyway
4. A dialog box does not appear; however, the data is not saved to the database or does not display on the tableview.

**Results**

**C195 Appointment Manager**

**New Appointment**

Appointment ID: Auto-Generated

Title: TestTitle

Description: TestDescription

Location: TestLocation

Contact: Li Lee

Type: TestType

Customer ID: 1

User ID: 1

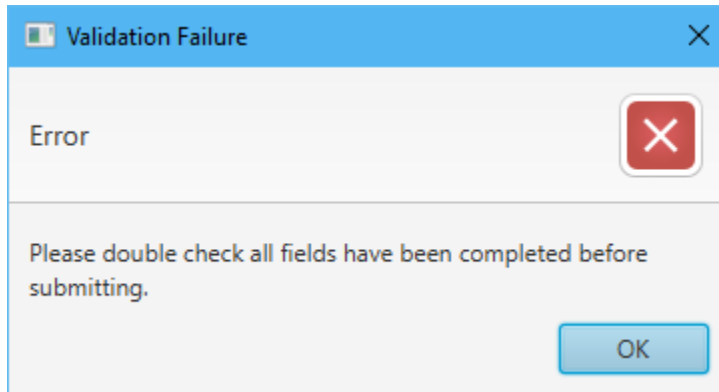
Appointment Date: 10/10/2022

Start Time: 08:00

End Time:

Save Cancel

*Figure 26 - Test Data entered omitting the End Time selection box to perform validation checks*



*Figure 27- Dialog box displayed because of the end time selection box being null*

**C195 Appointment Manager**

### New Appointment

Appointment ID	Auto-Generated	Appointment Date	10/17/2022
Title	TestTitle		
Description	TestDescription		
Location	TestLocation		
Contact	Li Lee	Start Time	08:00
Type	TestType		
Customer ID	1	End Time	08:30
User ID	1		

Save Cancel

Figure 28- Re-running the test with the end-time selection box being populated

**C195 Appointment Manager**

Current System Time: 15:04  
Current East Coast Time: 15:04

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1
89	TestTitle	TestDescription	TestLocation	TestType	2022-10-17T08:00	2022-10-17T08:30	1	1	3

New Modify Delete ☒ View All ☐ Weekly ☐ Monthly Search by Appointment Title

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

New Modify Delete Search by Customer Name Reports Log out

Figure 29 - Test data has successfully been added to the appointment tableview

## C4. Source Code

The source code will be contained in a separate zip file.

## C5. Link to Live Version

A live version is unavailable. The application can be via the code provided in the zip file using IntelliJ IDE. To login to the application, use username “test” and password “test”.

## **User Guide**

### **Introduction**

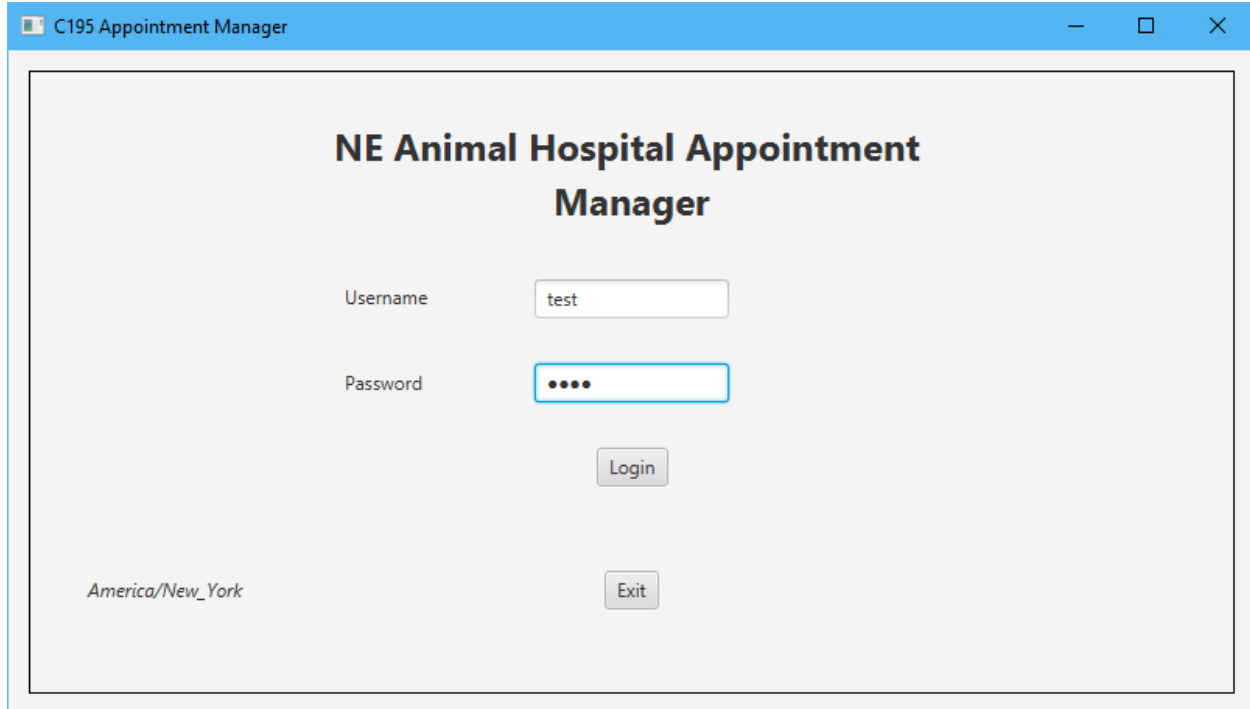
This user guide provides an overview of how to navigate the appointment manager as well as explains the basic steps needed to properly use the application. This guide will assist the user in creating, modifying, and deleting appointments and customers, and show the user how to generate and read the reporting available.

### **Installation and Using the Application**

#### ***Login Screen***

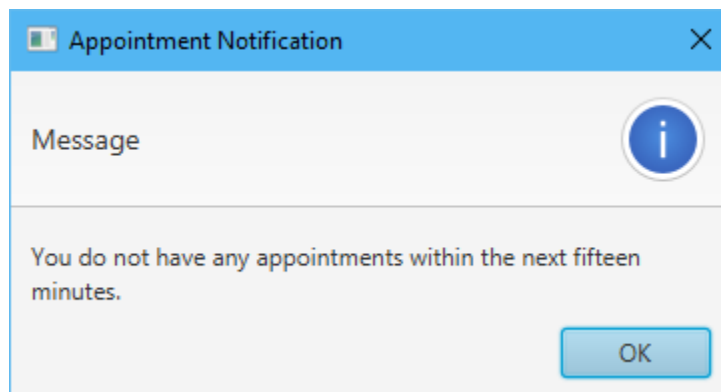
The first screen user will see upon first opening the login application is the login screen. The login screen contains a username field, a password field, a location label, a login button, and

an exit button.



*Figure 30- Login Screen*

1. Enter your username in the username field. (Evaluators can use the username “test”)
2. Enter your password in the password field. (Evaluators can use the password “test”)
3. Click login
4. A notification will display letting the user know if there is an appointment scheduled in the next fifteen minutes.



*Figure 31 - Appointment notification*



**Create a New Appointment**

1. Once logged in, click the “New” button below the Appointment’s table to add a new appointment.

**Appointment List**

Current System Time: 15:20  
Current East Coast Time: 15:20

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1
89	TestTitle	TestDescription	TestLocation	TestType	2022-10-17T08:00	2022-10-17T08:30	1	1	3

☒ View All
 ☐ Weekly
 ☐ Monthly

**Customers**

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF198	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

Figure 32 - New appointment button

2. To create an appointment, fill out all the fields on the screen. All fields must be completed to pass validation checks. Remember that appointments cannot overlap with other existing appointments.
3. Once all fields are completed, click the save button.

**C195 Appointment Manager**

### New Appointment

Appointment ID: Auto-Generated

Title: TestTitle

Description: TestDescription

Location: TestLocation

Contact: Li Lee

Type: TestType

Customer ID: 1

User ID: 1

Appointment Date: 10/17/2022

Start Time: 08:00

End Time: 08:30

**Save** **Cancel**

Figure 33- Adding a new appointment

4. The new appointment should now display on the appointments table.

**C195 Appointment Manager**

Current System Time: 15:20  
Current East Coast Time: 15:20

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1
89	TestTitle	TestDescription	TestLocation	TestType	2022-10-17T08:00	2022-10-17T08:30	1	1	3

☒ View All
 ☐ Weekly
 ☐ Monthly

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

Figure 34 - Displaying the new appointment in the appointments table

### ***Modify an Existing Appointment***

1. Once logged in, click the “Modify” button below the Appointment’s table to modify an appointment.

**C195 Appointment Manager**

Current System Time: 15:20  
Current East Coast Time: 15:20

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1
89	TestTitle	TestDescription	TestLocation	TestType	2022-10-17T08:00	2022-10-17T08:30	1	1	3

☒ View All ☐ Weekly ☐ Monthly

Search by Appointment Title

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

Search by Customer Name

Figure 35 - Modify an appointment button

2. Find the field you are looking to modify. In this example, I will be modifying the title of the appointment. Change the field to the desired value. Once completed, click save.

**Modify Appointment**

Appointment ID: 89

Title: ModifiedTitle

Appointment Date: 10/17/2022

Description: TestDescription

Location: TestLocation

Contact: Li Lee

Type: TestType

Customer ID: 1

User ID: 1

Start Time: 08:00

End Time: 08:30

Save Cancel

Figure 36 - Modify appointment screen

3. View the table. The modified appointment should now display the updated information.

**C195 Appointment Manager**

Current System Time: 15:27  
Current East Coast Time: 15:27

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1
89	ModifiedTitle	TestDescription	TestLocation	TestType	2022-10-17T08:00	2022-10-17T08:30	1	1	3

☒ View All
 ☐ Weekly
 ☐ Monthly

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

*Figure 37 - Successful modification of an appointment in the table*

### **Delete an Appointment**

1. Once logged in, locate the appointment to be deleted.
2. Select the item on the appointments table

C195 Appointment Manager

Appointment List

Current System Time: 15:27  
Current East Coast Time: 15:27

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1
89	ModifiedTitle	TestDescription	TestLocation	TestType	2022-10-17T08:00	2022-10-17T08:30	1	1	3

New Modify Delete

☒ View All ☐ Weekly ☐ Monthly

Search by Appointment Title

Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

New Modify Delete

Search by Customer Name

Reports Log out

Figure 38 - Selecting an appointment to delete

3. Click the “delete” button.

**C195 Appointment Manager**

Current System Time: 15:27  
Current East Coast Time: 15:27

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1
89	ModifiedTitle	TestDescription	TestLocation	TestType	2022-10-17T08:00	2022-10-17T08:30	1	1	3

☒ View All
 ☐ Weekly
 ☐ Monthly

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

Figure 39 - Deleting the appointment

- A dialog prompt will display showing successful deletion. The prompt will display some of the deleted appointment information.

**Success!**

Success!

Appointment ID: 89 has been deleted. Appointment type was: TestType

OK

Figure 40 - Successful deletion notification



***Changing the appointment list view***

1. Login and observe the appointments table. By default, all appointments are displayed.
2. To sort by weekly appointments, click on the “Weekly” button.

**C195 Appointment Manager**

Current System Time: 15:27  
Current East Coast Time: 15:27

**Weekly Appointments**

ID	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1

New Modify Delete View All **Weekly** Monthly Search by Appointment Title

**Customers**

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

New Modify Delete Search by Customer Name Reports Log out

*Figure 41 - Weekly appointments table*

3. Weekly appointments will display.
4. To sort by monthly appointments, click on the “Monthly” button.

C195 Appointment Manager

Monthly Appointments

Current System Time: 15:27  
Current East Coast Time: 15:27

ID	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1

New Modify Delete

☐ View All ☐ Weekly ☒ Monthly

Search by Appointment Title

Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF198	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

New Modify Delete

Search by Customer Name

Reports Log out

Figure 42 - Monthly appointments table

5. To return to all appointments, click the “view all” button.

**C195 Appointment Manager**

Current System Time: 15:27  
Current East Coast Time: 15:27

### Appointment List

ID	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3

☒ View All
 ☐ Weekly
 ☐ Monthly

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

Figure 43 - All appointments table

### Adding a New Customer

1. Once logged in, click the “New” button below the Customers table to add a new customer.

**C195 Appointment Manager**

Current System Time: 15:27  
Current East Coast Time: 15:27

### Appointment List

ID	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3

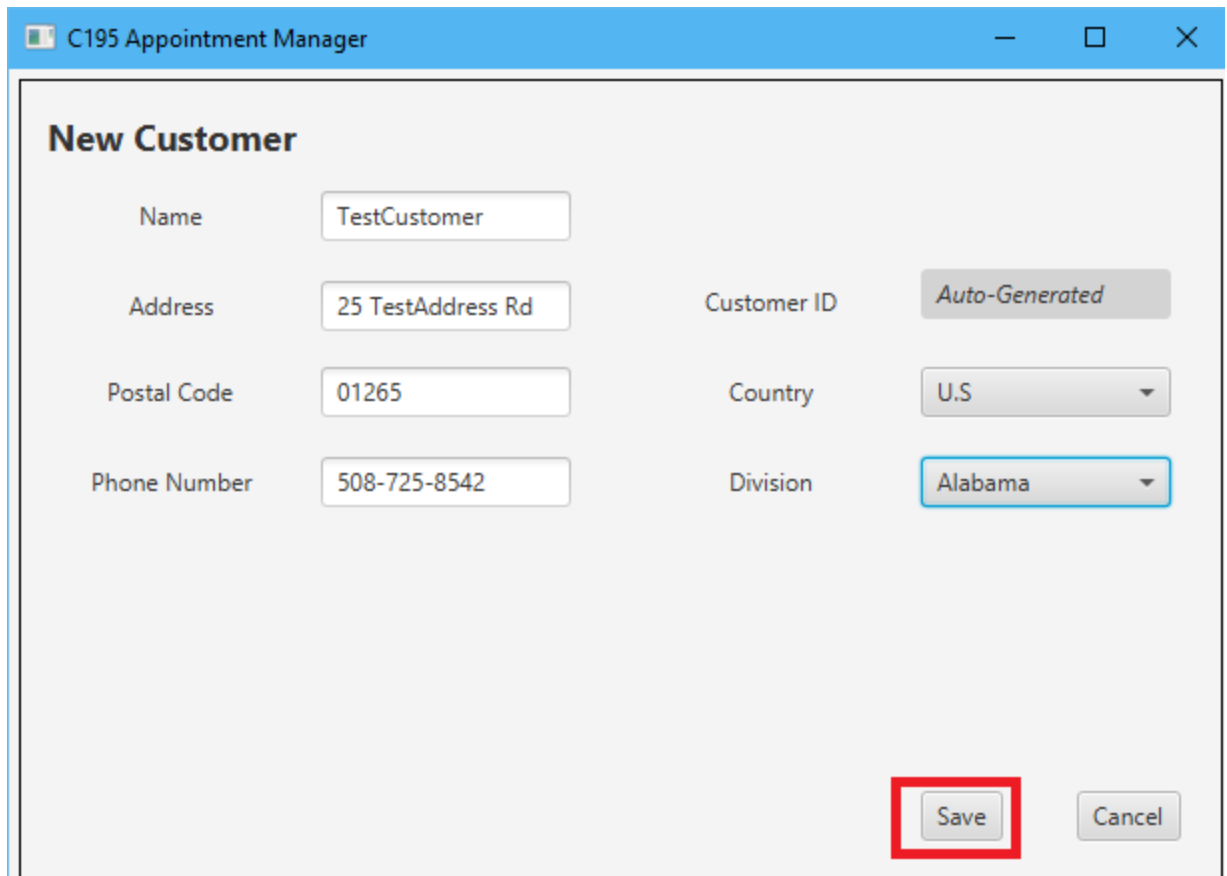
☒ View All ☐ Weekly ☐ Monthly

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts

Figure 44 - New customer button

2. To create a new customer, fill out all the fields on the screen. All fields must be completed to pass validation checks.
3. Once all fields are completed, click the save button.



**C195 Appointment Manager**

### New Customer

Name:

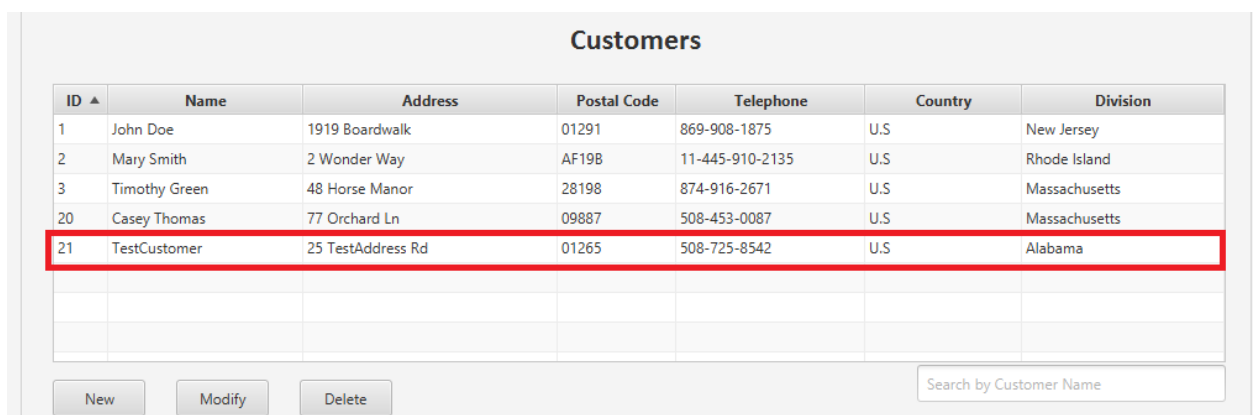
Address:  Customer ID:

Postal Code:  Country:

Phone Number:  Division:

Figure 45 - Saving a new customer

4. The new customer should now display on the customer's table.



ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts
21	TestCustomer	25 TestAddress Rd	01265	508-725-8542	U.S	Alabama

Figure 46 - New customer displayed on the table

### *Modifying an Existing Customer*

1. Once logged in, select the existing customer to modify and click on the “Modify” button below the customer’s table.

The screenshot shows the C195 Appointment Manager application interface. It features two main sections: 'Appointment List' and 'Customers'.

**Appointment List**

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1

Below the table are buttons for 'New', 'Modify', and 'Delete'. There are also radio buttons for 'View All' (selected), 'Weekly', and 'Monthly'. A search bar labeled 'Search by Appointment Title' is present.

**Customers**

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts
21	TestCustomer	25 TestAddress Rd	01265	508-725-8542	U.S	Alabama

Below the table are buttons for 'New', 'Modify' (highlighted with a red box), and 'Delete'. There is a search bar labeled 'Search by Customer Name' and buttons for 'Reports' and 'Log out'.

*Figure 47 - Modifying an Existing Customer*

2. The customer’s information will display on the modify customer screen. In this example, the customer’s name is being modified.
3. Make the desired changes to the customer, and click the “Save” button

**C195 Appointment Manager**

### Modify Customer

Name	<input type="text" value="ModifiedName"/>	Customer ID	<input type="text" value="21"/>
Address	<input type="text" value="25 TestAddress Rd"/>	Country	<input type="text" value="U.S"/>
Postal Code	<input type="text" value="01265"/>	Division	<input type="text" value="Alabama"/>
Phone Number	<input type="text" value="508-725-8542"/>		

Figure 48 - Making the modifications and saving them on the modify customer screen

4. The updated customer information should be displayed on the customer's table.

**C195 Appointment Manager**

Current System Time: 15:46  
Current East Coast Time: 15:46

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1

☒ View All
 ☐ Weekly
 ☐ Monthly

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts
21	ModifiedName	25 TestAddress Rd	01265	508-725-8542	U.S	Alabama

Figure 49 - Successfully modified customer

### Deleting a customer

1. Log in to the application and view the main screen. Observe the Customer table and locate the customer to be deleted.
2. Select the customer and click on the “Delete” button.



**C195 Appointment Manager**

Current System Time: 15:58  
Current East Coast Time: 15:58

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
90	TestTitle	Description	Location	Scheduled Appointment	2022-10-19T08:30	2022-10-19T09:45	21	1	3

New Modify Delete View All Weekly Monthly Search by Appointment Title

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts
21	ModifiedName	25 TestAddress Rd	01265	508-725-8542	U.S	Alabama

New Modify Delete Search by Customer Name Reports Log out

Figure 50 - Delete customer button

3. A dialog box will display letting the user know that the customer has scheduled appointments and deleting the customer will also remove any of their appointments.

**Warning!**

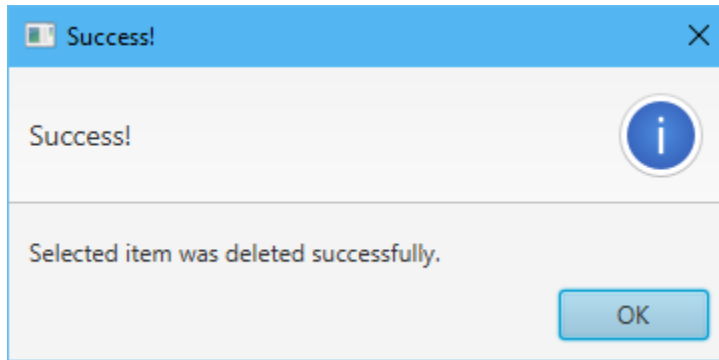
Warning!

Customer has scheduled appointments. Deleting this customer will also remove the appointments associated.

OK Cancel

Figure 51 - Deletion warning notification

4. To continue, click "OK", another dialog box will appear to show success.



*Figure 52 - Successful deletion notification*

5. Both the customer and associated appointments will be removed.

***Searching for a Customer/Appointment using the search field***

1. Log in to the main screen and observe the two tables. Each has built-in search functionality.

**C195 Appointment Manager**

Current System Time: 15:46  
Current East Coast Time: 15:46

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1

☒ View All
 ☐ Weekly
 ☐ Monthly

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts
21	ModifiedName	25 TestAddress Rd	01265	508-725-8542	U.S	Alabama

Figure 53 - Search fields for appointment and customer tables

2. To search for an appointment, enter the appointment title in the search field.
3. The appointment list will filter and display the results based on the search.

### Appointment List

Current East Coast Time: 15:49

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3

☒ View All
 ☐ Weekly
 ☐ Monthly

Figure 54 - Filtering appointments by the search text

4. To search for a customer, the process is the same, but now we are searching by customer name. Enter the customer's name in the search field.

The screenshot shows a web application titled "Customers". It features a table with columns: ID, Name, Address, Postal Code, Telephone, Country, and Division. The first row of the table is highlighted with a red border and contains the data: ID 1, Name John Doe, Address 1919 Boardwalk, Postal Code 01291, Telephone 869-908-1875, Country U.S., and Division New Jersey. Below the table, there are three buttons: "New", "Modify", and "Delete". To the right of these buttons is a search input field containing the text "John Doe", which is also highlighted with a red border. At the bottom right, there are two buttons: "Reports" and "Log out".

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S.	New Jersey

New Modify Delete

John Doe

Reports Log out

*Figure 55- Filtering customers by the search text*

5. The customer list will filter and display the results based on the search.
6. To clear the search criteria and return the table to default, simply delete the text in the search field.

## ***Reports***

1. Log into the application using valid credentials.
2. To view reports, click on the "Reports" button located at the bottom right of the application.

**C195 Appointment Manager**

Current System Time: 15:49  
Current East Coast Time: 15:49

### Appointment List

ID▲	Title	Description	Location	Type	Start Time	End Time	Customer ID	User ID	Contact ID
86	Kitten Spay	Kitten	Room 2B	Scheduled Appointment	2022-10-07T19:15	2022-10-07T21:00	3	2	3
87	Vomiting Dog	Dog	Room 1A	Emergency Visit	2022-10-10T08:00	2022-10-10T10:00	1	2	1
88	TestTitle	TestDescription	TestLocation	TestType	2022-10-10T21:00	2022-10-10T21:30	1	1	1

☒ View All
 ☐ Weekly
 ☐ Monthly

### Customers

ID ▲	Name	Address	Postal Code	Telephone	Country	Division
1	John Doe	1919 Boardwalk	01291	869-908-1875	U.S	New Jersey
2	Mary Smith	2 Wonder Way	AF19B	11-445-910-2135	U.S	Rhode Island
3	Timothy Green	48 Horse Manor	28198	874-916-2671	U.S	Massachusetts
20	Casey Thomas	77 Orchard Ln	09887	508-453-0087	U.S	Massachusetts
21	ModifiedName	25 TestAddress Rd	01265	508-725-8542	U.S	Alabama

Figure 56 - Reports button

3. The reports page will display. To display monthly appointment totals by type, select the month from the month dropdown.
4. The monthly appointment totals will display

**Monthly Appointments Total by Type**

Type	Total
Scheduled Appointment	1
Emergency Visit	1

<  >

Figure 57 - Monthly Appointment Totals by Type Report

- The steps are the same for the Contact Schedule report, but for this report, the user will select the contact ID.

**Contact Schedule**

Appt ID	Title	Type	Description	Start Time	End Time	Customer ID
87	Vomiting Dog	Emergency Visit	Dog	2022-10-10T08:00	2022-10-10T10:00	1

<  >

Figure 58 - Contact Schedule Report

- No user interaction is needed for the total customer report. It will display the total number of customers in the system by default.



*Figure 59 - Total Customers Report*