Maverick Home Center

CSE-5325-004: Software Engineering: Management, Maintenance & Quality Assurance

Group #13 - Mavericks

Team Members

S. No.	Student Name	UTA ID
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2.	Akash Biswas	1002055500
3.	Amit Gupta	1002066302
4.	Ravi Rajpurohit	1002079916

Maverick Home Center

Maverick Home Center is an app that provides home décor, used furniture, and all other accessories that one needs/wants to study. This app is for students at the University of Texas at Arlington and living close to the campus. This would allow students to have cheap (possibly free) and affordable furniture and would save the time and resources it would take to buy them firsthand or from other sellers. Maverick Home Center is here to help you whether you want to sell things you no longer need or if you're seeking a certain item at a good price.

There are many online marketplaces for buying and selling used goods, including eBay, Facebook Marketplace, Etsy, and Ebid. However, the main issue with the worldwide market is that anyone can pose as a buyer or a seller, which has the potential to defraud other users. This would ultimately result in a loss of faith in the system. Additionally, the user interface and user experience of the current market are so overwhelming that any first-time user could run into problems while attempting to complete fundamental tasks on the application.

The main advantage of having this application is that it is made by students with the aim to provide a seamless and easy-to-access place where one can get all the items one needs to have a convenient and easy journey to studies and have an immersive college life experience. Maverick Home Center, which is only available to students at The University of Texas at Arlington, overcomes all the aforementioned problems by gathering all the products in one location. Here, a buyer and seller can interact to lay the groundwork for negotiation and to have a better understanding of the state of the commodity. There would be no chance of being duped because the application only allows students who have been validated by the university to register. Additionally, the user can sell or buy a thing with just a few clicks because of the interactive design's simple user interface.

Functions:

Function 1 (Login page): Users will log in with their UTA IDs to access the application. This ensures that only UTA students get the appropriate services.

Function 2 (List items): This would allow people to list items that they no longer require and others to see what kind of items are available for pickup or sale.

Function 3 (Browse items): Look up items that have been listed and whether it meets the requirements.

Function 4 (Buy menu): Confirm the items that have been listed so that we can buy them for a cut price or for free.

Methodology:

We are planning to use Agile methodology for this project. The agile methodology emphasizes flexibility, collaboration, and rapid iteration. There are several reasons supporting the use of this methodology in our project:

- Flexibility: Agile allows for changes to be made quickly and easily. This is especially important in projects where requirements may change frequently.
- Collaboration: Agile encourages collaboration between team members, stakeholders, and customers. This can lead to better communication, faster decision-making, and a more engaged team.
- Rapid iteration: Agile focuses on delivering working software in small increments. This allows for feedback to be gathered quickly and incorporated into the next iteration.
- Risk management: Agile provides a framework for identifying and managing project risks. The iterative nature of the methodology allows for risks to be addressed early on in the project, which can help to minimize their impact.
- Continuous improvement: Agile is a continuous improvement process. The team can review and evaluate each iteration of the project, identifying areas for improvement and making changes as necessary. This can help to ensure that the final product is of the highest possible quality.

Team Experience:

1. Aditya:

I have gained decent experience in android application development thanks to taking CSE 5324 - Software Engineering 1: Design, Analysis, and Testing under Dr. Anam Sahoo previous semester. I have experience working on Android Studio, IntelliJ, PyCharm, and Google Colab and have worked on the design, development, and testing of an android application in the past and am eager to expand the boundaries of my knowledge by learning and participating in the management side of software engineering in this course from my peers, teaching assistant and professor.

2. Akash:

With 3 years of industry experience in the Retail domain, I have led and operated as an Automation Engineer within complex projects to perform on-time and cost-efficient delivery. I have worked extensively in automation Testing - API, Web Interface, and Mobile App - Order Management and Fulfillment, SAP Hybris, AWS, and Database management. Additionally, I was responsible for advising and providing best practice guidance for overall testing strategy and project deployments.

Furthermore, I oversaw the deployment of new application releases and was in charge of giving the final QA approval. Responded to and remedied critical issues that could not be addressed by junior members of the team. Gathered in-depth knowledge in Java Cucumber framework, Rest-Assured API, SAP Hybris, Postman, Robo3T, JIRA, TestRail, API Testing, Regression Testing, Defect Debugging,

Mobile & APP Testing, and Retail Warehouse Management with extensive hands-on applications like Manhattan DOM.

 I am thrilled to attend this course and learn more about software engineering management.

3. Amit:

Throughout my Bachelor's degree, I faced a plethora of challenges and gained an abundance of knowledge on innovative technologies, including Computer Vision, Mobile Application Development, Machine Learning, and Robotics. My skills extend to a range of programming languages such as Python, Dart, C/C++, Java, and NodeJS, as well as expertise in React, Flutter, and Django frameworks.

Currently, I am pursuing a Masters in Computer Science at the University of Texas at Arlington. My coursework, which includes Data Mining, Design and Analysis of Algorithms, Machine Learning, and Software Engineering, has provided me with a platform to enhance my skills and broaden my knowledge. Additionally, I have applied my expertise to various projects and internships, including creating an open-source package in Dart published on the Flutter Dev Community.Furthermore, during my internship at IIT-Bombay, I developed a Self-Driving Robot using a Mobile where I was responsible for designing an Android application that could run a trained TensorFlow model. I also collected data from the camera and sent steering angles to the bot via Arduino.

I aim to acquire an in-depth understanding of Software Management intricacies and employ them in future projects to optimize the outcome, leveraging the opportunities presented in this course.

4. Ravi:

In my 2.5 years of work experience at Kaha Technologies, I built algorithms for activity recognition, stress assessment, and personalized sleep quality measurement. I also contributed to the development of an end-to-end machine learning pipeline and mentored three interns for Android development and data science. As an Android Intern, I developed a custom camera module, automated data collection, and designed and implemented JUnit test cases for unit testing.

I am currently pursuing a Master of Science in Computer Science at the University of Texas at Arlington and have completed courses in Design & Analysis of Algorithms, Cloud Computing, Data Analysis & Modelling Techniques, and Software Engineering. My technical skills include Java, Kotlin, Android, HTML, CSS, Python, Flask, C, R, Git, Selenium, Excel, SQL, GCP, Docker, DSA, and experience with databases such as Firebase, BigQuery, MySQL, and DynamoDB.

I am excited to learn and practice the project management aspect of computer science by taking this course and building a project focusing on management details.

CSE 5325-004: SFWR ENG-II MANAGEMENT, MAINTENANCE, AND QA

Academic Integrity
Honor Code:
I pledge, in my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only the work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

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