

Tech Spec MotoMoto

The New Panelists
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1. Executive Summary

1.1 Document Summary

This document contains our business objectives as well as limitations and how we plan to address them. Our delivery outline is scheduled to reach and complete every milestone and retrospective by the end of the semester: December 10th. We also outline every feature and their respective functional and non-functional requirements.

1.2 Objectives

- Provide a consolidated platform of car builds, parts, events, and interaction.
- Offer part compatibility features to lessen user's time spent.
- Assist users in price analyses and finding popular parts.
- Help users connect with other users interested in similar products or events.

MotoMoto provides link resources on the web application and does not manufacture, sell, or ship parts listed on the website. The product is aimed at ensuring compatibility with the latest version of Google Chrome. It should include minor changes to the web application itself to reach the product's objectives. This product will include sources to external vendors for potential payment where information may be used by such parties for research purposes.

1.3 Assumptions

- Our website application will only be available in US English and we will assume that all users accessing the website are in the United States
- Our application will consistently have measures built into the code to ensure that there is no mis-information being shared or on the website about part use or pricing

2. Softwares to Build the Product

2.1 Communication Software

- Discord Desktop Application - Minimum Version Stable 100054
 - Used for immediate communication in-between team members:
 - Channels for setting up meetings, voice meeting communications, check deadlines, helpful learning resources, and voting
- Trello Desktop Application 2.12.3
 - For daily scrum meeting updates
 - Checking/meeting deadlines set and knowing future deadlines
- Zoom Desktop Application - Minimum Version 5.8.0
 - Will be used to communicate with our client where meetings will be discussed about partial expectations and deadlines as well as answering questions in online meetings.

2.2 Documenting Software

- Diagrams.net Web Application
 - For UML creation
 - For Site Map creation
 - For sequence diagram creation
- OneDrive Web Application
 - To store all finalized documents of the project, including but not limited to: project proposal, brd, site map, etc.
- OneNote - Minimum Version 16.0.13901.20462
 - Used to document all notes for meetings with our client and also used to quickly jot down any information we have regarding research that is conducted
- Google Drive Web Application
 - Used by team members to work on documents collaboratively and see edits in real-time before submitting final drafts
- Microsoft Excel - Minimum Version 16.0.13901.20400
 - Used by the team to log hours worked throughout the week
 - Used to create team BurnDown Charts for sprints

2.3 Version Control Software

- GitHub Desktop Application - Minimum Version 2.9.4
 - A multifaceted website that will allow our team to push edits of code so that members can see what team members have contributed and when
 - To push edits of document deliverables
 - All team members already have accounts with this site and it is free to use
 - Required by client

2.4 Project Development Software

- Visual Studio Code - Minimum Version 16.11.4
 - A code editor will be used in the project development stages to implement the ASP.NET framework using the programming language, C#

2.5 Programming Languages

- HTML5 - Minimum Version 5.0
 - Purpose:
 - Used for structure and display of content on the website
 - This is required for layout and we are using 5 as it is the newest version
 - Advantages:
 - Does not required to pay royalties
 - Provides clear and consistent coding style
 - Ables to be deployed across multiple platforms
 - Easy to learn
 - Disadvantage:
 - Requires users to have modern browsers to access the website
 - Lack of compatibility with Internet Explorer
- CSS - Minimum Version 2.1
 - Purpose:
 - Used to create a more 'stylish' user interface
 - Used alongside HTML5
 - Advantage(s):
 - Simplifies the website development and the website maintenance
 - Provides faster load time for website
 - Style is applied consistently across the website
 - One command line can control several areas at one time
 - Disadvantage(s):
 - Lack of security
 - May compatible with one browser may not always compatible with another
- ECMAScript 6 - Version 11+
 - Purpose:
 - To ensure interoperability of web pages across different web browsers
 - Advantage(s):
 - Supports most of the latest modern browsers and produce an equivalent result
 - Disadvantage(s):
 - The code is visible to everyone
 - If an error occurs in the ECMAScript, it can affect the entire website

- Vue Framework - Version 3.X
 - Purpose:
 - It will be used for front-end development and create an user interface
 - Advantage(s):
 - Compact in size, just need few seconds to download files
 - Allows easy integration, integrate the framework with the existing applications
 - Disadvantage(s):
 - Since it's still a new framework, the support is limited from the developers team

- C# : Version 9.0 - Released November 10, 2020
 - Purpose
 - C# will be used in the application development stages to implement the ASP.NET framework
 - ASP.NET will allow for our application to become dynamic, scalable, and interactive with the web UI.
 - Currently, there is support for JavaScript UI development support which will assist with programming which helps with our goal of SPA architecture implementation.
 - Advantage(s):
 - It's an object-oriented language
 - Unlike C++, no need to pay much attention on memory loss
 - Easy to develop
 - Disadvantage(s):
 - Not very flexible, it's entirely based on Microsoft .Net framework

2.6 Database

- MariaDB - Version 15.1+
 - Purpose:
 - We will be using MariaDB for the set-up, operation and scalability of the website network
 - Advantage(s):
 - Latest version of MariaDB is compatible with older versions
 - Upon installation, gain the full access of MariaDB
 - Open source, compatible with Windows and Mac computers
 - Disadvantage(s)
 - Only supports JSON data types
 - Not compatible with MySQL, which makes migration difficult

2.7 Operating Systems

- Windows 10 - Minimum Version 21H1
 - For application development, testing, and deployment
 - We will continually check for system updates to ensure our application can run on the latest version within two weeks of release date
- macOS - Minimum Version 11.0 Big Sur
 - For application development, testing, and deployment
 - We will continually check for system updates to ensure our application can run on the latest version within two weeks of release date
 - We choose to run on these operating systems as they are most widely used by potential users

2.8 Web Browser

- Google Chrome - Minimum Version 94.0.4606.71
 - We will continually check for chrome updates to ensure our application can run on the latest version within two weeks of release date