MM

BRD	MotoMoto
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Executive Summary

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.

Business 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.

Scope

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.

Metrics

Every feature of this application will be subject to the monitoring of the following metrics:

- Page Speed - Google's Pagespeed Insights will be used to measure the performance of each individual web page in this web application. A score greater than 80 is acceptable.

- Algorithm Time Complexity - Every algorithm used in this application must be faster than $O(n^2)$

Features

Community Board

- Functional Requirements
  - Users may select from the list of available community boards to view the posts within them.
    - If there are 100 community boards, the user must be able to select all 100.
    - If a community board contains 10 posts, the user must be able to view all 10 posts when the community board is selected.
  - Users are able to comment and upvote on posts
    - If 100 comments are written on a post, all users must be able to see all 100 comments.
    - If 100 upvotes are given to a post. The post must show that it has 100 upvotes.
  - Users may subscribe to other profiles to see new posts released by the subscribed profiles
    - Both user and event profiles may be subscribed to.
    - Specific community boards may be subscribed to.
    - If a user is subscribed to 100 accounts, all posts from those 100 accounts must appear in the user's community board feed.
- Non-Functional Requirements
  - Community boards will be updated upon new posts in them.
    - If a community board admin posts a new post to that community board, it must be viewable to all users within 30 seconds of the admin sending the post request.
  - Subscriptions made in these community boards will show new posts or updates on a user's main feed
    - If a subscribed to community board posts a new post it must appear in their subscriber's feed within 30 seconds.
  - Comments will range from 1 character to 1000 character limit.
    - An error message will show if a comments' length is < 1 or > 1000 characters and the comment will not be posted/
  - Users are limited to one upvote per post
  - Users can only subscribe to one profile at a time and is not limited to a number of subscriptions
  - Notifications will be set in-app for users to be notified on specific profiles
    - If users enable notifications for a profile, and the profile makes 100 posts, the user will receive 100 notifications.

Features

Community Board: Main Feed

- Functional Requirements
  - The feed will present user account and car builds of which users have subscribed to
    - If no subscriptions were made (i.e. new user) then the feed will contain posts of highest popularity based on upvotes
      - Popularity is determined by at least 100 upvotes
    - User accounts can be subscribed to by selecting the profile and selecting the subscribe button
    - Parts can be subscribed to by selecting them in the parts lists of posts and selecting the subscribe button
  - Users will be able to place upvotes and be able to comment on their favorite car builds
  - Posts can be selected to reveal more information
  - User sees ten posts at a time

- Non-Functional Requirements
  - Main feed will be updated upon new subscription posts
  - Each comment posted on a car build or user posts can range from a minimum of 1 character to 1000 characters
    - Users will be able to comment multiple of times if they exceed the 1000 character limit
  - All uploaded images will be converted to a jpeg image and must not exceed 1MB as a jpeg image

Features

Car Builder

- Functional Requirements
  - User should be able to choose the car year, make, and model OR type in the vin number of their car to generate the car they want
    - Year consists of four digits (####)
      - >= 1910 but <= current year (and next year if applicable)
    - Will display 5 makes at a time from a drop down menu and the user can scroll through every car make
    - When car make is chosen, there will be another drop down menu with all the models for that year and make
  - The car is then saved to their profile, with a maximum of ten saved cars
  - User can then choose from a large list of OEM OR aftermarket parts to add to their virtual car
- Non-Functional Requirements
  - The application's database holds every possible stock car they could ask for
  - The application's database hols vin association to the correct car they would own
  - The application's database holds all OEM parts for any type of vehicle
  - The application's database holds various aftermarket parts used for different modifications. The database will retrieve information on these parts from the following sources:
    - Web Scraping
    - Amazon Services LLC Associates Program
    - Autozone Affiliate Program
    - Demon-tweeks Affiliate Program
    - Jegs Affiliate Marketing Program

Features

Part Flagging

- Functional Requirements
  - Users see flags are tagged onto modifications relative to the selected vehicle and have labels: Compatible or Non-Recommended
    - Parts will show as non-recommended only after receiving 100 incompatibility flags from users.
  - When users put incompatible parts into their online build, they are notified with a warning that their part is not recommended for their selected vehicle
  - When users view car build posts, flags may appear in the parts lists set by the posting user
    - Users can select flags, when selected they will present a review set by the specific user in view and a rating based on other users' upvotes
  - Users can place new flags on parts they believe to be incompatible.

- Non-Functional Requirements
  - Flags are tagged onto modifications relative to the selected vehicle and have labels: Compatible or Non-Recommended
    - The Compatible label means that a part, OEM or Aftermarket, is manufactured to be installed with the selected car
    - The Non-Recommended label means that a part is considered potentially incompatible which we do not recommend purchasing
    - This label includes interactable user vehicle posts that contain the part, user reviews, and ratings
  - The flag database will update upon every new flag set given that a user provides the necessary information
  - Flags' credibility are improved by part assembly in vehicle posts, user reviews, and ratings

Features

Event List

- Functional Requirements
  - When users select the post it will expand details and reveal a register button for which a logged in user can confirm or cancel their intention of attending an event
    - Address, City, State, and Zip code will be provided
  - When users access the Event Feed they will be prompted to input a zip code to discover events in that area OR users can search for specific events by event title or event account.
  - Users may input filters: most popular based on upvotes, car type, new or old based on time of post, radial distance relative to the zip code, and date intervals
  - Users can make event accounts to create an event

- Non-Functional Requirements
  - Event list will be updated once in the beginning of the week and once in the middle of the week
  - Each event post requires the following: event title, location, time, and date
    - Event title has a maximum 100 characters
    - Date will appear ##/##/####
    - Time will show for whatever time zone the user is in
  - All uploaded images will be converted to a jpeg image and must not exceed 1MB as a jpeg image
  - An Event Account is limited to one event post per day
  - Activity includes all users that have registered for the event and when a new registered user appears

Features

Part Price Analysis

- Functional Requirements
  - Users can browse a large assortment of car parts
  - When users choose a car part they are immediately notified if it is or is not compatible with their current vehicle
  - Users may subscribe to a part to be notified of part price updates
  - Users can compare different brand specific parts
  - Users can pick the link to where they'd like to buy from on the part price page
  - Users will be able to hover over a vendors line on the graph to see price points of previous or current prices of the item itself

- Non-Functional Requirements
  - Updates on new part prices will be updated accordingly based on our affiliate program data sources
  - Prices can be ordered by lowest price to highest price or ratings
    - Prices listed will be determined by the current lowest price of a brand specific part (prices will be listed by USD)
    - Prices will be formatted as USD $####.##
    - Ratings will determined by upvotes
  - All picture icons of a specific part will have the ability to be selected by the user to view price table comparison and price graph
    - Picture icons do not exceed 1MB, will be original image size
    - Will not exceed 1000x1500
  - Part price page will have a table where each vendors price is listed and compared
  - Every vendor will have selectable icons that will link a user to the part to purchase (links will be embedded with vendors icons)
    - Part prices will be sorted on the table from lowest to highest where linked icons will be available for users next to prices
  - Product price page will contain a line graph that has all vendors and their price of the brand specific part over the past 6 months, thus will be updated every six months

Features

Notification System

- Functional Requirements
  - Out-app notifications
    - Deliver to user's email inbox
    - Notification activities will be include:
      - New events posted by a subscribed event account
      - Upcoming registered events within one and a half to the date of event
      - Monday and Wednesday 3PM PST
    - Email notifications will be delivered every 3PM PST containing all the updates that happened in the previous 24 hours.
    - Unsubscribe option is available: the users may opt-out from receiving notification emails
  - In-app notifications
    - Push an instant notification to the users when they are logged in the application upon new subscription activity specified below.
  - Users have the option to unsubscribe to any notification they want

- Non-Functional Requirements
  - In-app notifications will be sent to a virtual inbox within the application and will consist of all subscription activity
  - Out-app notifications will be sent to a user's email inbox that was used during sign-up and may consist of all or some of the following subscription activity
  - Every out-app notification summary will present the type of activity, event, and date of occurrence
  - If changes to the event were made, the summary will present the new post and a link redirecting to the specific post
    - Summary will consist of up to 1000 characters
  - If an event has already passed, then users will not receive any new information on a former event
    - Notification of an event will stop the day it starts to ensure that users will no longer receive notifications once an event has past