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TorqueIT: Car Diagnostics

TorqueIT: Car Diagnostics is a car diagnostic application for both Android and Apple Mobile OS. Our application is designed for use by both people with high automotive knowledge and people with low automotive knowledge. We save customers money by empowering them with the information needed to diagnose or even fix their car! We create multiple levels of user control to ensure that our product has the best possible user experience for the consumer. Currently, the market for car diagnostics is a near blue ocean market. There is a few competitors but none with the capabilities that our application will possess. The application will be the center of our company reaching to a global audience. Below is our logo for TorqueIT: Car Diagnostics.

Audience and Needs

For our project we had to first evaluate who our audience is and what their needs are. This audience being do-it-yourselfers, mechanics, and general people who need their cars fixed. The need of the audience is a need for ; automotive diagnostic information,

troubleshooting information, local garage information, and diagnostic help.

Functionality Design

Our application offers two levels of account control for the user; Novice, which is a question based diagnostics platform and Advanced, which is a question based diagnostics platform incorporating; OBD2 connectivity diagnostics and functionality.

This connects through previous bluetooth OBD2 connections. For take advantage of this interface you must purchase an aftermarket OBD2 receiver and transmitter.

The Application Interface uses the platforms developed by Android and Apple designed for both tablets and smartphones. Refer to appendix A for how the homepage layout looks. We anticipate future integration for desktop and laptop computers. Our application changes depending on the kind of account you're using. We chose a very simplistic design to increase the overall user experience and ease of use.

The novice account application design consists of a four button home page layout. Refer to appendix B for how this layout looks. The upper left hand button says "What's wrong with my car?" This button asks questions to diagnose the issue. The upper right hand button is "Upgrade my account." The bottom left button is "My garage." This button has the user input the information about their car for quick referencing. They can customize their garage and their cars. The bottom right button is "Garage/store locator." This button uses in-app Google Maps to locate nearby garages and automotive stores.

The Gold account application design consists of a six button home page layout. Refer to appendix C for how this layout looks. This account is one class higher than novice. The upper left button is "What's wrong with my car?" This button asks questions to diagnose the issue. The upper right button is "Upgrade my account." The middle left button is "My garage."This interface has user inputs the information about their car for quick referencing, settings for the application, and a area to buy additional diagnostic information. The middle right button is "Garage/store locator." This interface uses in-

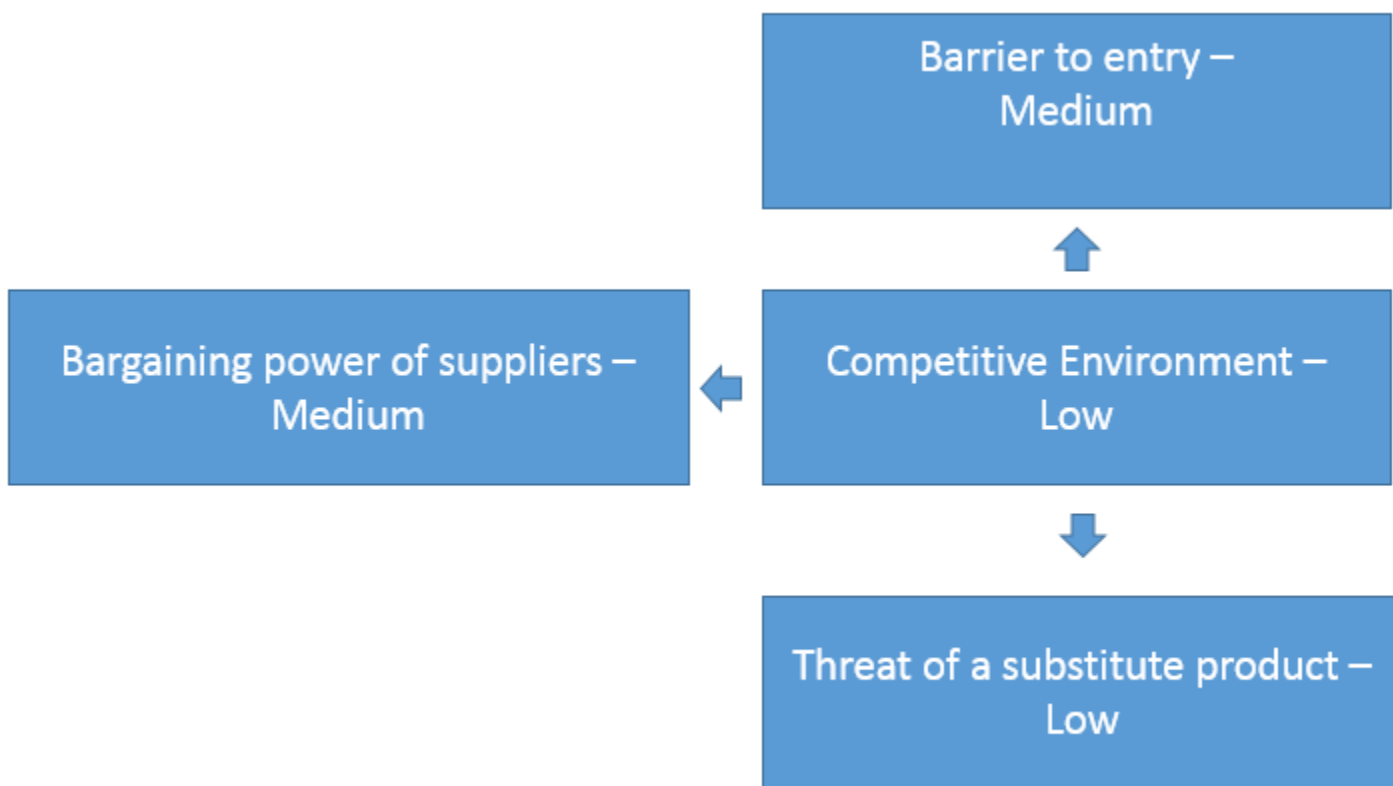app Google Maps to locate nearby garages and automotive stores. The bottom left button is "OBD2 link." The bottom right button is "Integrated code lookup."

The Platinum account application design consists of a five button home page layout. Refer to appendix D for how this layout looks. This account is one class higher than Gold. The upper left button is "What's wrong with my car?" This asks questions to diagnose the issue. The upper right button is "My garage." This interface has user inputs the information about their car for quick referencing, options to change application settings, and a store to buy additional diagnostic information. The middle left button is "Garage/store locator." This interface uses in-app Google Maps to locate nearby garages and automotive stores The middle right button is "OBD2 link." This connects your car to your mobile device. The bottom button is "Integrated code lookup." This is used to find pending or past codes for your vehicle.

Business Plan

To design our business plan for our application we first confronted
Porter's Five Forces. We did this to ensure that we are strong enough
positioned to consider this application development. Below is the
chart applying our application TorquIT: Car Diagnostics to the model
"Porter's Five Forces:"

	Barrier to entry – Medium
Bargaining power of suppliers – Medium	Competitive Environment – Low
	Threat of a substitute product – Low

The value proposition of our application is strong because content is
valuable, convenient, and reliable. Our competitive advantage is
created by our large database with accurate, evaluated, diagnostic

information. Another advantage is our cross platform cloud integrated

account synchronization.

Our last advantage is our plethora of features integrated into our

application. With this application we are entering a Blue ocean

market. Currently, we are the only application that offers both

diagnostics for both OBD2 troubleshooting and a questionnaire based

troubleshooting technique. We have many features that are integrated

that others do not offer. Besides us there is only a handful of partially

developed applications. This helps gain us the first mover advantage.

We will gain a lot of diagnostics information before competitors join the

market. This will give us an advantage over them.

The current lack of market competition gives us a strong market

opportunity for this kind of application. There are a very limited

number of competitor. We possess more valuable content then

competitors. We have a large target audience to the fact that

'everyone' has a car. They all need to get them fixed when they

break.

Marketing Plan

The marketing plan for our application is a very complex one focusing on social networking promotion, viral marketing, and ad exchange programs. Using social networking promotion we will use social networking sites; Twitter, Facebook, and LinkedIn to promote our app. We will stay up with the most current social networking sites to help stay connected with as many potential customers as possible. We will develop strong content to help promote consumer engagement to create buzz.

We will also use viral marketing promotion by paying top blogger, Youtubers, and social media users to virally promote our application. According to Brian Powers, it generally costs between $.10 and $.30 per impression for viral marketing.   Another form of marketing that we will engage in is ad exchange programs. This will exchange advertising on our application with advertising space on another application. This will consist of:

- In-game advertising in exchange for viral marketing.
- In-game advertising in exchange for radio promotions.

Below is our developmental budget for the application.

Cost	Details	Low	High	
Usability Test Costs	Free from LVC Volunteers	$0	$0	
App Development	Outsourced	$3,000	$50,000	
App Upgrades	In-app Purchasing	$1,000	$3,000	
	App. Info sharing Capablities	$500	$1,500	
Andriod Store	Fee to have app featured	$25	$25	*One Time Fee*
Apple Store	Fee to have app featured	$99	$99	*Annual Fee* + *30% c
Social Networking	Made by us	$0	$0	
		Low	High	
	Total:	$4,624	$54,624	

The development budget of this application consists of usability test costs, application development costs, application upgrade costs, Andriod Store hosting fee, Apple Store hosting fee, and social networking costs. Please refer to our development budget for additional information. Based on the information we have gathering the lowest we could build the application is for $4,624 and the highest it might cost if $54,624. This number varies depending on the features integrated into our application.

The usability test costs will be virtually $0 because it will be taken by volunteers at Lebanon Valley College. Application development is the core of our development budget. Based on quotes from Carter Thomas from Bluecloud Solutions, it will cost between $8,000 to $50,000 outsourced for the application development. Application

upgrades such as In-app purchasing will cost between $1000-$3000. Possible sharing capabilities for social networks, text, and email will cost between $500-$1500 .

Advertising Budget

Facebook Advertising is based on a Daily or lifetime budget. They charge based on Cost-Per-Impression or Cost-Per-Click models. The cost of this is generally $.10 per click, based on Facebook's page 'Frequently Asked Questions About Advertising on Facebook.' Android Store hosting costs a $25 one time fee. Apple Store hosting costs $99 a year in addition to the Apple IOS toolkit, which costs a lifetime fee of 30% of the application's revenue according to Apple's Overview and Cost Iphone App development page. Social network marketing for our application will be virtually free because we will only use their free services to promote our application.

Employee Budget

Our management team will consist of Kevin Tilley (the manager of the team), Joe D'Angelo (the manager of outsourcing), and Tim Martinez (the Designer and content creator).   Most of our development will be

outsourced. We will have virtually no cost to develop the application in-house, however,we are seeking a 10% cut of the revenue after we start generating a profit for the business. The costs to viral market will be free because it is in-house. We will create viral marketing campaigns to create buzz within the car diagnostic and fixing industry. The management costs will also be free because it is done in-house by us.

Revenue Model

Our revenue model consists of many different revenue techniques such as subscription based, advertisement based, and in-app microtransaction based revenue models. These will all be done by integrating them into our three different account models; Free, Gold, and Platinum accounts.

Our Free account uses mostly advertisements to generate revenue. This account does offers add-on information at a cost to generate additional revenue..This account offers less content than the other models including; Limited diagnostic information and pay-per-car for additional information.

Our Gold account has no advertisements to generate revenue, however we gain revenue from the purchase of the upgrade and the monthly subscription cost of the upgrade. This account upgrade will cost the user a monthly fee of $5.99 and an initial application fee of $19.99. This account offers All domestic car diagnostic information, additional foreign car diagnostic information, and pay-per-car for additional information. The pay-per-car generates additional revenue for us.

The Platinum account has no advertisements. We generate a lot of revenue based on the account upgrade from this individual. This account upgrade will cost the user a monthly fee of $9.99 and an initial application fee of $29.99. This account includes all of the content available including exotic car diagnostics information, free upgrades, full database of domestic car diagnostic information and foreign car diagnostic information.

Our advertisements will gain us a profit of roughly $0.75 per thousand impressions, according to the article ' Why Are Mobile Ads So Cheap?' on BeeDesign.org.

Advertisement exchange program with affiliate apps will not gain us monetary value but gain us potential account sales, content sales, B2B, and B2C. The chart below shows our work schedule for each task and its description, corresponding start date and completion date.

Tasks	Description	Start Date	Completed
Task 1:	Choose Project	3/10/2014	3/12/2014
Task 2:	Research	3/10/2014	3/14/2014
Task 3:	Group Proposal	3/14/2014	3/17/2014
Task 4:	Group Outline	3/17/2014	4/3/2014
Task 5:	Rough Draft	4/4/2014	4/23/2014
Task 6:	Final Draft	4/24/2014	5/6/2014

Conclusion

TorqueIT: Car Diagnostics is more than just an idea. It is a potential business with a solid business plan. Currently lacking strong competition while being able to meet the needs of countless potential users. We can meet the needs of the user in many ways; saving them

money, helping them be more self-reliant, providing them with

troubleshooting information, and providing many useful tools in one

integrated application. If done correctly, our application can be

developed for as low as $4,624. This is a small price to pay to such a

capable business and application. Our biggest obstacle to overcome

is the advertising campaign. This is a result of the lack of current

competition to model ourselves after. We have to find a way to reach

these customers in a new engaging way while selling a new type of

application.

Appendices

Appendix A.   Home Page of Application

Appendix B. Novice Account

Appendix C. Gold Account

Appendix D.   Platinum Account

TorqueIT

What is wrong with my car?

My Garage

Garage/Store Locator

OBD 2

Intergrated Code Lookup