CarXchange
Project Definition Document

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VERSION HISTORY

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November 29, 2017	1.0	Initial draft	Ganesh Koripalli, Kirby Herrmann, William Shamrock
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1. PURPOSE

The purpose of this Project Definition Document is to show a brief overview and the process of Phoenixolutions development on Senior Project: CarExchange.

2. PROBLEM/OPPORTUNITY

The opportunity to exchange cars (at this point in time) without the middle man is something that does not exist, it creates a template for the application and can be used for other purposes later in the future.

3. PROJECT GOAL

CarXchange should make exchanging cars between one user and another user easy, efficient, and cost effective. By eliminating the use of car dealerships, users can cut down on costs and negotiate a fair price or trade for vehicles more quicker and more efficiently.

4. PROJECT OBJECTIVES

The main objectives:

- Conveniently Exchange cars
    a. Bidding on cars
    b. Paying a price for the car
    c. Bartering with other items owners accept
- Help the environment by promoting broad bartering
- All exchanges are done through user accounts

5. PROJECT SCOPE

The main objectives:

- Buy and Sell cars through the website
- Be able to provide a medium for selling/exchanging/bartering that is easier for all sides
- Reduce junk
- Have a secure account management base

6. OUTCOMES/SUCCESS CRITERIA

A usable, fully-functional platform/website that targets at car owners who will be provided the following free and convenient services:
    A.   Selling a car at an acceptable price offer

    B.   Exchanging a car for another desired car

    C.   Bartering a car for other items desired, including services

7. ASSUMPTIONS

- **Since this is a two-semester course, we will have the same team members and the same mentor**

- **The initial idea of only using cars as the initial design**

8. RISKS

This project does not present any risks other than not finishing in time

9. ESTIMATED DURATION

The duration of the project is a two-semester course and the final project being due at the end of the spring semester 2018.

10. FUNCTIONAL REQUIREMENTS

10.1 Homepage

The homepage will contain a navigation bar (F10.4) with features when clicked upon will take the user to those pages. The homepage will also contain a quick search (F10.5) with options and filters to narrow down the users search. The homepage might also contain images of suggested vehicles the user might be interested in.

10.2 Login

The login page will be accessed from the navigation bar (F10.4). The login page will contain a form to collect input for the users' email address or username and password.

10.3 Sign Up

The sign up page will be accessed from the navigation bar (F10.4). The sign up page will contain a form to collect a users' information and create the user an account.

10.4 Navigation Bar

The navigation bar will be located at the top of each page. The navigation bar will contain buttons that when clicked take you to different pages which include: List Your Car, My Listings, My Offers, My Watch List, Login, Sign Up.

10.5 Quick Search

The quick search will be located on the homepage. The quick search will be able to filter the users' specifications on vehicles to make searching easier and more precise. The filters might include: Make, Model, Year, Miles. The user will also need to enter a ZIP Code to specify what location the user wishes to search for vehicles.

10.6 Listing Your Vehicle for Sale

The 'List Your Car' page can be accessed from the navigation bar (F10.4). The 'List Your Car' page will collect information and a picture of the vehicle that you want to sell. The information collected will include the price the user wants for the vehicle, if the user will accept cash, details on the vehicle, and more.

10.7 Viewing My Listings

The 'My Listings' page will be accessible from the navigation bar (F10.4). The 'My Listing' page will contain each vehicle the user has listed for sale. It will also list any offers to purchase for each vehicle.

10.8 Viewing My Offers

The 'My Offers' page will be accessible from the navigation bar (F10.4). The 'My Offers' page will contain offers the user has received on her/his listing as well as offers the user has made on other vehicles. The user will be able to accept and decline offers. The user will also be able to communicate with the other user to negotiate a price. Once the price is settled upon, the user can make a commitment to solidify the deal.

10.9 Viewing My Watch List

The 'My Watch List' page will be accessible from the navigation bar (F10.4). The 'My Watch List' page will contain vehicles that the user has marked as interested in but is not prepared to make an offer on yet.

11. NON-FUNCTIONAL REQUIREMENTS

11.1 Account Security

All user accounts will be stored on a secure database and will have encrypted passwords.

11.2 Payment Security

All payments between users will be through a secure payment method such as PayPal.

11.3 Convenient Interaction between users

Message-based, context aware (by means of threads) interaction mechanism   will be implemented.

12. TECHNICAL REQUIREMENTS

12.1 Front End

The user interface will consist of a web page written in html, css, bootstrap, and java script. PHP may be used to interact with the server. For the beginning versions, Paypal will be used to exchange money.

12.2 Back End

The server will be run on CentOS using Apache as the web server. The database language used will be MySQL, and the scripting language will be PHP.

Date: _____

Approved by: _____

Approver Signature: _____

Mentor Name: _____

Mentor Signature: _____