


Dentist Appointment Management System

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User Manual

Getting Started	
	<p>Description</p> <p>This project is built to reflect what a dental clinic appointments management system would be like.</p> <p>Project Structure</p> <p>This project is a Windows Presentation Foundation Application. WPF application has a reference project (console application) where hosts business logic classes.</p> <p>Scenario</p> <p>The clinic has two doctors, a General Dentist & a Pediatric Dentist. Both have their separate calendars. Our clinic has only one dental chair. So, appointments should be booked in a systematic way via WPF application. The clinic has an admissions clerk (secretary), responsible for managing the appointments and filling the patients' information.</p>
Appointment Slot	<p>Choose one of the available time slots from the combo box.</p> <p>Appointment Time <input type="text"/></p>
Age	<p>Enter age of the patient. Valid ages are [2-99]</p> <p>Age: <input type="text" value="0"/></p>
Gender	<p>Select gender from the drop-down list.</p> <p>Gender: <input type="text"/></p>
Medical Conditions	<p>Select if patient has any medical conditions mentioned in the list.</p> <p>Medical Conditions: <input type="text"/></p>
CT-XRAY	<p>Select yes if you patient has his CT-XRAY.</p>

	CT-XRAY: <input type="radio"/> Yes <input type="radio"/> No
Treatment	Choose one of the services which patient requests for. Treatment: <input type="text"/>
Credit card	Make a payment for the appointment by taking 16-digit credit card number. Credit Card <input type="text"/>
Register	<input type="button" value="Register"/> Create temporary patient and shows in Data Grid
Save	<input type="button" value="Save"/> To book an appointment, save the appointment
Display	<input type="button" value="Display"/> View the details of the patient.
Search	<input type="button" value="Search by age"/> Search details of the patient by age

Use cases

Register: Admissions clerk selects appointment time, age, gender, medical conditions, CT- XRAY, treatment and credit card number.

Display: Clerk views the details entered.

Save: Clerk saves all the details entered.

Search: Clerk views all the details by priority.

Fully Dressed use cases

Use case 1

Use case Name: Save Appointment

Scope: Booking an appointment online

Primary actor: Admissions clerk

Stake holder and Interests:

User wants to book a dental appointment.

Clerks takes the details of the patient and books an appointment.

Preconditions:

Clerk enters the details in the respective fields.

Success guarantee (Post conditions):

Appointment is successfully booked.

Main success scenario:

1. Clerk inputs all the valid details.
2. Clerk books an appointment for the patient.

Extensions:

Clerk enters the age which is out of range.

- a. Age field box will become red in color.

Clerk enters the credit card number in invalid format.

- a. Credit card field turns red in color.

Use case 2

Use Case Name: Display details

Scope: Booking appointment online

Primary actor: Clerk

Stake holder and Interests:

Clerk wants to view the details accurately with out any errors.

Preconditions:

Clerk must register and an appointment save before displaying any details.

Success guarantee (Post conditions):

Details are displayed successfully in the data grid with out any errors.

Main success scenario:

1. User registers an appointment
2. User views the entered details.

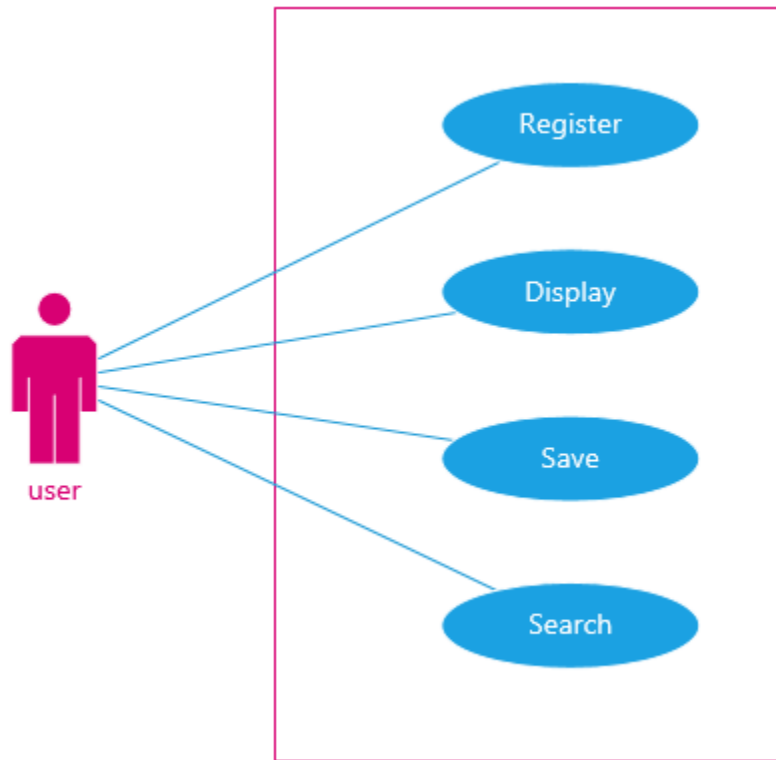
Extensions:

Clerk clicks display button before registering or saving an appointment.

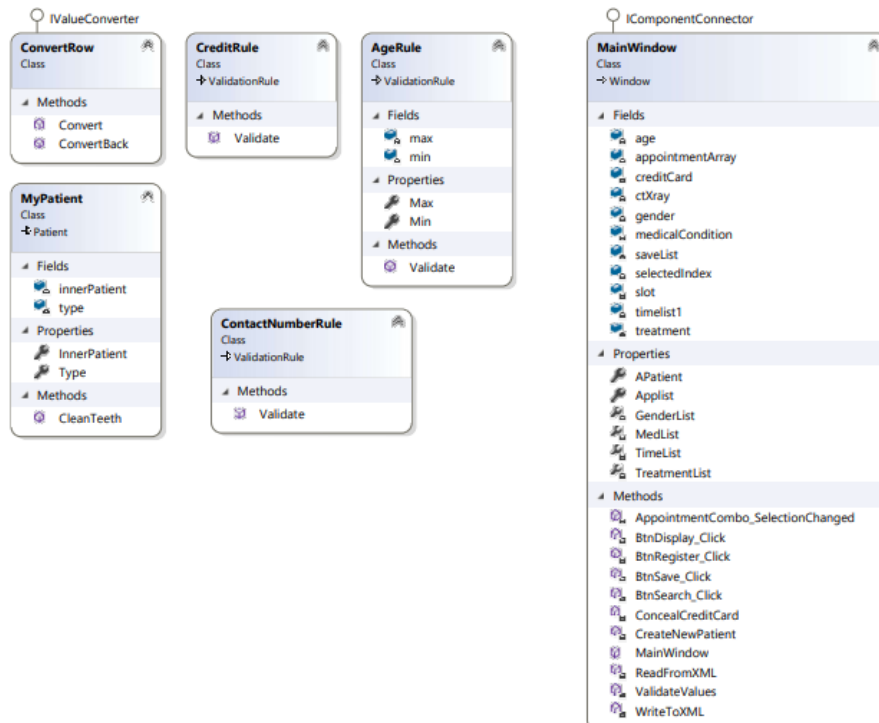
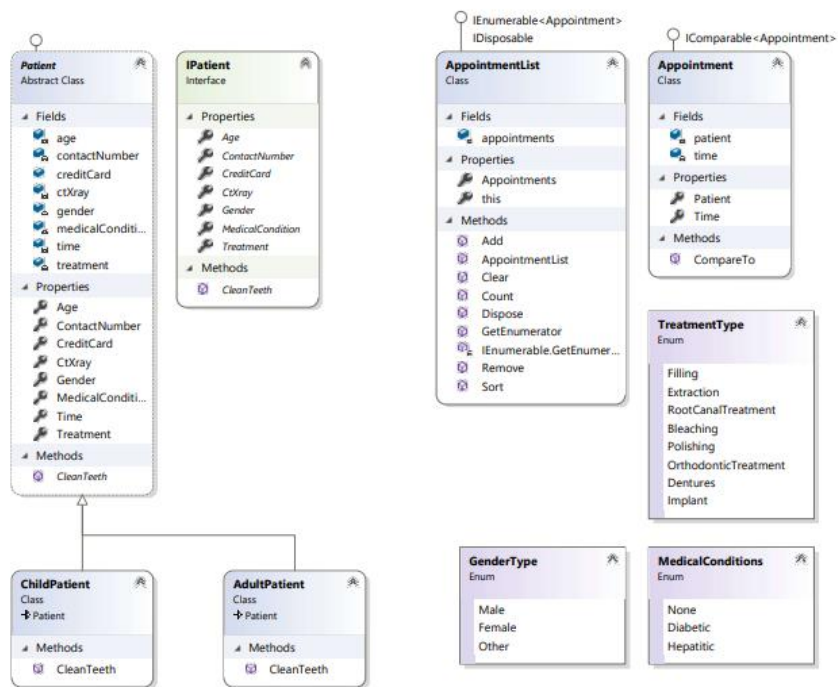
- a. No data is displayed on the screen.

UML Diagrams

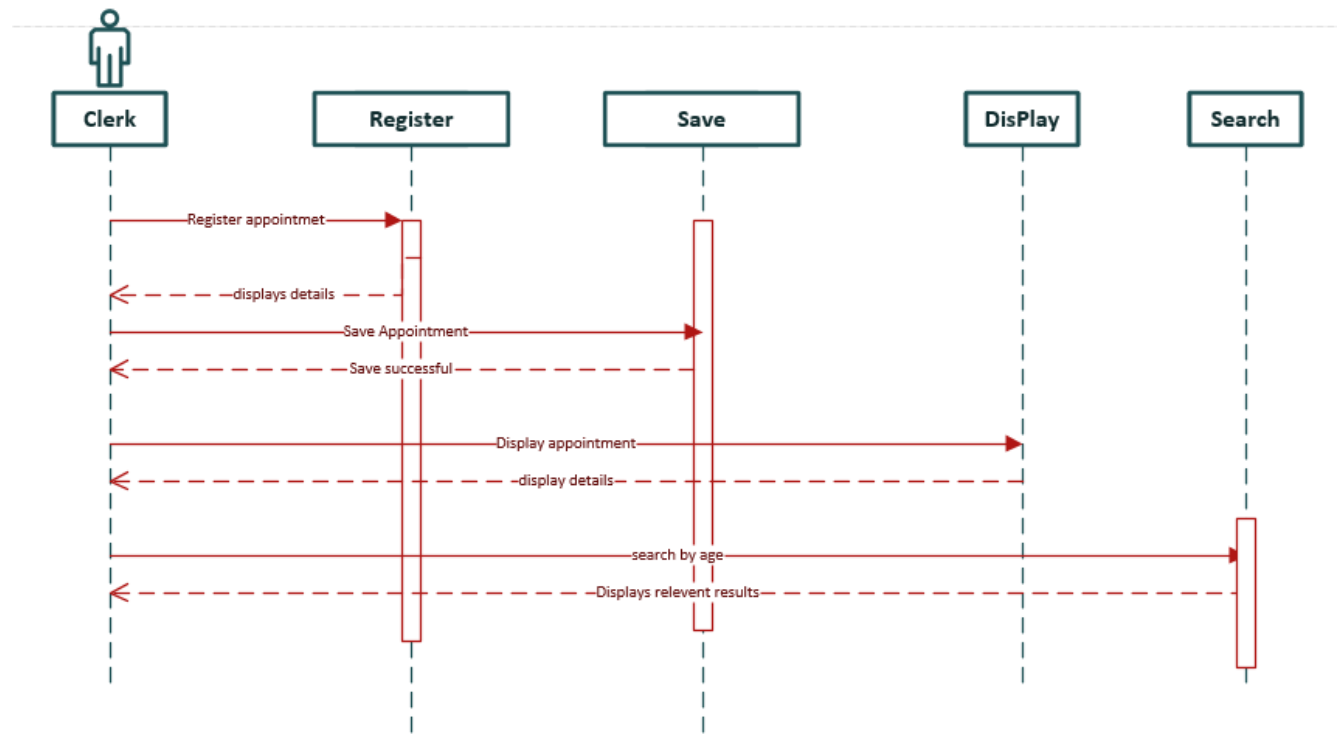
Use Case Diagram



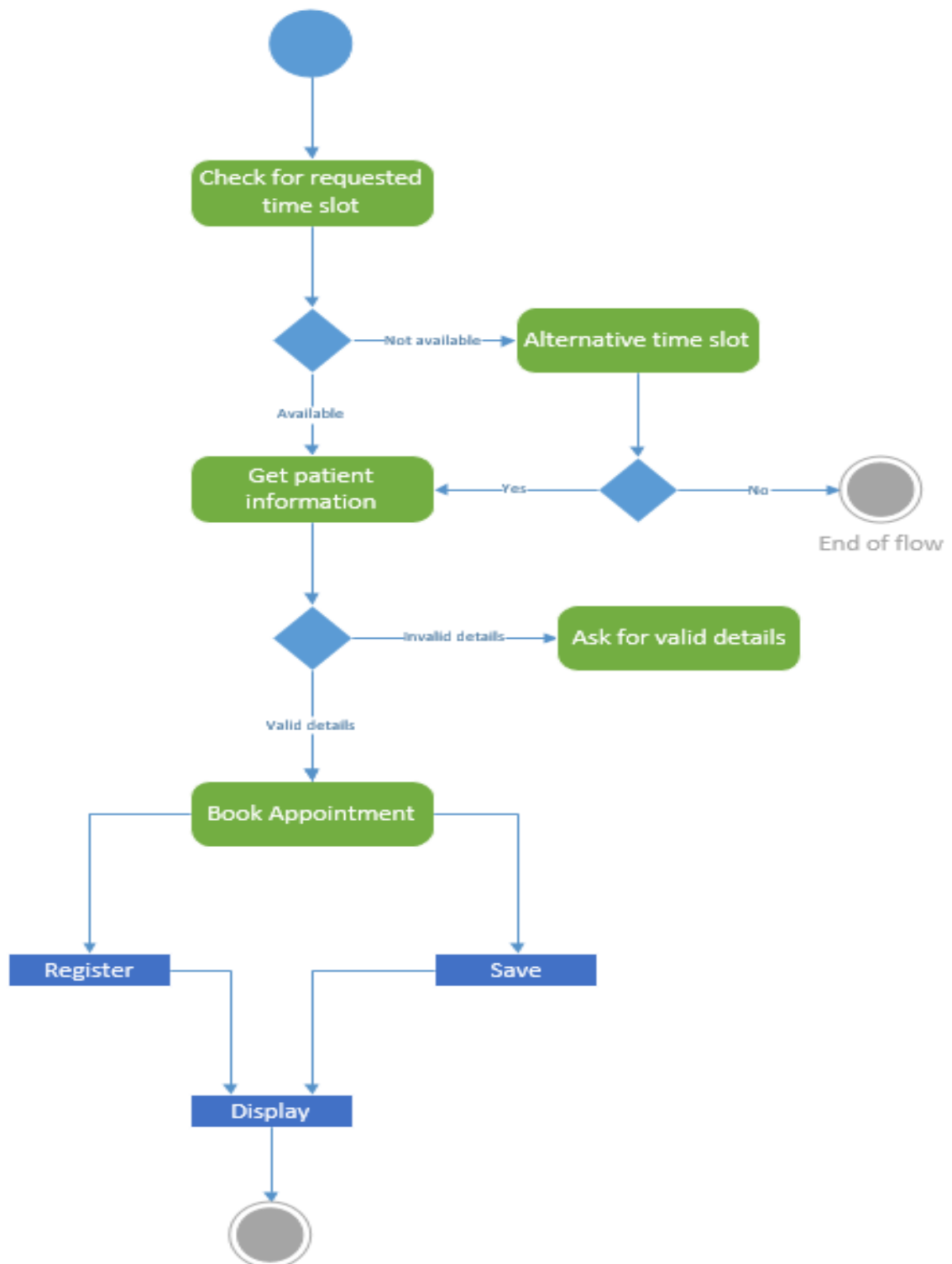
Class Diagrams



System Sequence diagram



Activity Diagram



User Interaction and design

This project is built to reflect what a dental clinic's appointments and patient's management system would be like.

GUI Screenshots

The screenshot displays the 'Dentist Appointment Manager' application. On the left is a registration form with the following fields and values:

- Appointment Time: 10:00 AM (dropdown)
- Age: 22 (text input)
- Gender: Male (dropdown)
- Medical Conditions: None (dropdown)
- CT-XRAY: No (radio button selected)
- Treatment: Filling (dropdown)
- Credit Card: 1234567891234567 (text input)

Below the form are three buttons: 'Register' (highlighted in blue), 'Display', and 'Save'. On the right is a 'List of Customers' window containing a table with the following data:

Time	Gender	Age	Medical Conditions	CT-XRAY	Treatment	Credit Card
09:00 AM	Male	4	None	True	Extraction	1234XXXXXXX4567

Below the table is a 'Search by age' text input field. The Windows taskbar at the bottom shows the time as 10:58 PM on 8/9/2019.

Error is handled when the data is invalid.

The left screenshot shows the registration form with valid data, identical to the first screenshot. The right screenshot shows the form with invalid data and error messages:

- Age: 112 (text input) with a red border and the message 'Enter a valid Age'.
- Credit Card: 1234567891234567123 (text input) with a red border.
- The 'Register' button is disabled (greyed out).
- A red error message 'Error Registering Customer' is displayed at the bottom right.

If the patient's age is 15 and above will be considered as Adult patient and age less than 15 is considered as a child patient.

Details of child patient is displayed in green whereas adult patient details are displayed in yellow color.

Appointment Time

Age:

Gender:

Medical Conditions:

CT-XRAY:

☐ Yes ☐ No

Treatment:

Credit Card

Register

Display

Save

List of Customers

Time	Gender	Age	Medical Conditions	CT-XRAY	Treatment	Credit Card
10:00 AM	Male	17	None	True	Extraction	1234XXXXXXXXX4561
12:00 PM	Female	12	Hepatitis	False	RootCanalTreatment	2345XXXXXXXXX4561
15:00 PM	Female	16	Diabetic	True	Bleaching	2345XXXXXXXXX4561

Search by age

When clerk saves an appointment with out any errors, it will be saved successfully.

Appointment Time

Age:

14

Gender:

Female

Medical Conditions:

None

CT-XRAY:

☒ Yes ☐ No

Treatment:

Bleaching

Credit Card

1234567890123456

Register

Display

Save

List of Customers

Time	Gender	Age	Medical Conditions	CT-XRAY	Treatment	Credit Card
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Search by age

Save Successful

OK

Error has been handled by displaying a message to the clerk.

Appointment Time

13:00 PM

Age:

45

Gender:

Female

Medical Conditions:

Diabetic

CT-XRAY:

☒ Yes ☐ No

Treatment:

RootCanalTreatment

Credit Card

123456789023456

Enter a valid Credit Card

Register

Display

Save

Error Registering Customer

List of Customers

Time	Gender	Age	Medical Conditions	CT-XRAY	Treatment	Credit Card
------	--------	-----	--------------------	---------	-----------	-------------

Search by age

Filter appointments by age

List of Customers							
Time	Gender	Age	Medical Conditions	CT-XRAY	Treatment	Credit Card	
16:00 PM	Female	10	None	True	Polishing	0987XXXXXXXX8765	
12:00 PM	Male	10	None	False	Extraction	0987XXXXXXXX3456	

Search by age

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Sort Appointments by Age

Before Sorting

Time	Gender	Age	Medical Conditions	CT-XRAY	Treatment	Credit Card
09:00 AM	Male	4	None	True	Extraction	1234XXXXXXXXX4567
10:00 AM	Female	33	None	False	RootCanalTreatment	1234XXXXXXXXX4567
14:00 PM	Male	55	Diabetic	False	Dentures	1234XXXXXXXXX4567
16:00 PM	Female	10	None	True	Polishing	0987XXXXXXXXX8765

After Sorting

Time	Gender	Age	Medical Conditions	CT-XRAY	Treatment	Credit Card	
09:00 AM	Male	4	None	True	Extraction	1234XXXXXXXX4567	
16:00 PM	Female	10	None	True	Polishing	0987XXXXXXXX8765	
10:00 AM	Female	33	None	False	RootCanalTreatment	1234XXXXXXXX4567	
14:00 PM	Male	55	Diabetic	False	Dentures	1234XXXXXXXX4567	