

# **Software Project Management Plan**

**UMKC Commerce Bank Marketplace**

Last Change: 4/27/2024

## **Team Members**

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## Document Control

### Change History

Revision	Change Date	Description of changes
1.0	2/29/2024	Homepage was created
1.1	3/02/2024	Login/Register has been implemented
1.2	3/7/2024	Django implemented to handle database requests with MySQL in regards to a login/register functionality and budget tracking
1.3	3/20/2024	User profile + setting implemented
2.0	4/3/2024	Refactored code with React to better fit for future development.
2.1	4/5/2024	Using MongoDB instead of Django/MySQL, user profile login information connect to and pull from MongoDB
2.2	4/7/2024	Able to launch website using Node.js
2.3	4/14/2024	Listing have been implemented
2.4	4/18/2024	Filtering and Categorization implemented, additional user features implemented
2.5	4/23/2024	Swipe payment implemented

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## 1 Overview

### 1.1 Purpose and Scope

The goal of this project is to create a Marketplace-style web application for UMKC users, through Commerce Bank. We decided on this project in particular because we felt it would provide a service to students that is not in place that would provide students a way to buy, sell, and list items that other students could find useful or necessary.

We have seen an issue with college students not having a wide enough reach when it comes to looking for something that they need, including things such as an apartment, a roommate, furnishing, books, and clothes. These are just a few examples and I am sure it doesn't stop there. By developing an application that could theoretically be used by all students, like we do for Handshake, and give users the option to opt-in then the user is directly connected to the UMKC base that utilize the application, which is our goal.

### 1.2 Goals and Objectives

Project Goals:

1. Create a web application that allows UMKC students to participate in an online marketplace that is connected to other UMKC students.

Project Objectives:

1. Create a database that represents a student's available funds.
2. Allow a user to create/edit their own listing.
3. When the user decides to purchase or sell an item, update their available funds to reflect that.
4. Allow the user to log in using their UMKC credentials.

### 1.3 Project Deliverables

The following items will be delivered by May 1st.

1. Source code for the application
2. System test cases
3. Test Plan

## 1.4 Assumptions and Constraints

### Assumptions:

Students are actively willing to use the marketplace for buying and selling items within the community

College has the technological infrastructure to support the application

Appropriate security measures are in place to protect personal and financial data

### Constraints:

Development deadline poses a bit of an obstacle due to the developer's current schedules.

Programming languages and frameworks may not be adopted by the college's existing infrastructure.

## 1.5 Schedule and Budget Summary

Task	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Setup project repository								
Implement user registration								
Implement user login								
Design homepage								
Define database schema								
Implement listing creation								
Implement budget tracking								
Conduct unit testing								
Implement user profile features								
Documentation								

## 1.6 Success Criteria

- Project is delivered on time
- User is able to create and log into their profile
- User is able to buy and sell listing on the marketplace

- User's budget reflects appropriately according to a purchase or sale of an item

## 1.7 Definitions

UMKC: University of Missouri-Kansas City

HTML: Hypertext Markup Language

CSS: Cascading Style Sheets

JavaScript: A programming language commonly used in web development.

GitHub: A web-based platform used for version control and collaboration on software projects.

Discord: A communication platform commonly used for text, voice, and video chat.

## 1.8 Evolution of the Project Plan

Over the course of this project we understand that there will be difficulties and changes that will need to be made.

We will make sure to update any significant points of interest in the Document Control portion of this document. This includes not only our code but our time constraints, schedule, project deliverables, and risk assessments.

## 2 Startup Plan

### 2.1 Team Organization

Programmers (4): Responsible for coding and unit testing.

Jesse Gonzalez

Sam Cabrera

Tea Abuselidze

Adam Talpers

### 2.2 Project Communications

We will talk to each other at least once per week with the designated day being Friday. While we have a plan to talk each week we will continue to update each other on our progress and what still needs to be done throughout our process. To do this, we will be using Discord to collect and recall information about our project.

## 2.3 Technical Process

Our group decided to use an agile methodology since we felt it would be best to build individual processes, gather them, find out what is wrong or missing and continue development from that point.

We had a few milestones in mind when we started this project. The first being getting our homepage to display information about what this project was about, and who it was for in a way that made sense to the user and allowed engagement with the website. The next was implementing a database that would be able to hold and store information regarding login/registry as well as keeping track of finances. Our last milestone was a successful deployment of our project where a user was able to register+login, make a listing to sell, buy a listing, and have the data reflect through the database.

## 2.4 Tools

Programming Languages - HTML, JavaScript, CSS

Version Control - source code will be stored in a github repository.

Defect Tracking - Github Issues

Build Tools - Parcel

Automated Testing - Jest

## 3 Work Plan

### 3.1 Activities and Release

Planning and Requirements Gathering:

Everyone comes together and brainstorms ideas of how to best come up with a solution for our web application. Sam starts the Project Charter and Jesse starts the Project Plan.

Design and Development:

Sam and Tea work on the front end of the marketplace application, Adam gathers information for our database, Jesse works on the back-end development.

### 3.2 Release Plan

Release 1.0:

Features:

- Ability to register and login for users.

- Functional homepage

Release 2.0:

Features:

- Additional functionality added to user's profile

- Listings are able to be made to buy and sell an item

- Buying and selling items reflect appropriately in a user's budget

Release 3.0:

Features:

- Listings are able to be filtered by category

- Information is stored for later and continued use

### 3.3 Iteration Plans

Iteration 1:

Goals and Objectives:

- Start a GitHub repository

- Set up the basic structure for the marketplace

- Implement user login and registration

- Develop the homepage layout and navigation



Define the database schema for user information and product listings  
This should take about two weeks to get done.

#### Iteration 2:

Implement user profile settings

Allow the user to create and buy listings

Allow the user to filter listings by category

Test everything up to this point via unit tests.

Allowing ourselves another two weeks to get this portion done.

#### Iteration 3:

Address any user interface issues

Switch over from using Django and Python to using React and Node.js

Implement payment processing

With this refactoring of code we expect this to take around another two weeks to allow us to continue making tests to make sure we refactored correctly.

#### Iteration 4:

Implement a messaging system between users

Homepage should allow users to filter by category

Continue unit testing

Coding and testing should be done at this point after another two weeks.

### 3.4 Budget

There is no budget for this project.

## 4 Control Plan

### 4.1 Monitoring and Control

Weekly progress meetings will be held to review accomplishments or issues with the project. Any changes to the scope of the project will be discussed with the team and documented accordingly.

## 4.2 Project Measurements

Release Planning: Brainstorm and record features and tools needed for project

Iteration Planning: Record and update progress on functionality and individual tasks.

Iteration Closeout: Record effort for individual tasks and features implemented.

System Test: Record error rate.

Project Closeout: Collect all source code and necessary documents.

Ongoing: Monitor defects from unit testing.

## 5 Supporting Process Plans

### 5.1 Risk Management Plan

Technical challenges could be a risk due to trying to understand new tools and languages some of us may be unfamiliar with.

Scheduling and availability also poses an issue with how busy the group is on a weekly basis.

In order to help prevent some issues that we may run into, we're making sure to communicate with each other and offering aid when a group member is unable to finish or understand their part of the work load.

### 5.2 Configuration Management Plan

Utilizing GitHub's repository will be invaluable for us where we will keep all of our work.

We will operate off of the use of different branches that we can pull and merge to and from each other.

### 5.3 Verification and Validation Plan

Creating test plans and test cases will help to verify the functionality and usability of our application.

#### 5.4 Product Acceptance Plan

In order for our project to meet product acceptance we must ensure we have met the following criteria:

User Registration and Login functionality

Listing Creation and Management

Transaction Functionality

User Profile Management

Budget Tracking