

12-04-2020

FINAL PROJECT DOCUMENTATION

BOSTON APARTMENTS

PREPARED BY: AMIT SQUARED [TEAM 1]

AMIT SHARMA

AMIT PANDEY

BHAVANA VAKKALAGADDA

SAI VINAY GANGADHARABHATLA

SURAJ ATMAKURI

TABLE OF CONTENTS

Project Description	2
Overview	2
Key Requirements	3
Design and Architecture	4
Deliverables	7
User Manual	9
2.1.How to Upload and run the project	9
2.1.1.How to Upload code base	9
2.1.2 How to start apache server	10
2.1.3. How start my sql server	10
2.1.4. How to Run the project	11
2.1.5. Client login	11
2.1.6 login to the client portal	12
Functionalities developed	13
2.2. client page	13
2.2.1 .sorting functionality	14
2.2.2 .scroll down bar	15
2.2.3.status field fix	16
2.2.4.All filters in the page fix	19
2.3 landlords	22
2.4 listings	23
2.5 user preferences	25
2.6 image magicks	26
2.7 database changes	26
Installation Guide	28
Setting up local IDE	28
Setting up XAMPP server	28
Configuring XAMPP/MySQL to allow table creation from PHPMyAdmin file dump	28
Issues	27
Outlook	29

PROJECT DESCRIPTION

OVERVIEW :

Bostonapartments.com is a realty website that shows all the empty lots, rentals and open houses in and around the city of Boston. The website had to be updated to the latest version of php (7.0 +) and to MySQL(8.0 Syntax) that enables the website to run in the latest Apache debian version (8.0) that's currently running on the local server. We had upgraded and fixed important functionality and made the website presentable throughout the semester. The expected users of our project are:

1. Landlords
 - A Landlord can add or delete rentals for the listings present under them, but cannot edit other listings present.
2. Realty Agents
 - Realty agents come under agents and can follow up on customers and also send mails to the customers but don't have the ability to edit the contact details of their clients, can only classify the client as either active or inactive.
3. Agencies
 - Agencies can add or manage agents and nearly have the power of admin to alter the details and can send mails to all the agents present in the website.
4. Home Owners
 - Home owners are independent users and can only access the background check reports provided by the agency.
5. Admin
 - Has complete control over all the users to add/delete/edit users present in the website, can also read logs by the user.

The website uses LAMP stack to run, which comprises of:

1. Linux Operating System
 - The Server the website is running on has Linux as its OS.

2. Apache Server
 - The website runs on Apache web server that enables the various internet protocols to run.
3. MySQL
 - Used to store the data in a structured manner and can be accessed using simple commands.
4. PHP
 - Scripting language used to manipulate/send/edit the data.

KEY REQUIREMENTS :

- Update and align the UI of the site with the latest web specifications.
 - Updated the UI in
 - Manage Clients table and filter.
 - Landlords table and filter.
 - Listings table and filter.
- Add Intellirent a rent tracking system to track the rental history of the clients.
 - Intellirent is a rent tracking system for the landlords or the rental agencies to track the rental payments from their respective tenants. We have integrated the Intellirent API into the website and enabled particular users to access intellirent.
- Upgrade to the latest version of ImageMagick, an API that helps to upload large media files.
 - ImageMagick is a PHP API used to give support for large size media uploads like 360 view of the lot listed, large size high quality video uploads and Hi-Definition pictures. We have upgraded ImageMagick to its latest version to get support for new and large video formats.
- Check and fix form validations all over the website.
 - Validations fixed in:
 - Manage Clients table.
 - Listings table, view filter.
 - Create Landlords.
 - Status change in Manage Clients table.
- Upgrade and make changes to the Landlords page that tracks and lists the activities of Landlords.
 - Made changes and fixed the edit landlords table.
- Implemented a Chrome Extension that enables the users to post on Craigslist.

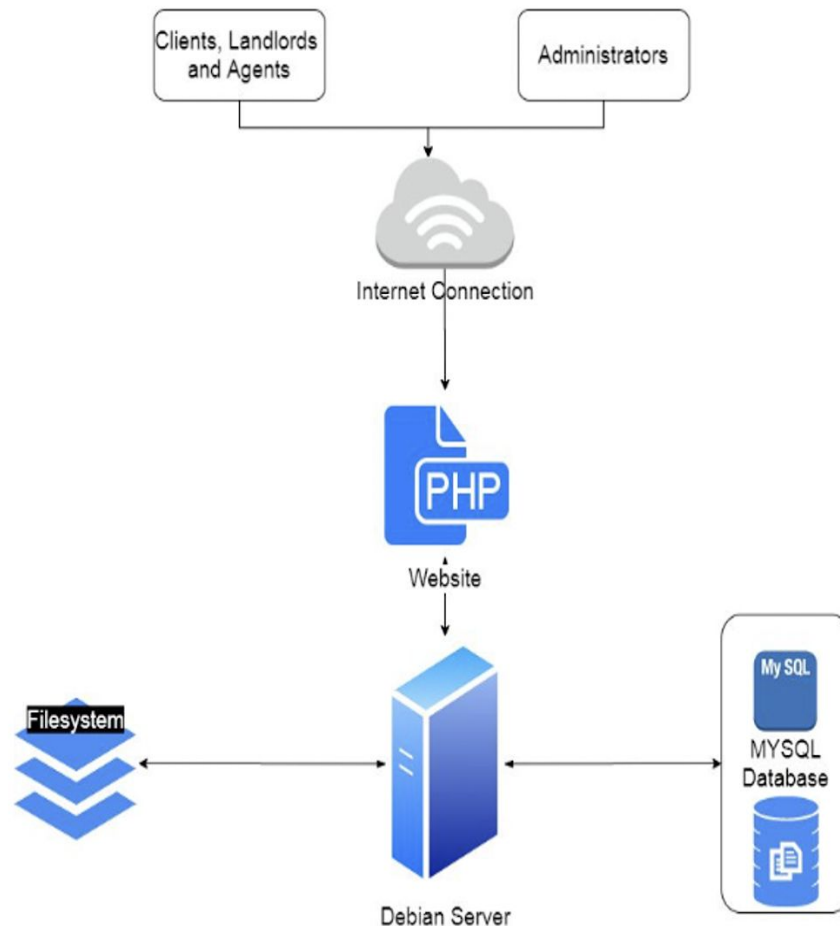
- We designed a chrome extension exclusive for bostonapartments.com, on click of a button the listing chosen can be posted on your respective boston.craigslist.com account.
- Upgrade the Clients page to display the clients under each agent/agency.
 - Added agency column under each client and restricted access to the particular clients in edit clients for an agency.
- Upgraded Agent functionality to add/delete clients and their listings.
 - Added a functionality that when a client is deleted all the listings under the client also gets deleted.
- Added restrictions for locations when creating an agent.
 - Added functionality to admin so that when creating an agent, the admin can restrict the agent to work only in a particular area in the state.
- Fix and upgrade the agent email feature to send mail to either one or more clients to follow up.
 - Fixed headers and footers for the email functionality in the database.
- Fix all the minor bugs found all over the website.
 - Making clean up of the project to display all the changes that have been implemented and fixed some unexpected errors we came across.

DESIGN AND ARCHITECTURE:

In this project majorly the tasks revolved along the revamp of existing functionality of the duo server of BostonApartments. Duo server is a hosted online server where the latest developments related to the upgrade of old BostonApartments.com is done and tested, as this endpoint is not open to the general public, yet it is still under beta testing phase. There are several assumptions in place for this application:

- PHP 7 (this is the scripting language for web development and is at its core in this application) and Development server is compatible with the existing code base.
- MySQL (The database query language to handle everyone's data on App) is assumed to be compatible with existing databases.

As shown in the figure 1 below, it is the system architecture for this project. We are following the Model, View and Controller (MVC) pattern for our development throughout the project and the design pattern being deployed is Façade.



*Figure 1 - System Architecture - *Administrator are those with all privilege access to the application *Clients, Landlords and Agents are those with a subset of privileges to the application to post/edit their content*

The whole design has been built keeping in mind the modular aspects of each component. It comprises the Clients, landlords' agents and Administrators which interact with the system. PHP is the backbone of the whole application with more than 90% of the crucial functionality targeted in this scripting language.

This PHP module interacts with the Debian server which is the Apache client that helps retrieve any resource required by the application and also helps store information. This

server interacts with the data that is the file system where all the data is hosted and also the MySQL client which is responsible to fetch information from the tables.

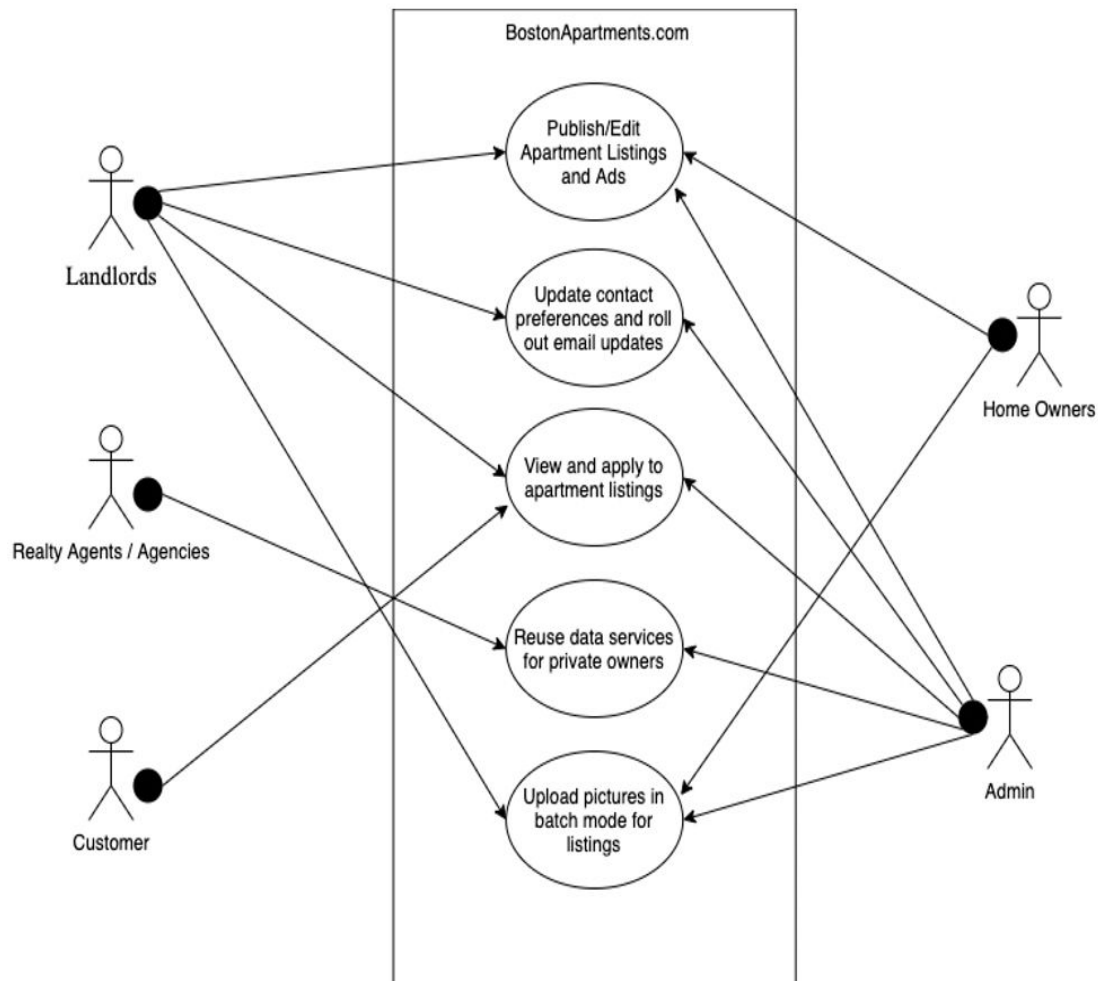


Figure 2 – Use Case Diagram – BostonApartments.com

Majorly this project involved migration and update related tasks to the new technology, as a result of which we don't have relevant data for building more detailed diagrams.

Figure 2 represents the use case diagram that shows the roles and responsibilities of the major users of the application.

The core functionality of the application is that each action and function is associated with an operation (OP) and this acts as an interface between the action and its desired result. So, this way we have a Façade pattern in action as the OP is the acting entity for each action done on the web application and retrieving results.

There is separation of concerns in this architecture as it focuses on loose coupling and high cohesion. Each component works together to build a functionality but at the same moment inter dependencies are minimal. As stated before, the major requirement for this project was to fix the functionalities that were breaking because of the upgrade to the tech stack of the application. Hence a targeted approach to all the features and its fixes was the main aim of this project.

DELIVERABLES :

- **Sprint 0:**
 - To set-up the project in our local environment.
 - Learn php basics.
 - searched the project to find major bugs and reported them.
- **Sprint 1 :**
 - Improved on the User Interface.
 - Fixing User preferences.
 - Fixing Manage Clients table.
 - Enabling sorting all over the tables present in the website.
 - Modifying queries to access from the DB.
- **Sprint 2:**
 - Made email functionality from agents to clients more presentable.
 - Updated client functionality.
 - Multiple locations being displayed on clients table.
 - Worked on the listings page.

- **Sprint 3:**
 - Diagnose the chrome extension.
 - Add the landlords listings.
 - ImageMagick upgrade.
 - Fixed create a landlord functionality.
 - Fix location bug.
- **Sprint 4:**
 - Upgrade the Chrome extension to work on craigslist.
 - Made the delete client functionality such that when a client is deleted all the listings under him get deleted too.
 - Upgrade ImageMagick.
 - Add Intellirent as an application.
 - Added location restrictions when creating an agent.
- **Sprint 5:**
 - Wrap up all of the functionalities to a working state.
 - Fixed the view under the listings table.
 - Resolved the errors on the development server.
 - Fixed listings filters.
 - Clear all the major backlogs.
- **Sprint 6:**
 - Final Integration testing of the website.
 - Refactoring the code.
 - Documentation.

USER MANUAL

The Following are the functionalities which are developed in throughout the project along with how to implement the project in a step by step manner. The developed functionalities are prioritized and developed based on the sponsor requirements.

- **2.1 How to Upload and Run the project**
 - **2.1.1 How to Upload the code base**

Description :

- Initially, upload the cloned project from github in the netbeans application to access the file and to update the functionalities. As shown in the Figure 3 below.

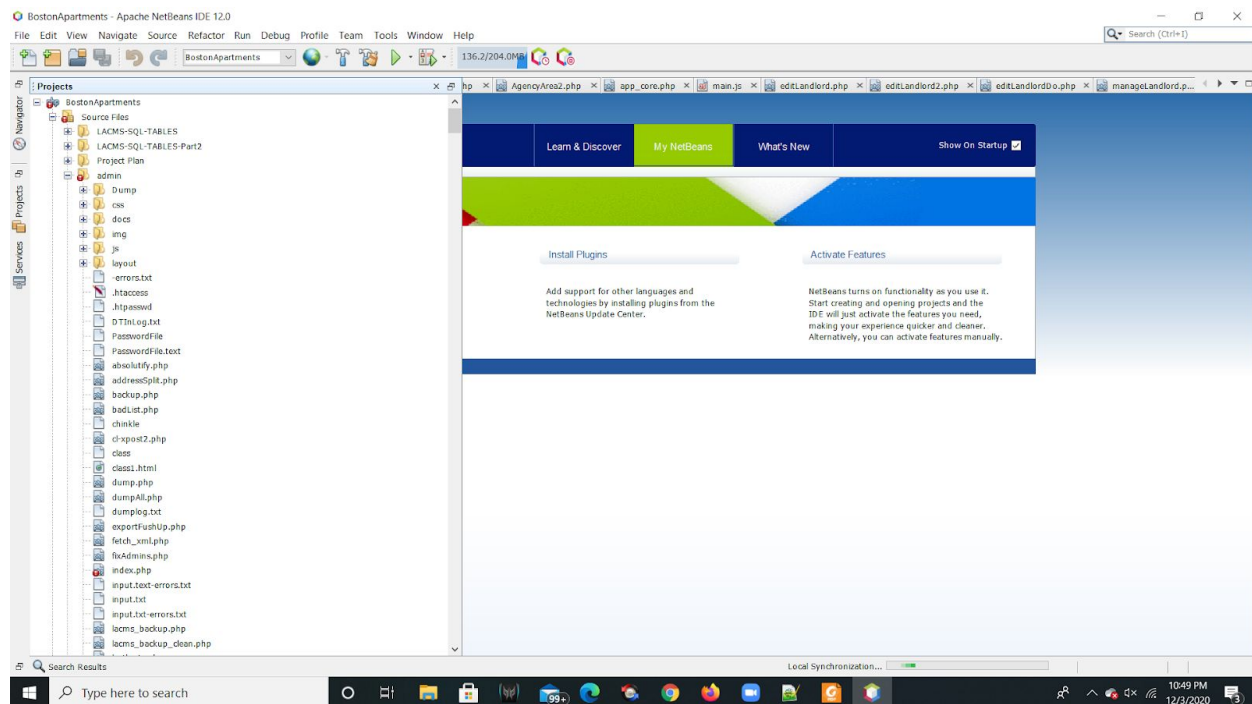


Figure 3

- **2.1.2 How to start apache server**

Description :

- Open xampp server start apache server before running the project as shown in the figure 4 below.

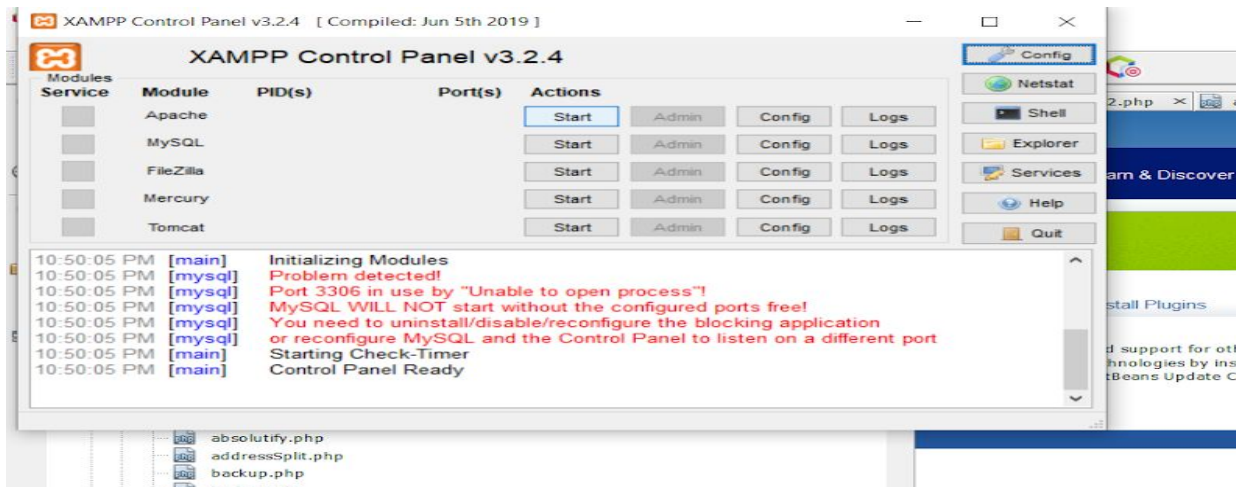


Figure 4

○ 2.1.3 - How to start mysql server

Description :

- Before running the project make sure to start my sql server in the xampp server as shown in the figure 5 below

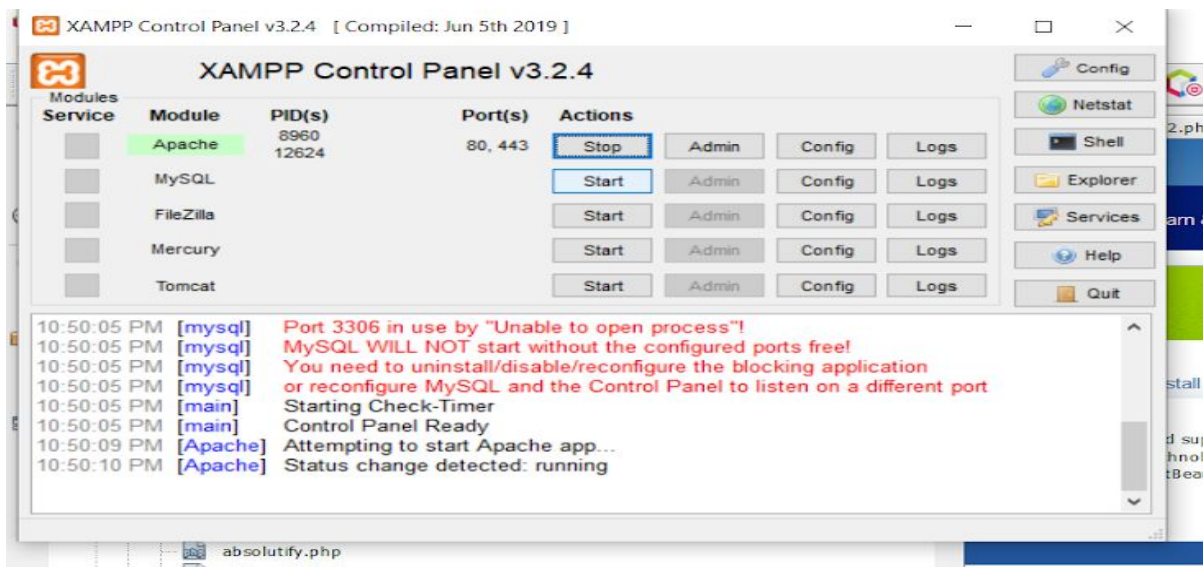
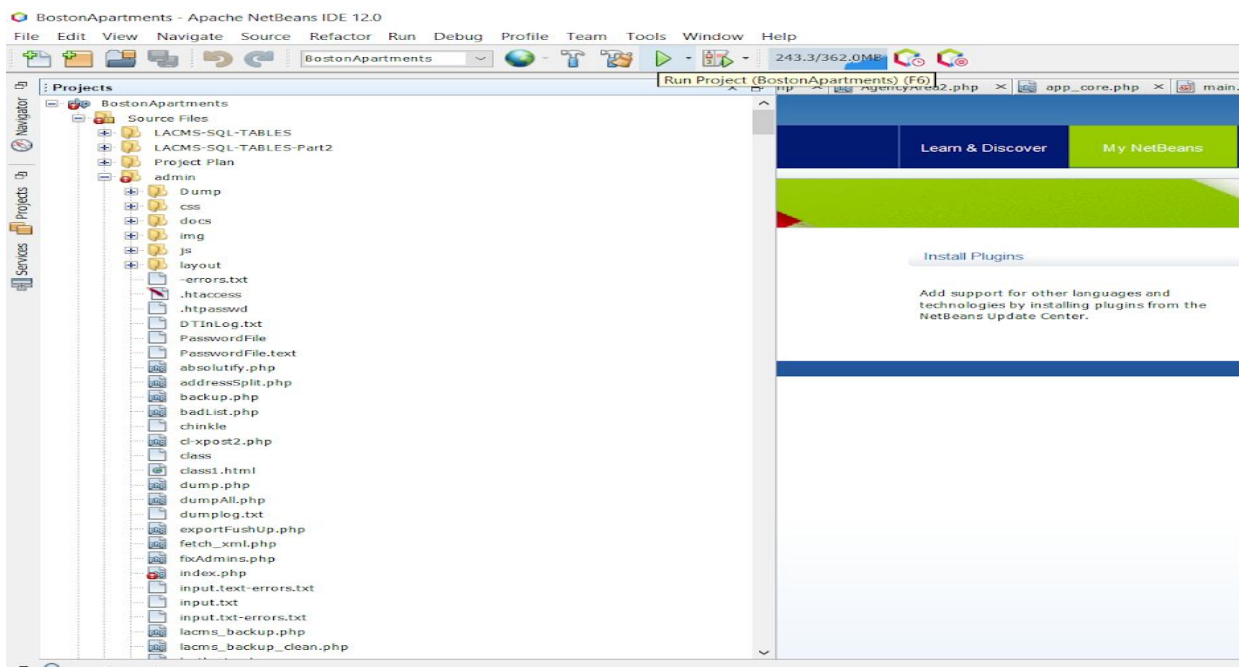


Figure 5

○ 2.1.4 How to Run the project

Description :

- upon clicking on the run button in the netbeans application a client login page will appear as shown in figure 7 below.
- Before that ensure that apache and my sql server is running in the xampp server.

**Figure 6**

○ 2.1.5 client login

Description :

- once the login page appears login with the client details i.e Username and Password.
- If you don't see the login page then go back to the steps and make sure that everything is done.
 - Our client user name is WXYZ
 - There can be a lot of clients who want to login and post their deals and ads

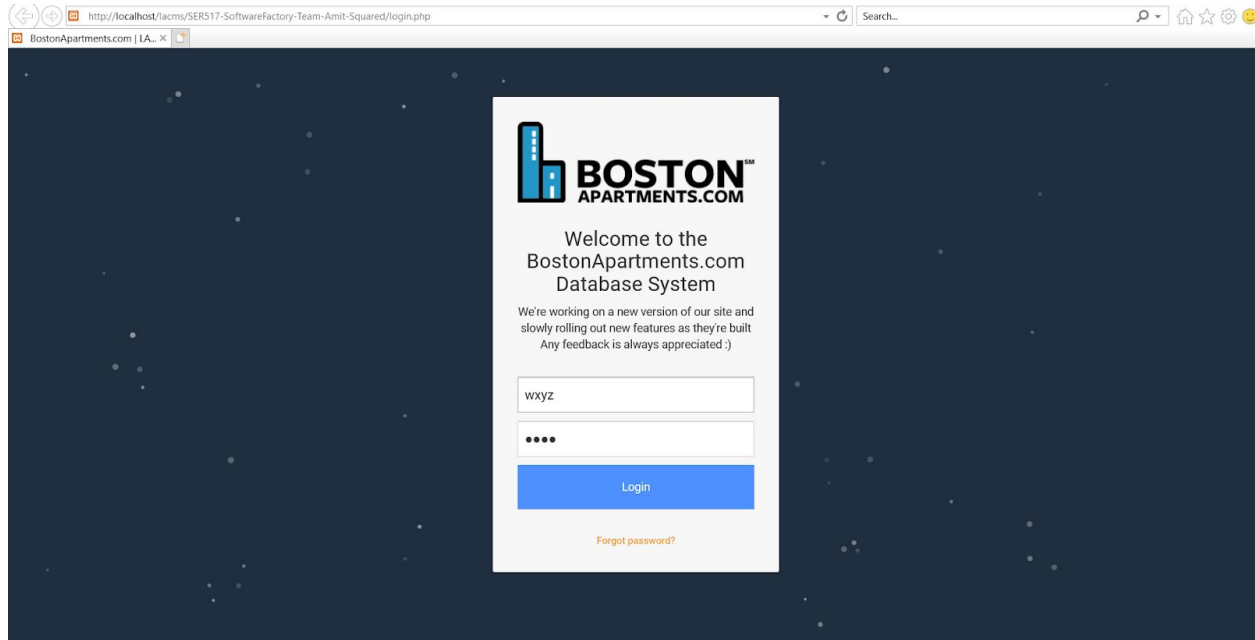


Figure 7

○ 2.1.6 Login to the client portal

Description :

- By clicking on login, you can see the page as shown in the figure 8

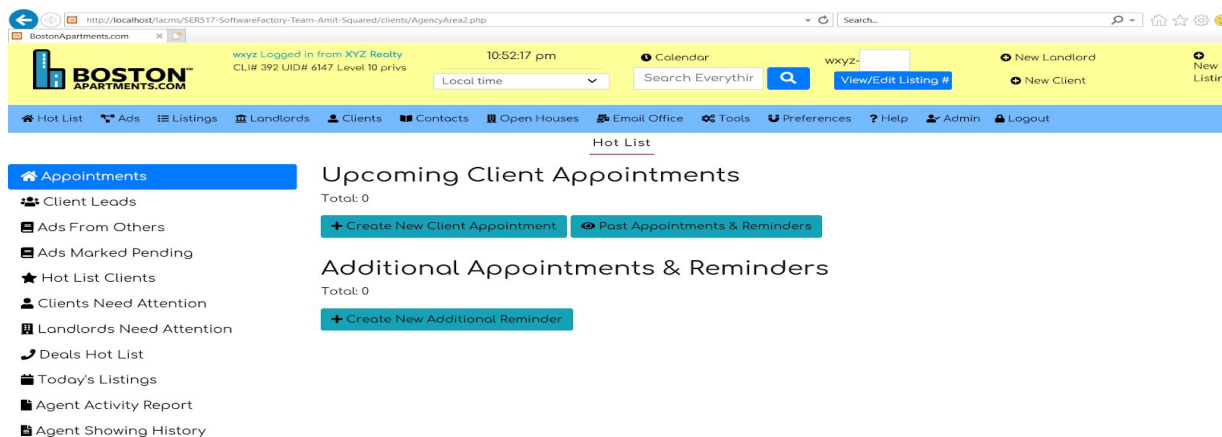


Figure 8

Functionalities developed

● 2.2 - Client page

Description :

- click on the clients which is present in the header field . Following page will open (as shown in figure 9 & 10)

Figure 9

Name	Home Phone	Work Phone	Type	Location	Beds	Price Min	Price Max	Next Contact Last Modified	Move In Date Range	Email	Date Created	Agent
Jacob Inactive			Rental	ABINGTON		0	0	2021-10-04 Follow Up 2019-12-13	2025-10-01 2016-01-01			
Jill Inactive				ABINGTON		0	0	2019-10-05 Follow Up 2019-09-24	2025-10-01 2016-01-01			
qaa aaa Inactive			Commercial Sale	BROOKLINE		0	0	2015-11-11 2019-03-19	0000-00-00 0000-00-00			
AA AAA			Rental	ABINGTON		0	0	2020-05-11 2020-05-11	2020-05-11 2020-05-11			
Andrew Acmes	1617-555-1212	1-617-555-8945	Commercial Rental	BROOKLINE CAMBRIDGE	STUDIO	0	0	2024-03-04 Follow Up	2025-10-01 2024-11-01			

Figure 10

○ 2.2.1 - Sorting functionality

Description :

- sorting all the fields present in the clients page in ascending order as shown in figure 11.
 - Fields that are sorted are as follows
 - Name
 - Home Phone
 - Work Phone
 - Type
 - Location
 - Beds
 - Price Min
 - Price Max
 - Next Contact
 - Last Modified
 - Move in Date Range
 - Date Created

Name	Home Phone	Work Phone	Type	Location	Beds	Price Min	Price Max	Next Contact	Last Modified	Move In Date Range	Email	Date Created	Agent	Status
Earl Witsion			Rental	ABINGTON	^	0	0	2011-10-05 Follow Up 2010-10-05	2010-10-01 2010-10-01					
Jamaal Whitehead			Rental	ABINGTON	^	0	0	2010-12-04 Follow Up 2010-10-04	2010-10-01 2010-10-01					
Eric Thered	555-555-5455		Rental	ABINGTON BACK BAY	STUDIO 1 BED	1000	3000	2010-12-10 Follow Up 2010-09-10	2011-09-01 2012-09-01					
testing tester Inactive	555-1212		Rental	BOSTON UNIVERSITY AREA BRIGHTON CIRCLE BRIGHTON Brookline Line CHARLES RIVER PARK	1 BD SFLT	0	0	2010-10-10 0000-00-00	2009-01-01 2009-01-01					FredTest

Figure 11

- sorting all the fields present in the clients page in descending order. As shown in the figure 12

Viewing Clients 1 - 20 of 76

Go to page: 1, 2, 3, Next

Show all Clients

Name	Home Phone	Work Phone	Type	Location	Beds	Price Min	Price Max	Next Contact Last Modified	Move In Date Range	Email	Date Created	Agent
Jacob Inactive			Rental	ABINGTON	^	0	0	2021-10-04 Follow Up 2019-12-13	2025-10-01 2016-01-01	✉	●	🔄
Jill Inactive				ABINGTON	^	0	0	2018-10-08 Follow Up 2019-09-24	2025-10-01 2016-01-01	✉	●	🔄
000 000 Inactive			Commercial Sale	BROOKLINE	^	0	0	2018-11-11 2019-03-19	0000-00-00 0000-00-00		●	🔄
AA AAA			Rental	ABINGTON	^	0	0	2020-05-11 2020-05-11	2020-05-11 2020-05-11		●	🔄

Figure 12

○ 2.2.2 Scroll down bar

Description :

- There are so many locations based on a single name client and so many beds are available with the same client, so to make the UI non-clumsy we used a scroll down bar so that UI will look more appropriate as well as optimal. Figure 13
 - Fields having this functionality are as follows
 - Location
 - Beds

The screenshot shows a web browser window with the URL `http://localhost/lacms/SER517-SoftwareFactory-Team-Amit-Squared/clients/AgencyArea2.php?top=manageClients&clients.sort=NAME_LAST&SortDir=ASC&clients.pac`. The page displays a table of clients and their associated properties.

Client Name	Phone 1	Phone 2	Property Type	Address	Room Type	Bedrooms	Bathrooms	Start Date	End Date	Status	Actions
AA AAA			Rental	ABINGTON		0	0	2020-05-11	2020-05-11	Active	Filter, Refresh, Delete
Andrew Aames	1617-555-1212	1-617-555-8945	Commercial Rental	BROOKLINE CAMBRIDGE	STUDIO	0	0	2026-03-06 Follow Up 2019-09-26	2025-10-01 2026-11-01	Active	Filter, Refresh, Delete
Augustine Aboris Inactive			Sole	BOSTON UNIVERSITY AREA BRIGHTON Brookline Line CHARLES RIVER PARK CHARLESTOWN CHINATOWN COPLEY SQUARE DORCHESTER DOWNTOWN EAST BOSTON	LOFT STUDIO STU/ALC STU/2BR STU/1FTBD 1 BD 1 BD SPLT 1 BD PLUS 2 BD 2 BD SPLT 2 BD PLUS	100000	350000	2014-08-07 2014-08-19	2014-08-07 2014-08-07	Inactive	Filter, Refresh, Delete
James Ableman	617-555-1212		Rental	ABINGTON	1 BD 1 BD SPLT 1 BD PLUS	0	0	2013-06-17 2012-10-09	2013-05-01 2014-05-01	Active	Filter, Refresh, Delete
BB AF			Parking Spaces - Sale	ABINGTON		0	0	2020-05-11	0000-00-00 0000-00-00	Active	Filter, Refresh, Delete

Figure 13

○ 2.2.3 Status field fix

Description :

- All the radio buttons in the status field are not working. we fixed all the filter functionality as shown in the below every filter is working. Out of 64 clients 48 are active
 - This functionality in-coperated in the following fields
 - All
 - Active (fig 14 & 15)
 - Inactive (fig 16 &17)
 - Short term
 - Pets
 - Lead safe
 - Furnished

Agent: First Name: Last Name: Type: Location:
 Price Min: Price Max: Beds: Baths: Status: ☐ All ☒ Active ☐ Inactive Building Type:
 Partial Phone #: Partial Email: Furnished: ☐ Short-Term: ☐ Pets: ☐ Lead: ☐ Safe: ☐ Comm. Sub Type:
 Search Clients Clear Search

Criminal History Check | SS# Checker | Set up Utilities | Email ALL Clients | Email All Active Clients | Email All Inactive Clients

Figure 14

Viewing Clients 1 - 20 of 48

Go to page Show all Clients

Name	Home Phone	Work Phone	Type	Location	Beds	Price Min	Price Max	Next Contact	Move In Date Range	Email	Date Created	Agent
Donny Osman	800-555-dony		Rental	ABINGTON		0	0	2010-03-24 Scheduled Tour 2010-03-24	2010-03-01 2010-03-01			
Andrew Aomies	1617-555-1212	1-617-555-8945	Commercial Rental	BROOKLINE CAMBRIDGE	STUDIO	0	0	2024-03-06 Follow Up 2019-09-24	2025-10-01 2024-11-01			
Bobby Brown	456-444-4444		Rental	ABINGTON		0	0	2012-03-23 2011-09-08	2012-03-01 2013-03-01			

Figure 15

- Similarly out 64 clients 8 are inactive clients

Browser: http://localhost/lacms/SER517-SoftwareFactory-Team-Amit-Squared/clients/AgencyArea2.php?op=manageClients&clients_filter=1&clients_filter_agent=6147&clients_fi

BostonApartments.com

Agent: First Name: Last Name: Type: Location:

Price Min: Price Max: Beds: Baths: Status: ☐ All ☐ Active ☐ Inactive ☐ Building Type:

Partial Phone #: Partial Email: Furnished: ☐ | Short-Term: ☐ | Pets: ☐ | Lead Safe: ☐ Comm. Sub Type:

[Search Clients](#) [Clear Search](#)

Criminal History Check | SS# Checker | [Set up Utilities](#) | [Email ALL Clients](#) | [Email All Active Clients](#) | [Email All Inactive Clients](#)

Viewing Clients 1 - 8 of 8 [Show all Clients](#)

Name	Home Phone	Work Phone	Type	Location	Beds	Price Min	Price Max	Next Contact Last Modified	Move In Date Range	Email	Date Created	Agent	Status
Erin Moran Inactive			Rental	ABINGTON		0	0	2010-03-23 Scheduled Tour 2010-11-10	2010-03-01 2010-03-01				

<http://localhost/lacms/SER517-SoftwareFactory-Team-Amit-Squared/clients/AgencyArea2.php>

Figure 16

Browser: http://localhost/lacms/SER517-SoftwareFactory-Team-Amit-Squared/clients/AgencyArea2.php?op=manageClients&clients_filter=1&clients_filter_agent=6147&clients_fi

BostonApartments.com

Viewing Clients 1 - 8 of 8 [Show all Clients](#)

Name	Home Phone	Work Phone	Type	Location	Beds	Price Min	Price Max	Next Contact Last Modified	Move In Date Range	Email	Date Created	Agent	Status
Erin Moran Inactive			Rental	ABINGTON		0	0	2010-03-23 Scheduled Tour 2010-11-10	2010-03-01 2010-03-01				
Show 18 winship													
Dove Davis Inactive			Rental	ABINGTON		0	0	2010-03-23 Scheduled Tour 2010-12-10	2010-03-01 2010-03-01				
Nice client like West Street.													
Joseph anderson Inactive	123-4567	123-4569	Rental	ACUSHNET AGAWAM ALFORD AMHERST	2 BED	1500	2500	2019-03-31 2012-07-25	2013-04-01 2013-04-01				
show wilcox st.													

<http://localhost/lacms/SER517-SoftwareFactory-Team-Amit-Squared/clients/AgencyArea2.php>

Figure 17

○ 2.2.4 All filters fix

Description :

- As you can see in the figure 18 below . All the status fields are fixed and based on the selected search results will appear.
 - Fields that incorporate this functionality
 - Bath field(fig 18)

The screenshot displays the 'MANAGE CLIENTS' interface. The search form includes fields for Agent (wxyz), First Name, Last Name, Type (All), Location, Price Min, Price Max, Beds (dropdown), Status (All, Active, Inactive), Building Type, Partial Phone #, Partial Email, and Comm. Sub Type. A dropdown menu for 'Beds' is open, showing options: --, .5-3/4, 1 Bath, 2 Bath, 3 Bath, 4 Bath, 5 Bath, 6 Bath, and Shared. Below the search form are buttons for 'Search Clients' and 'Clear Search'. At the bottom, there is a table of client data with columns: Name, Home Phone, Work Phone, Type, Location, Beds, Price Min, Price Max, Next Contact Last Modified, Move In Date Range, Email, Date Created, Agent, and Status. The first row shows 'Erin Moran' with status 'Inactive'.

Figure 18

■ Beds Field (fig 19&20)

MANAGE CLIENTS

Agent: wxyz First Name: Last Name: Type: All Location: --

Price Min: Price Max: Beds: -- Studio/Loft 1 Bedroom 2 Bedroom 3 Bedroom 4 Bedroom 5 Bedroom 6 Bedroom 7 Bedroom 8 Bedroom 9 Bedroom 10 Bedroom

Partial Phone #: Partial Email: Status: All ☐ Active ☐ Inactive Building Type: --

Comm. Sub Type: -- Short-Term: ☐ Pets: ☐ Lead

Search Clients **Clear Search**

Criminal History Check | SS# Checker | Set up Utilities | Email ALL Clients | Email All Active Clients | Email All Inactive Clients

Figure 19

Viewing Clients 1 - 3 of 3

Show all Clients

Name	Home Phone	Work Phone	Type	Location	Beds	Price Min	Price Max	Next Contact Last Modified	Move In Date Range	Email	Date Created	Agent	Status
Joseph Anderson Inactive	617-555-1212	617-555-1212	Rental	BROOKLINE CAMBRIDGE	2 BED	1500	2500	2013-03-31 2010-07-25	2013-04-01 2013-04-01				
James Ableman	617-555-1212		Rental	ABINGTON	1 BED 1 BD SPLIT 1 BD PLUS	0	0	2013-05-17 2012-10-09	2013-05-01 2014-05-01				
AAA Tester	617-555-1212	617-555-1212	Rental	BELMONT ALLSTON	1 BED	1500	0	2013-05-02 Follow Up 2012-07-05	2013-05-01 2012-05-01				

Test

Viewing Clients 1 - 3 of 3

Figure 20

■ Location filter (fig 21& 22)

Figure 21

Name	Home Phone	Work Phone	Type	Location	Beds	Price Min	Price Max	Next Contact Last Modified	Move In Date Range	Email	Date Created	Agent	Status
Joseph anderson Inactive	123-4567	123-4569	Rental	ACUSHNET AGAWAM ALFORD AMHERST	2 BED	1500	2500	2013-03-31 2012-07-25	2013-04-01 2013-04-01	✉	●	🔄	🚫
show wilcox st.													
Eric Boyer	6177340092	6177340092	Rental	ABINGTON ACTON ACUSHNET ADAMS AGAWAM ALFORD AMESBURY AMHERST ANDOVER ARLINGTON ASHBY	2 BED	0	10000	2025-10-04 Follow Up 2018-02-11	2018-01-01 2023-03-01	✉	●	🔄	🚫
Augustine Abaris Inactive			Sale	ALLSTON BACK BAY BAY VILLAGE BEACON HILL BENJAMIN COLLEGE AREA BOSTON UNIVERSITY AREA BRIGHTON BRIGHTON CIRCLE BROOKLINE LANE CHARLES RIVER PARK CHARLESTOWN	LOFT STUDIO STU/ALC STU/2RM STU/LTBD 1 BED 1 BD SPLT 1 BD PLUS 2 BED 2 BD SPLT 2 BD PLUS	100000	375000	2014-08-07 2014-08-19	2014-08-07 2014-08-07	✉	●	🔄	🚫
Eric B			Sale	ALLSTON BACK BAY BEACON HILL BRIGHTON WEST ROXBURY	LOFT STUDIO STU/ALC STU/2RM STU/LTBD	0	0	2014-08-14 2014-08-14	2014-08-01 2014-08-01	✉	●	🔄	🚫

Figure 22

● 2.3 - Landlords page

Description :

- Landlords are one of the agents to this application
- In this page also we have fixed all the filter functionality as well as search boxes.
- Upon clicking on the landlords as shown in the figure 23, The landlord page will be displayed.

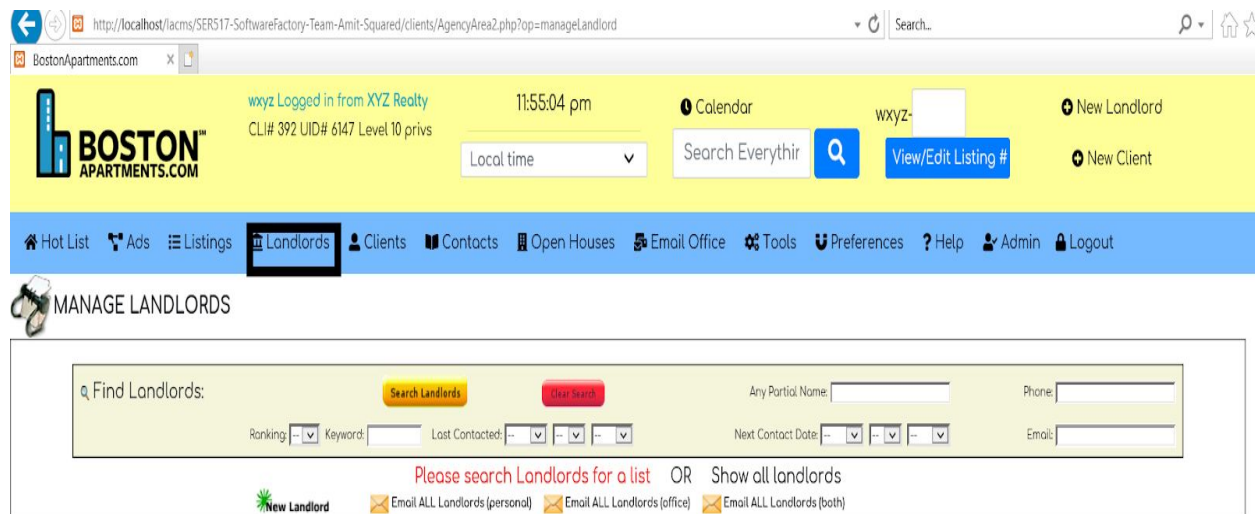


Figure 23

- As Shown in the figure 24. All the fields are fixed in the project
 - Fields that worked on Landlord page are as follows
 - search landlord
 - clear search
 - last contacted date
 - Next contact date
 - Phone
 - Email
 - Ranking

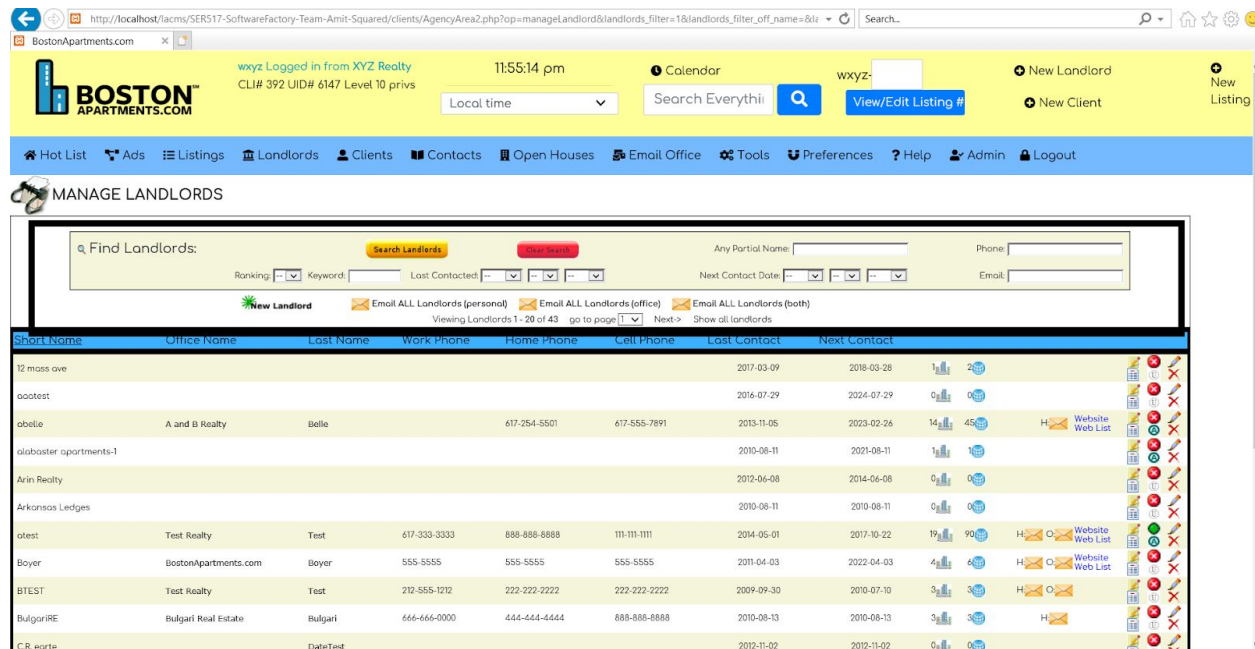


Figure 24

2.4 - listings page

Description :

- In the listings page, all the clients and agencies will be shown.
- Similar to other pages we fixed all the filter functionality and search boxes
- Upon clicking on the Listings button as shown in the figure 25, Listings page will appear

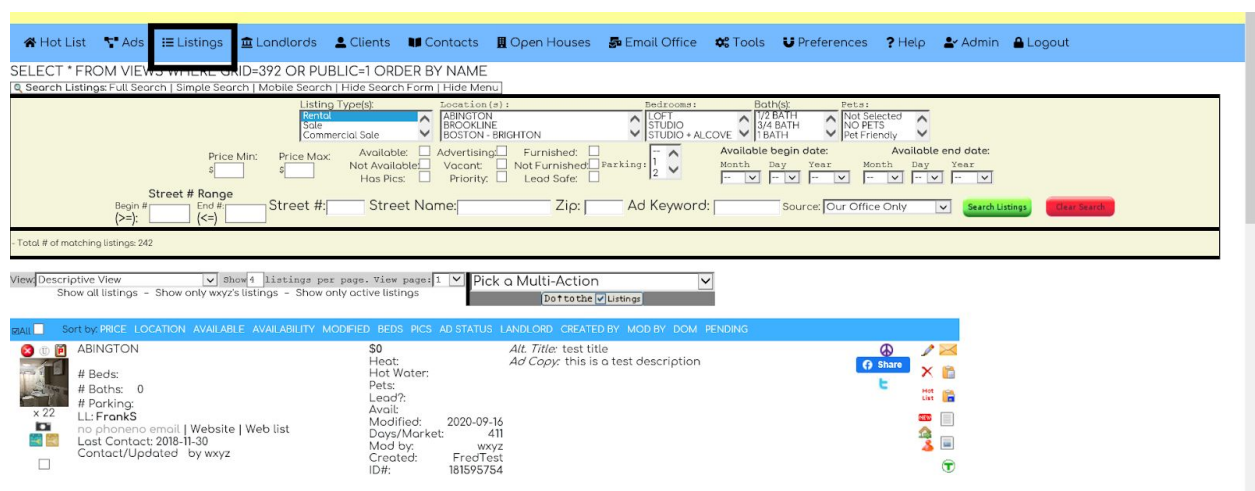


Figure 25

- As Shown in the figure 26. All are the filters and search boxes we worked on
 - Fields worked in Listings page
 - All the checkboxes
 - Sources
 - Search listings
 - Clear listings
 - Available begin date
 - Available end date
 - Listing selection
 - Street Name

Search Listings: Full Search | Simple Search | Mobile Search | Hide Search Form | Hide Menu

Listing Type(s): ☒ Sale ☐ Commercial Sale Location(s): Bedrooms: Bath(s): Pets:

Price Min: \$ Price Max: \$ Available: ☐ Advertising: ☐ Furnished: ☐ Not Available: ☐ Vacant: ☐ Not Furnished: ☐ Parking: Has Pics: ☐ Priority: ☐ Lead Safe: ☐

Available begin date: Available end date:

Street # Range: Street #: Street Name: Zip: Ad Keyword: Source:

- Total # of matching listings: 242

View: Show: listings per page. View pages: Pick a Multi-Action:

Sort by: PRICE LOCATION AVAILABLE AVAILABILITY MODIFIED BEDS PICS AD STATUS LANDLORD CREATED BY MOD BY DOM PENDING



  x 22	ABINGTON # Beds: 0 # Baths: 0 # Parking: 0 LL: FrankS no phoneno email Website Web list Last Contact: 2018-11-30 Contact/Updated by wxyz	\$0 Heat: Hot Water: Pets: Lead?: Avail: Modified: 2020-09-16 Days/Market: 411 Mod by: wxyz Created: FredTest ID#: 181595754	Alt. Title: test title Ad Copy: this is a test description <input type="button" value="Share"/> <input type="button" value="Print"/> <input type="button" value="List"/> <input type="button" value="Add"/> <input type="button" value="Remove"/>
--	---	--	---

Figure 26

• 2.5 - user preferences

Description :

- In the user preferences section. All data entry can be updated in seconds and retrieved in seconds
- Optimized the code for fast retrieval and update
- Upon clicking on the user preferences button as shown in figure 27 , user preferences page will appear
 - Fields in this section are
 - All the client details such as First name , last name, email, phone number, address and lot more details.

Hot List Ads Listings Landlords Clients Contacts Open Houses Email Office Tools Preferences Help Admin Logout

Edit Preferences for wxyz from XYZ Realty

[Save Agent Preferences](#) [Change Password](#)

(You have to log out on log back in for some of the changes to your preferences to take place after you save. In some cases you may have to close your browser,)

Default number of ads/listings to display on page:

4

Personal Signature (to be displayed optionally in the body of each ad, e.g. Call Pat: (617) 123-4567)

(No HTML accepted.)

First Name: first name Last Name: last name Position: 1

Direct Line: E-mail:

http://localhost/lacms/SER517-SoftwareFactory-Team-Amit-Squared/clients/AgencyArea2.php?op=editPrefs

Figure 27

• 2.6 image magicks

Description :

- Under Ad Listings there are a lot of ads which are available as shown in figure 28.
- In this only one picture can be added for each Ad but we developed this feature in such a way that any no of pictures can be uploaded for a single listing

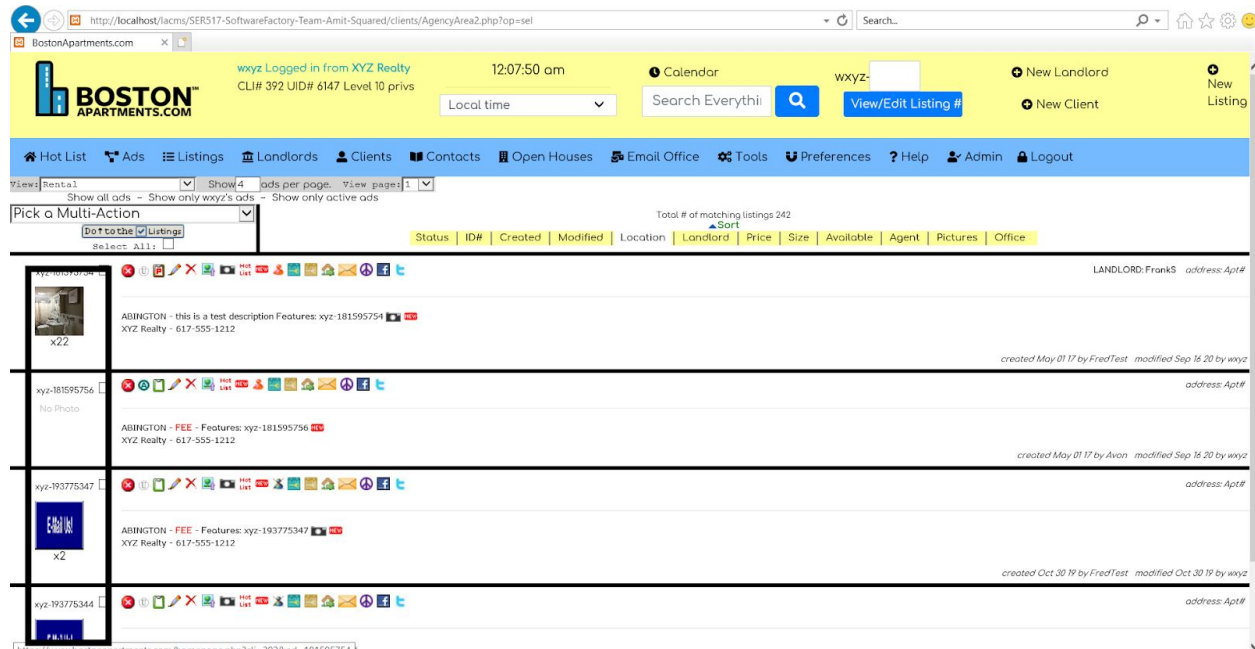


Figure 28

• 2.7 Database changes

Description :

- In the databases , we changed the coalition of the table class to utf8mb4_general_ci from latin1_swedish_ci as shown in figure 29.

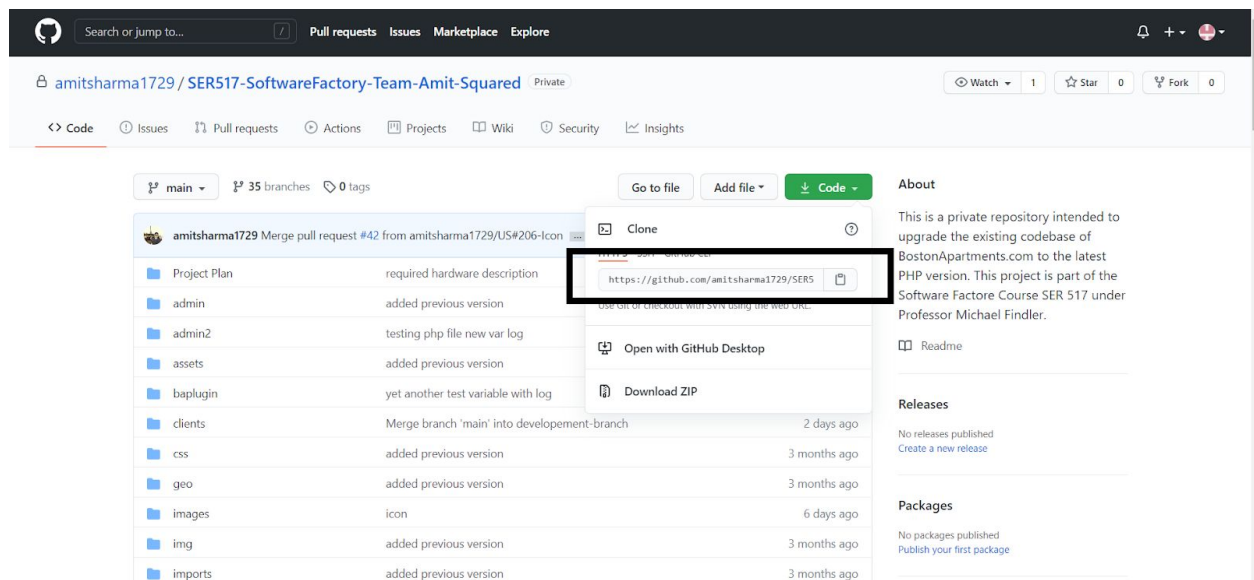


Figure 29

INSTALLATION GUIDE

Setting up local IDE :

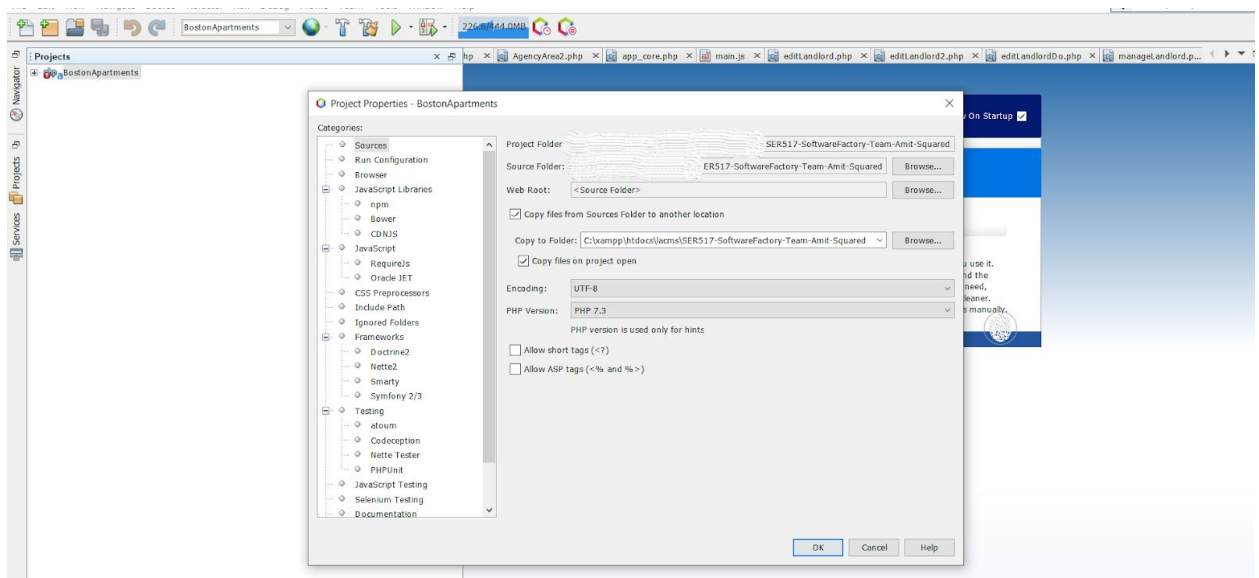
- Go to <https://netbeans.apache.org/download/index.html> and download the most recent version of NetBeans.
- Install NetBeans, be sure that the HTML5/JavaScript and PHP components are listed as those that will be installed.
- Clone the latest version of code from git repository
[“https://github.com/amitsharma1729/SER517-SoftwareFactory-Team-Amit-Squared.git”](https://github.com/amitsharma1729/SER517-SoftwareFactory-Team-Amit-Squared.git) As shown in the below figure



- Set up Xampp
- Launch NetBeans and navigate to File Open Project
- Browse to the location of your locally cloned git repository, then select the project named “Boston Apartments.”
- The project will open and then may take some time to synchronize file contents to the htdocs\lacms folder.
- Once XAMPP’s Apache and MySQL services are running, try running the NetBeans project via Run Run Main Project (F6). The main login page for Boston Apartments should appear. If launching the project fails, please review the previous steps to see if all the paths are as expected.

Setting up XAMPP server :

- In NetBeans, navigate to Run Customize
- If available, select BostonApartments and confirm the settings are as seen below.
- If not available create a run configuration as shown below and set it as the active configuration.
- Ensure that XAMPP is installed and the C:\XAMPP\htdocs directory is available for file synchronization with your repository location.



Configuring XAMPP/MySQL to allow table creation from PHPMyAdmin file dump

- Verify that XAMPP is installed.
- Verify that XAMPP's MySQL service is not running.
- Navigate to C:\XAMPP\mysql\bin\ and insert the line below into my.ini as shown below:
 - `[Mysqld]`
 - `port=3306`
 - `innodb_strict_mode=0`
- Save the file and re-start the XAMPP MySQL service.
- Execute the command to load the tables in such as the example below

- `mysql -h localhost -u root lacms < C:\XAMPP\phpMyAdmin\sql\LACMS.sql`

ISSUES

- 1. Issue#1 Chrome extension doesn't respond when clicked on craigslist Icon**
 - When posting a listing in bostonapartments.com on to boston.craigslist.com the chrome extension is just displaying the data of the listing but not creating a listing on craigslist.com.
 - It's an Issue on server request the user sends, upon inspection but, couldn't pinpoint where the issue is.
- 2. Issue#2 After changing the status of a client the table resets to 1st page**
 - In manage clients page when the status of a client is changed it doesn't remain in the same page instead, it's displaying the first page.
 - Possible solution is to figure out to change the offset of the table instead of resetting it to default.
- 3. Issue#3 Listings Filter not working**
 - Listings filter doesn't work in the way as intended.
 - The POST request sent to the app_core is not properly managed, the query built at some place is being reset to default and default filters are being applied.
- 4. Issue#4 Street Name not displaying in Landlord /clients view.**
 - In the listings page in view Landlord/Listing update the street name is not visible.
 - The possible fix is to query the database on street names and display them, mostly the query might give out empty strings right now, upon fixing the query the issue can be fixed.
- 5. Issue#5 UI needs to be adjusted with change in window size.**
 - Every page needs to be adjusted for smaller window slides or displays.
 - The display libraries from bootstrap need to be modified.
- 6. Issue#6 Button for accessing intellirent not working**
 - Button to access intellirent is not redirecting the site to intellirent website.
 - The JQuery library needs to be updated to the full version in the project in order to support AJAX requests.

OUTLOOK

In future, we have made sure to carry on some changes that have some scope of improvement:

Priority List

I. Query Handling

II. UI improvements

III. Resolving compatibility issues with the XAMPP server.

IV. Cleaner code

V. Modularization of the files and more structured MVC pattern.

VI. Chrome extension to populate Craigslist.

VII. 3D tour of the house/property by using a 3d Map/Image

VIII. Adding Location services to the Boston apartments website.

VIDEO PRESENTATION

<https://www.youtube.com/watch?v=CaMq9GEC0cM&feature=youtu.be>