

Course Number: 420-DW4-AS
Course Title: Web Server Applications Development II
Session: Autumn 2023
Group: 7262

FINAL PROJECT REPORT

TITLE: Property Rental Management Web Site

DUE DATE: November 30, 2023

SUBMITTED

To

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I. PROJECT DESCRIPTION

Property Rental Management Web Site serves as a comprehensive platform designed to streamline property rental processes for both property owners and potential tenants. The system is structured to accommodate the distinct roles of Property Owners/Administrators, Property Managers, and Potential Tenants, offering tailored functionalities to meet their specific needs.

II. PROJECT DEVELOPMENT

PHASE I ANALYSIS

1. Introduction:

Purpose: The purpose of this document is to outline the functional requirements of the Property Rental Management Web Site, detailing the features and capabilities that the system must possess to meet the needs of Property Owners, Property Managers, and Potential Tenants.

Scope: The system will cover account management, property and apartment operations, appointment scheduling, communication, and reporting functionalities.

2. User Roles:

Property Owner/Administrator:

- Account Management
- Tenant Management
- Web Site Control

Property Manager:

- Building Operations
- Apartment Operations
- Status Tracking
- Appointment Scheduling
- Communication and Reporting

Potential Tenants:

- Account Creation
- Apartment Exploration
- Appointment Booking
- Communication

3. Functional Requirements:

3.1 Property Owner/Administrator:

3.1.1 Account Management:

- Create a new Property Manager account.
- Update details of an existing Property Manager account.
- Delete a Property Manager account.
- Search and list Property Manager accounts.

3.1.2 Tenant Management:

- Update details of an existing Potential Tenant account.
- Delete a Potential Tenant account.
- Search and list Potential Tenant accounts.

3.1.3 Web Site Control:

- Full control over the web site.
- Monitor and manage overall system functionality.

3.2 Property Manager:

3.2.1 Building Operations:

- Create a new building entry.
- Update details of an existing building.
- Delete a building entry.
- Search and list buildings.

3.2.2 Apartment Operations:

- Create a new apartment entry.
- Update details of an existing apartment.
- Delete an apartment entry.
- Search and list apartments.

3.2.3 Status Tracking:

- Mark apartments as available, occupied, or under maintenance.
- Track and manage apartment status changes.

3.2.4 Appointment Scheduling:

- Schedule appointments with Potential Tenants.
- View and manage appointment schedules.

3.2.5 Communication:

- Respond to messages from Potential Tenants.
- Facilitate effective communication within the system.

3.2.6 Reporting:

- Generate and view reports on relevant events.
- Provide Property Owners/Administrators with insights.

3.3 Potential Tenants:

3.3.1 Account Creation:

- Create a new online account.
- Provide necessary information for account setup.

3.3.2 Apartment Exploration:

- View apartments based on specified criteria.
- Explore details of available apartments.

3.3.3 Appointment Booking:

- Schedule appointments with Property Managers.
- Confirm and manage appointment schedules.

3.3.4 Communication:

- Send messages to Property Managers.
- Receive and manage communication within the system.

4. Non-functional Requirements:

4.1 Performance:

- The system should handle concurrent user activities efficiently.

4.2 Security:

- User authentication and authorization mechanisms should be robust.

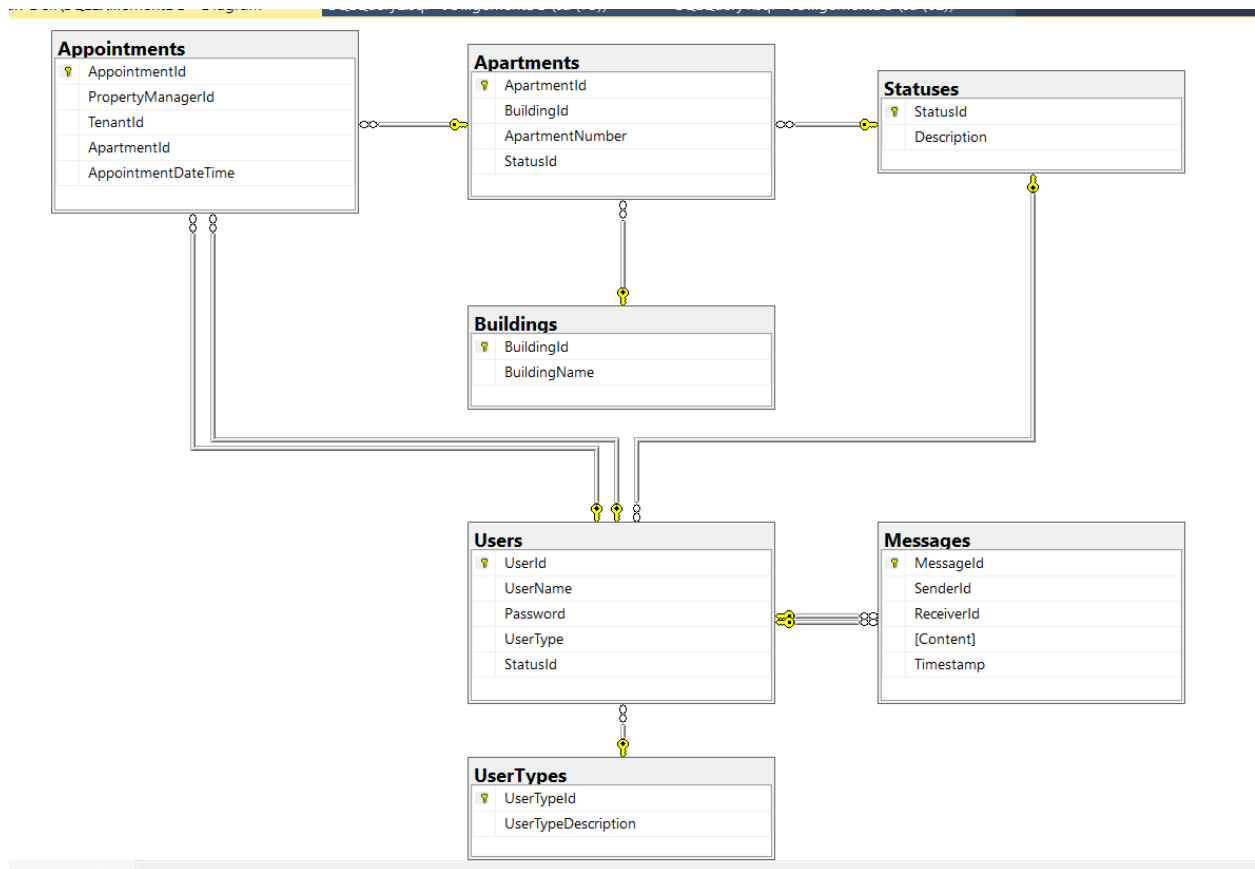
4.3 Usability:

- The user interface should be intuitive and user-friendly.
- Help documentation and tooltips should be provided where necessary.

5. Constraints:

- The system must comply with relevant data protection and privacy regulations.
- Compatibility with modern web browsers (Chrome, Firefox, Safari, Edge) is required.

PHASE II DESIGN



PHASE III IMPLEMENTATION

[Property Rental Management Web Site \(github.com\)](https://github.com)

PHASE IV TESTING THE PROGRAM

User Role	Functional Requirement	Test Result/Problem(s)
Property Owner/Administrator	Create Property Manager Account	Test Passed
Property Owner/Administrator	Update Property Manager Account	Test Passed
Property Owner/Administrator	Delete Property Manager Account	Test Passed
Property Owner/Administrator	Search/List Property Manager Accounts	Test Passed
Property Owner/Administrator	Update/Delete/Search/List Potential Tenant Account	Test Passed
Property Owner/Administrator	Full Control of the Website	Test Passed
Property Manager	Perform CRUD operations related to buildings	Test Passed
Property Manager	Perform CRUD operations related to apartments	Test Passed
Property Manager	Keep track of apartment status	Test Passed
Property Manager	Schedule potential tenant appointments	Test Passed
Property Manager	Respond to potential tenant messages	Test Passed
Property Manager	Send message to the property owner when necessary	Test Passed
Potential Tenant	Create an online account through the Property Rental Website	Test Passed
Potential Tenant	View apartments suitable for their needs	Test Passed
Potential Tenant	Make an appointment with the property manager	Test Passed

User Role	Functional Requirement	Test Result/Problem(s)
Potential Tenant	Send necessary messages to the property manager	Test Passed
Performance	System handles concurrent user activities efficiently	Test Passed
Security	Robust user authentication and authorization mechanisms	Test Passed
Usability	Intuitive and user-friendly interface	Test Passed

III. CONCLUSION

This course has provided me with valuable insights into critical thinking, autonomy initiative, time management and analytic and synthetic. I have developed a deeper understanding of key concepts such as analyzing, designing, implementing and testing an application using Visual Studio 2022, ASP.NET Core MVC/ASP.NET MVC, C# and SQL Server 2019, and I have honed my skills in analyze the application development project, prepare the database, program the Web interface, program the server-side and client-side application logic. The hands-on projects and assignments have not only challenged me but also equipped me with practical knowledge that I can apply in real-world scenarios.

IV. BIBLIOGRAPHY

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4. [ASP.Net Core MVC Tutorial - Code Maze \(code-maze.com\)](#)
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