

September 25, 2018

PROJECT PROPOSAL

[Team Spyderz]

[Product: CheckIt]

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1. Abstract

Spyderz is a development team that is going to be managing the creation of CheckIt, a web application for price tracking and product distribution. CheckIt is a product that will help any user be proactive and thrifty in their online shopping. From this proposal, we hope to get the idea across that this product will be a point of relief for a majority of online shoppers and/or distributors. The project management will be done through an agile methodology, specifically SCRUM. This will allow us to manage our development in cycles. CheckIt will have personal user accounts to allow account holders to customize their profiles, and also business accounts for businesses will allow them to manage any products sold through CheckIt. This web based application will have many features, but users can decide which of them they would like to use. Some of the main features of CheckIt include price monitoring and alerts, searching for products, and even hosting your own business's products through our website. The proposed timeline for the creation of CheckIt is two school semesters, which is about eight months including the holiday breaks. The key goals from the initial semester is to have the development team understand which architectures and design to use to begin implementing the core product features. Over the second semester, CheckIt will be built to completion, and the development team can begin working on application specific features and perhaps extras such as a and incorporation of a browser extension.

2. Introduction

In today's society everyone seems to be very busy. Whether it's work, school, family, etc., completing basic tasks can be impractical and impair efficiency. We hope to help people attain a more productive and efficient lifestyle by providing automated price tracking on their desired products. This will also provide businesses a platform for product distribution. CheckIt will allow users to perform basic functions such as adding items to a watchlist and receiving notifications based on its price changes, creating a customized profile, sharing watchlists amongst friends, and even crowdsourcing on a hot item. We want to attempt to free up sometime in people's lives so that they can focus on other more meaningful tasks. Through providing a service to allow people to efficiently search product to obtain the lowest price, our goal is to help people quickly handle these tasks so they can have more time to complete the important things in their life. The target audience is anyone who has a knack for online shopping or product distribution.

3. Needs/Problems

CheckIt was conceptualized from the need for organization while shopping online. It will also serve as an easy to use platform for product distributors, no matter their size. It is our hope that CheckIt will work in the background for you to solve many problems. Some of these might include:

- Monitoring item sales for when you aren't explicitly shopping
- Finding a general product when you aren't quite sure what you want
- Notifying a user when their watched product goes on sale or drops below a specified price they wanted to pay for it
- Allowing companies be able to sell products directly from our website
- Being a part of a crowdsourcing campaign to buy items at a lower price than usual

Tasks like the ones above are just a few of the problems facing a busy lifestyle. According to a study done by Dr. Paul J. Zak, coupon recipients in an experiment showed a 38 percent rise in oxytocin levels and were 11 percent happier than those who did not receive a coupon. It's obvious that lower prices keep customers happy so why not get rid of the stress for hunting those lower prices down? With the technology out today, websites can do more than ever. Our goal is to have users configure CheckIt to their specific desires, and be able to move on with their day knowing our servers are grinding away to find them their deal. We have heard too many stories of frustration about many of these problems from friends and family, so we hope to do something to alleviate these problems.

4. Goals/Objectives

Our goal with CheckIt is to have it be a one-stop shop. With all the websites and retail stores around the nation, it is quite difficult to know if you're getting the best price for what you're looking for. People may spend hours looking for the lowest price of such items. With our website we wish to eliminate that burden by having our product look for the best price on the net and give it our users with a single search. Not only will this website provide the lowest price for items, it will also include features which will make buying easier. Features such as:

- Search for needed products at the lowest price.
- Monitoring products.
- Providing location updates on purchased items being shipped to you.
- Provide an easy to website to view potential products of interest.
- Selling items that are overstocked for certain businesses.

Going through multiple websites to find the best deals will become a thing of the past. We are offering a solution to this by having users come to our website and find the best price within minutes.

5. Features

Features are the things that give a website its personality. Core features and application features together are essentially the website itself. Core features include things that will help get a stable system up and running while application features give a website its purpose. In order to provide a smooth experience all around, the development team will create features that not only will drive traffic to the site, but also features that will deter any abuse from malicious bots or users.

5.1 Core Features

To make this product structurally sound, we will have 10 core features. These features will ensure the stability of our product and will provide an easy way for the development team to maintain it in the future. These key features will also ensure optimal usability for any potential customer or user. The following are the core features and descriptions of their usage and functionality:

- User Registration
 - Allows users, either customers or businesses to register for our website and save any information pertinent to their specific profile such as watched items on the user's side or selling products on the business side.

- Login / Logout
 - Provides a layer of security that will allow users to keep their information private within their session. Login and logout will also help on the server side with user management, the next feature.
- User Management
 - A system which allows an administrator to manage users within the entire system. An admin will potentially be able to strike down fake users and provide assistance for any user issues that arise during production.
- User Access Control
 - The controls that will assign user privileges and permissions. For example, a regular user will not be able to post any products, whereas a business user could.
- Usage Analysis Dashboard
 - This will provide the client and administrators with a collected view of usage statistics for the website. They will be able to see any activity or traffic and respond accordingly.
- Logging / Archiving
 - The website will provide feedback and stats for all activities performed. The logs will provide useful information for any debugging or errors that might occur.
- Error Handling

- The developers will put in place a system to catch any errors and thrown exceptions. This will allow a continual service during an error rather than a system failure.
- Data Store Access
 - This system will handle each user's ability to access or retrieve data stored within the server for the website. This will be unique to each user and will allow each user to see their own list.
- Network Communication
 - Network communication will allow the clients (user browsers) to communicate with the server, and allow the server to communicate with the data stores.
- Documentation
 - Documentation such as this will allow developers and administrators to continue to provide support for the system. Documentation helps facilitate the maintainability of the product, which will be the majority of the products life cycle.

5.2 Application Features

Execution is not the only focus for our website. CheckIt will also have many features that peak user interest and promote usage. These features are called the application features and will provide CheckIt with a uniqueness. The application features will be a large portion

of work in order to provide an enjoyable customer experience. Customers and Businesses will be positively affected by these features and even help them through their experience on the website. The following are the key application features that CheckIt will have:

- Search Engine
 - The website will allow users to search for shopping items and return with the least expensive item. This feature will also contain filters for users to see the results in a specific manner. This feature is the bread and butter of this project as it is the main way for users to see item selection.
- Set Alerts
 - Users will be allowed to set up alerts for specific items. They will be contacted when that item either goes on sale or drops below a certain price point. The user will then receive a notification via text, email, or potentially an app notification. This feature keeps our users engaged in our service.
- Multiple profiles
 - There will be two types of users, buyers and sellers. The buyers are really anyone coming to this website to shop for a deal. The sellers on the other hand would be verified manufacturers who can only sale wholesale. This will let them post their own products on our servers. This allows us to provide items which may not even be on retail or may cost less than retail price.
- Deals of the Day

- Throughout the day CheckIt will search through our supported websites to calculate the best deals for various items. The items with the biggest price drops will be featured on our main page as “Deals of the Day!”. This feature will entice users to buy more and continue using our service because they will be satisfied seeing they are receiving the best deal.
- Crowdsourcing popular items
 - When a certain item gains popularity in sales this service will crowdsource that item and try to get it at wholesale. This will allow us to have items at a cheaper price than other websites.
- Small business promotion
 - When small businesses have a large inventory of certain items they cannot sell, we allow them to promote it through our website for a set amount of time. This is another source of items at a far lower cost than retail, which will give us a competitive edge in the market.

6. Procedures/Scope of Work

In order to complete this project we will be applying the agile methodology, specifically SCRUM, to manage our project. This will require planning for the next three sprints. We plan on spending the first sprint learning which approach is best for the design and implementation of our product. This sprint will also include the creation of the Business Requirement Document and the Technical Specifications Document. By the second sprint we will be learning the proper implementation of technologies and begin incorporation of those technologies to create our core features. The third sprint will consist of implementation and debugging. This will put us on the right track of finishing our product by the end of next semester. This project will require our team to research, decide on, and learn how to incorporate several different API's to the system. Due to the high difficulty of the features, we plan to work through the winter break learning about many different technologies and implementation methods. Should time allow, another addition that would make CheckIt above and beyond would be to develop a browser extension for seamless access to our system without interrupting your work flow.

7. Timetable

Below is our proposed time table for the SCRUM sprints of this semester:

| Description of Work | | Start and End Dates |
|---------------------|--|---------------------|
| Sprint One | Business Requirement Document and Technical Specifications Document | 9/18 - 10/2 |
| Sprint Two | Deliverables and Work TBD | 10/4 - 10/30 |
| Sprint Three | Deliverables and Work TBD | 11/1 - 12/6 |