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Project Plan

BOSTON APARTMENTS

11-21-2020

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**General Notes (CO-7, CO-4):**

* Remove all editorial comments (red bullets) from this document prior to submitting.
* Replace items in square brackets (“[“, “]”) with the appropriate information (group number, date, project title, etc.).
* Do not remove document sections or subsections.
* Do not add new document sections or subsections.
* Make sure that the document speaks with a single voice (same style and tone throughout) and tells a consistent narrative.
* Language should be clear and concise throughout.
  + Focus on relevant details, do not add extraneous details.
  + Be explicit rather than require the reader to make assumptions.
  + Provide accurate over comprehensive content.
* Use diagrams when they are useful to convey the specific information for a section and refer to them in an explaining paragraph.
* This document must mostly contain running text. Only use bullet points where necessary, like listing items within running text.
* *Never include language, diagrams, or other content that you do not fully understand.*
* Consider your audience – that is, write a document that is readable by someone outside of your group. Do not produce an overly technical document.

# Project Description

## Overview (CO-5):

* Description: Provide an overview of your client’s application, a statement of the problem that they are seeking to address, and the final deliverable that will address it. Include the context, such as the business domain, technical platform, motivation for the work, and expected user(s).

## Key Requirements (CO-5):

* Description: List the specific, measurable, requirements (including functional, technical) that your final deliverable must satisfy to address the client’s goal.
* Notes: If specific requirements are not fully defined, the team must identify and discuss necessary assumptions.

## Deliverables (CO-5, CO-6):

* Description: Provide a decomposition of your project’s key requirements into specific deliverables. Deliverables should have a well-defined work scope, provide some value to either the sponsor or the project process, and be defined such that completion is assessable. If appropriate, specify interdependencies between deliverables.
* Notes: Do not specify a timeline. You must map all requirements to a deliverable.

## Acronyms and Abbreviations (CO-7):

* Description: Provide a table of technical acronyms and abbreviations that are used within your document along with the definition of each.
* Notes: Do not include abbreviations/definitions for commonly understood names (e.g. USA, ASU).

# Design and Architecture (CO-1, CO-3)

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.

Diagram

Description automatically generated

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.

Diagram

Description automatically generated

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.

# Implementation Strategy

## **High-level Work Breakdown Structure (CO-2):**

|  |  |  |
| --- | --- | --- |
| User Stories | Skills Required | Expected Time |
| As a Client, I want to view all the clients in the listings page in the application | Php,Sql,Xampp/apache  server | 17 th September 2020 |
| As a developer I want to set up the system locally. | Php,Sql,Xampp/apache  server | 17 th September 2020 |
| As a developer I want to know the code over view and flow architecture of the application | Php,Sql,Xampp/apache  server | 17 th September 2020 |
| As a Client,  I want to Fix user preferences | Php,Sql,Xampp/apache   server | 2 nd October 2020 |
| As an agent, I want to fix all the Sorting filters in the application | Php,Sql,Xampp/apache  server | 2 nd October 2020 |
| As an agent, I want to fix all the UI functionalities and update UI changes | Php,Sql,Xampp/apache  server | 2 nd October 2020 |
| As an admin, I want to be able to populate the list using the chrome Extension(Craigslist) | Php,Sql,Xampp/apache  server | 16 th october 2020 |
| As a Client,  I want to add intellirent to the application. | Php,Sql,Xampp/apache server | 16 th october 2020 |
| As an Admin I want to be able to delete listing from all databases | Php,Sql,Xampp/apache  server | 16 th october 2020 |
| As an Admin i would like to add service location on the create agent table | Php,Sql,Xampp/apache  server | 30 th October 2020 |
| As an admin, I'd like to register new landlords into my profile to track the listings of the clients | Php,Sql,Xampp/apache  server | 30 th October 2020 |
| As a developer, I want to debug the preexisting chrome extension | Php,Sql,Xampp/apache  server | 30 th October 2020 |
| As a client , I want  to upload large number of files in the application(Image magicks) | Php,Sql,Xampp/apache server | 12 th november 2020 |
| As a Client, I want all working UI  functionalities in the application | Php,Sql,Xampp/apache server | 12 th november 2020 |
| As an agent i want ImageMagicks upgraded version. | Php,Sql,Xampp/apache  server | 12 th november 2020 |
| As an agent, I want to search the listings I want by filtering from all the listings in my agency, to locate a listing easier | Php,Sql,Xampp/apache  server | 27 th November 2020 |
| As a client, I want to update all the Improve UI changes . | Php,Sql,Xampp/apache server | 27 th November 2020 |
| As a user , I want to have report Design and Architecture division | Php,Sql,Xampp/apache server | 27 th November 2020 |

## **Schedule / Timeline (CO-2):**

We are having 6 Sprint releases  for the project given by sponsor  during our semesters. The dates are as follows

* **Sprint 1 Release (September 4 2020 to September 17 2020)**
  + Setting up project locally
  + understanding the project goal
  + understanding the code flow through out the application
  + Knowledge acquisition of Sql Server / Database migration.
  + Implemented  visibility of all the listings in the application.
* **Sprint 2 Release (September 18 2020 to October  2 2020)**
  + Location filter fix in the clients page in the application.
  + Sorting fields in both ascending order and descending order
  + Sorting homepage field in the client page
  + Sorting type field, price max field in the client page
  + Sorting price min, email fields in the client page
  + Sorting date modified field in the client page
* **Sprint 3  Release(October 4 2020 to October 16 2020)**
  + Adding intellirent to the application.
  + Making Location, Beds field scrollable
  + Hide Menu functionality fix in the listings page
  + Fixing User preferences
  + Populating the list using chrome extensions.
* **Sprint 4 Release  (October 19 2020 to October 30 2020)**
  + Uploading large number of files in the application(image magicks)
  + Deleting unwanted listings from the database
  + Adding service location on the create agent table
  + Listings view under each agency
  + Debugging the pre existing chrome extension
  + Register new landlords into my profile to track the lists of the client
* **sprint 5 Release (November 2 2020 to November 12 2020)**
  + All the working  UI functionality in the client page
  + All the working  UI functionality in the landlords page
  + All the working  UI functionality in the Listings page
  + Image magick upgraded version accommodations
  + Updating the deleted records simultaneously
  + Search the listings by using filters in the listings page
* **Sprint 6 Release  (November 17 2020 to November  27  2020)**
  + Improving User Interface
  + Project plan documentation
  + Debugging the database queries
  + Building Design and Architecture Report

## Required Hardware (CO-2):

Hardware used for Development purposes : Windows and Mac Laptops.

Hardware used for Testing purposes : Windows and Mac Laptops.

## Required Software (CO-2):

* Describe the critical software upon which the application is built. This includes but is not limited to the operating system that needs to be used (including version), server, etc. (as appropriate).

## Third Party Content / Libraries (CO-2):

* Description: Describe any third-party content that may be required for completion of the project. Licensing terms for all content must be included. Also include any software packages/libraries that the application needs for execution.
* Notes: Include any special requirements for handling 3rd party content. Also include appropriate versions for the libraries.

## Quality (CO-2):

* Description: Indicate the quality goals and the metrics by which they will be measured. Describe your team’s strategy for meeting these metrics. Any language or coding style required to support readability or reusability goals of the sponsor should also be addressed.
* Note: Quality does not refer just to software bugs, but also includes how well the product meets the functional and non-functional design requirements. The test strategy should address both of these types of quality issues.

## Other Special Considerations (CO-7, CO-3):

* Description: Describe any additional considerations for your project.
* Notes: This should include any information that it would be beneficial or important for a potential project team.

# **Process**

## **Process Description and justification (CO-2)**

Team has chosen to work using the Agile development process for the duration of the project. Working and continuous delivery of the project in incremental stages. An overall estimate of six deliverables were set, over which the team worked on several UI developments, adding extensions and applications to the existing project and providing good code management. Team members have previously worked on agile development for earlier projects and have attained good understanding and found an ease to work with it.

## **Tools (CO-2):**

* Github - Objective of using this tool is version control. Project code was stored on this tool as remote. Branching feature provides version control and Sub-branching for efficient workflow.
* Apache Netbeans - This tool would be used as an IDE for the project, where team members could work on and make changes in their local repository.
* Taiga - This tool acts as an Scrum board aligned with the agile process. To keep track of the progress of the project.
* Slack - This tool is used as a communication channel for the team as well as the product advocate.
* Xampp - This tool is used as a web server solution.
* Zoom - A video conferencing tool for the team to use for stand up calls, sprint reviews, sprint retrospective and also meetings with the sponsor and the product advocate.

## **Roles and Responsibilities (CO-2):**

* **Amit Pandey**

**Role**

* Scrum Master for Sprint 4
* Developer

**Responsibilities**

1. Backend Development, debugging.
2. Fixing and updating the queries.
3. Reviewing code bases.
4. Conflict resolution.

* **Amit Sharma**

**Role**

* Scrum Master for Sprint 1 and Sprint 5
* Developer

**Responsibilities**

1. Majorly backend development.
2. Code and Bug fixes.
3. Complete application code management.
4. Deployment to release landscape post each sprint close. (CI/CD)

* **Bhavana Vakkalagada**

**Role**

* Scrum Master for Sprint 3
* Developer

**Responsibilities**

1. Develop and update UI functionalities in the application.
2. Sorting fixes in the application
3. sorting filter fixes in the application
4. User preferences.
5. Navigating pages fix

* **Sai Vinay Gangadharabhatla**

**Role**

* Scrum Master for Sprint 2 and Sprint 6
* Developer

**Responsibilities**

1. Front end Development.
2. Fixing changes in the listing module of the project.
3. Working on the Craigslist extension.
4. Added location restrictions functionality in the application.
5. Design, Develop and Update UI components.

* **Suraj Atmakuri**

**Role**

* Scrum Master for Sprint 0
* Developer

**Responsibilities**

1. Implementing and Fixing tables.
2. Implementing and adding forms.
3. Added additional required applications.

## L**ocation of Project Artifacts (CO-2):**

* [Taiga](https://tree.taiga.io/project/saivinayg-ser-517-boston-apartments/timeline) - This is the tool used as a scrum board for keeping track of the progress of the project. This contains the User Stories, Epics, Features, Product backlog of the project.

**Taiga board consists of following files :**

* [Issues](https://tree.taiga.io/project/saivinayg-ser-517-boston-apartments/issues) - It contains all the issues faced while developing the application
* [Wiki](https://tree.taiga.io/project/saivinayg-ser-517-boston-apartments/wiki/home) - Overall project goal throughout the semester
* [Team Members](https://tree.taiga.io/project/saivinayg-ser-517-boston-apartments/team) - All the developers involved in the project.
* [BackLog](https://tree.taiga.io/project/saivinayg-ser-517-boston-apartments/backlog) - It consists of all the sprints and user stories we worked on in each sprint

**Source Code Tracking with changes**

* [GitHub](https://github.com/amitsharma1729/SER517-SoftwareFactory-Team-Amit-Squared) - The source code of our project was stored in the location. The purpose of this tool is to accomplish version control for the project.
* [Google Drive](https://drive.google.com/drive/u/1/folders/1TCjMMt2zN9CrJmadqy102fNBcXXGmWW0) - All the documentation and Copy of the code is stored here.Documents like stand up, Minutes of the meeting, log file, Sprint reports, individual reports.

**Google Drive Consists of following Documents:**

* [Minutes of Meeting](https://drive.google.com/drive/u/1/folders/1FvaO6VuqWJIdSMrEQ1AvjHB38IupDvyg) - It consists of all the information of what we discussed with the sponsor and what requirements we have done in the each sprint
* [Work Log file](https://drive.google.com/drive/u/1/folders/1Ti3hi5YtUsnL8OJuwTP3S1eWMOLC-N76) - It consists of all the work done by each member of the team.
* [Sprint Reports](https://drive.google.com/drive/u/1/folders/1F28_UzdqiFyb23RLdRyjZRtHjfkWrDtF) - It consists of all the information of what we have accomplished in each sprint
* [Retrospective Boards](https://drive.google.com/drive/u/1/folders/1okg46s61zTDPPOki9AozMO4Qz3hT2U-8) - It consists of information about what went well and what we have improve for every sprint
* [StandUp Docs](https://drive.google.com/drive/u/1/folders/1t29O-wYZH7q8EM8QSNEDTWfm35PrhYyZ) : It consists of each team mates updates on daily basis for each sprint

## **Sponsor Communications (CO-7):**

The team and Sponsor communicated virtually through Zoom. Where there requirements gathering every sprint and sprint review. Updating the sponsor with the progress of the project and have additional meetings for additional information. Twice every sprint would be a rough estimate of the meetings with the sponsor.