

Project Plan



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Change History

Date	Modification
February 6th	Created Requirements Document
February 10th	Created User Story and Architecture Model
February 17th	Create Project Plan
February 28th	Changed Project Plan to be Specific

Project Documentation Plan

Why Dukiture?

Every semester, there are hundreds of new students coming to Duke. This is also the first time they come to Durham. They need to find a house and begin their life in Durham. However, they might find it difficult to buy furniture at the beginning, because getting furniture from online store may take a long time, driving to local store needs cars and also the price of new furniture is expensive.

There are also hundreds of students who want to sell furniture just graduating from Duke. However, currently there aren't many services that help students gather information. A web app that helps students obtain the information about second-hand furniture sold by Duke students would fill this gap. Duke students could post the photo, price of the furniture they want to sell and the time they want to make transactions. Students buyers can search the item they want by checking the category or by searching the keywords. When buying furniture, they can use this website easily to find the location using an online map and contact the seller via the provided email link. In addition, They can also use this application to share information about furniture with their friends to help each other find cool furniture.

Contents

This document will serve as the current project plan and task list for this project. It might be subject to change due to technical or requirement changes. We'll try to cover the task lists for the whole development cycle in this documents which would be consistent of 3 sprints and test cases. For each sprint, we will assign tasks to each developer and what they are expected to accomplish in this sprint. For technical details, we will cover technologies used for both front end and back

end in the task list. We also have a dedicated requirement document available here. In addition, user story and system architecture can be found here.

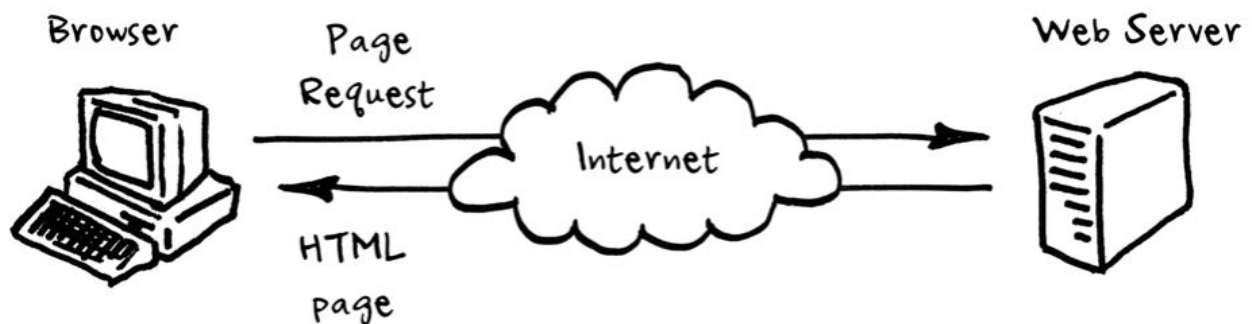
Code Development

Sprint 1

Sprint 1 will be delivered on March 13th. We will create the server-side framework and configure the database schema. Also, we will associate the database models, and include the models in our routes.



Frontend Architecture



RESTful Design

Task ID	Description	Owner	Start	Finish	Dependencies
Develop INDEX route	Develop the route that shows the furniture inventory	Zhihao Gong	02/17	03/06	N/A
Develop SHOW route	Develop the route that shows the information of particular furniture	Zhihao Gong	02/17	03/06	N/A
Develop CREATE route	Develop the route that allow users to post object to the database	Zhihao Gong	02/17	03/06	N/A
Develop NEW route	Develop the route that shows the form that allows users to fill out object info	Zhihao Gong	02/17	03/06	N/A
Develop UPDATE route	Develop the route that update the object information in the database	Zhihao Gong	02/17	03/06	N/A
Develop EDIT route	Develop the route that shows the form to allow users to update object info	Zhihao Gong	02/17	03/06	N/A
Develop DELETE route	Develop the route that delete the object in the database	Zhihao Gong	02/17	03/06	N/A

Configure database	Install and set up the MySQL database.	Zicheng Yuan	02/17	03/06	N/A
Develop Database Model for User	Develop database model for user that owns username, password and contact information.	Zicheng Yuan	02/17	03/06	N/A
Develop Database Model for Furniture	Design the furniture model that has price, furniture information pictures and description.	Yuanyuan Yu	02/17	03/06	N/A

Sprint 2

In sprint2, we will deliver our login functionality. We will enable users to login our website using NetID. We will check whether it is valid. We have to finish functionality test and security test for user authentication. Then we will implement all the functionalities for enabling users to post their furniture information. The web should allow users to upload up to 3 pictures for one furniture. Only the user who post the information can edit or delete the information. Other users can only view the information. The test cases should be designed and test the functionality of posting information, uploading picture, editing and deleting information.



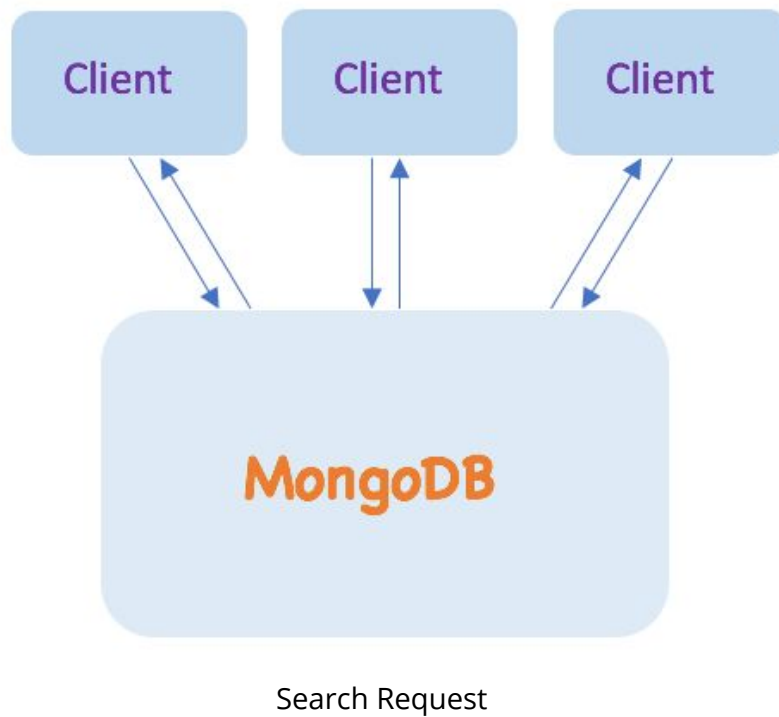
Backend Development

Task ID	Description	Owner	Start	Finish	Dependencies
Create landing page	Create a page as the "cover" of the website	Xu Lu	03/11	03/16	Backend Routes Development
Create index page	Create a page that shows all the objects	Xu Lu	03/11	03/16	Backend Routes Development
Create show page	Create a page that receive a particular object info and show the info	Xu Lu	03/11	03/16	Backend Routes Development
Create new page	Create a page that shows a form that allows users to create and update object info	Xu Lu	03/11	03/16	Backend Routes Development
Create register, login page	Create the page that shows a form that allows users to register and log in	Xu Lu	03/11	03/16	Backend Routes Development
Style the web pages	Style the web pages with Twitter Bootstrap	Yuan Yuan Yu	03/17	03/24	Develop web pages
Connect front-end web pages with the server	Use Spring Boot to route request to pages created and render corresponding webpages.	Tian Liao	03/17	03/24	Develop web pages

Authentic ation	Use Spring Security for authentication that allows users to register and login with password.	Yuanyuan Yu	03/17	03/24	Develop web pages
Authorizati on	Allow authorized users to add, edit and delete their furniture	Zhihao Gong	03/17	03/24	Develop web pages

Sprint 3

In sprint 3, our main goal is to allow user to search through the posted furniture. A user can either choose the category of a furniture(such as table, bed) or search the keywords by using elastic to search the MongoDB database. The challenging part will be allowing the searching result being sorted by relevance, price or posted time.



Task ID	Description	Owner	Start	Finish	Dependencies
Search furniture	Use elastic to search the MongoDB database to allow users to search furniture	Zhihao Gong	03/25	03/28	Develop web pages
Sort the furniture	Allow users to sort the items by relevance and price.	Tian Liao	03/28	04/03	Add search function

Document Plan

Task ID	Description	Owner	Start	Finish
Requirement: Introduction and Glossary	Mentioned the background of Dukiture and explain some technical words.	Zhihao Gong	01/27	02/07
Requirement: Functional Part	Set functional requirements such as Login/register, Post, Search.	Tian Liao	01/27	02/07
Requirement: Non - Functional Part	Set non-functional requirements such as performance, security, use-friendness and portability.	Zicheng Yuan	01/27	02/07
User Story: User Story	Consider the background of the application, summarize the use cases and write the user story.	Xu Lu	02/07	02/11
User Story: Task Card	Defined what will be implemented in all sprints by using front end and back end task card.	Zicheng Yuan	02/07	02/11
User Story: System Architecture	Gave an overarching block diagram of all the major components, including web-site, security unit, logical	Tian Liao	02/07	02/11

	unit, service and storage, and their relationships.			
User Story: MVC	Analyse the relationship between each part in application and design the MVC graph.	Zicheng Yuan	02/07	02/11
User Story: View, Model, Controller and Technical Stack	Design views for different roles and analyse relationships in Model and Controller. Also give details about techniques using in the application.	Yuanyuan Yu	02/07	02/11
Project Plan: Sprint 1	Using an agile approach defined WHO, WHAT and WHEN of every task. Create the server-side framework and configuration database models for user and furniture.	Tian Liao	02/17	03/06
Project Plan: Sprint 2	Create and style front-end web pages and build connections with server. Implement the register/login and post/edit/delete functionality.	Zhihao Gong	03/06	03/28

Project Plan: Sprint 3	Allow user to search through the posted furniture by searching the database. Implement the sorting of the search results.	Tian Liao	03/28	04/10
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Risk Analysis

Risk	Affects	Description
Time of learning new techniques	Project	Most of us should learn java spring. We may underestimate the time to learn before we use its components to implement our product
Environment compatibility	Project	We develop our product on different developing environment, which may cause undefined problems when the product is shipped on final platform
Technology change	Project	We may find the technology (e.g. the third party library, method) cannot fulfill the demand and want to change it
Requirement change	Project	Our requirement may change (e.g. after this presentation)
The demand is underestimated	Project, Product	More users will use our product than that we estimated which requires more storage, throughput, etc.
Team members are ill	People, Project	We may be ill and cannot finish our task in time

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Risk	Strategy
Time of learning new techniques	Estimate the time of learning required techniques before learning. The one who have the knowledge can help the others to learn.
Environment compatibility	The final platform should be determined at the beginning, and using the platform for testing in each phases.
Technology change	Investigate the technology before we use it. If it still happen, we need to investigate carefully and estimate the time to learn and reschedule our plan.
Requirement change	We will discuss the cost and necessity of the change.
The demand is underestimated	We may rent more facilities to run our service
Team members are ill	The one who is familiar to his/her jobs can take the job to finish it in time. Otherwise, we must reschedule our plan.