Software Development 2024 (Unit 3 SD SAT Criteria 3 & 4)

Software Requirements Specification

For

ItemIQ

By

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# Introduction

## Purpose & Users Characteristics

<Provide a short description of the software being specified, its purpose and audience>

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| I created a software solution called ItemIQ so that everyday people that go to the grocery store to buy things. They can use this application to make shopping easier. It helps with finding items and details about the items (price history, ingredients etc) also help suggest items to you from the store with past buying history and integrated checklist.  Also help store owners and admins with managing sales, logistics, order invoices and supply to the store with this application they can do all that with databases that will store the data from the store and display on the app for them. |

<Provide a description of the expected end users of the solution. Identify the various user classes that you anticipate will use this product. User classes may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience. Describe the pertinent characteristics of each user class. Certain requirements may pertain only to certain user classes. >

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| --- |
| People that will use the app will be Customers, Store admins, Suppliers. Very actively  Anyone from that age above 14 will be able to use the application easily with its seamless modern design. It is quick and easy to learn how to use the app meaning anyone above the age of 14 can use effectively for what it meant for. Won’t require expensive high-tech hardware to run the software as it will be developed to run-on low-end devices. So, people that are less fortunate can also use the application. |

# Scope

## Items within Scope

*<List the software’s capabilities>*

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| The user will be able to operate from the home page where they can view any item from the store on the home page and check details on specific items such as where it is located, past prices/history of price, reviews and ingredients and purchase the items then go to checkout. From there they will be able to navigate the navbar Where they can make checklists, check past order invoices, and go to profile, or go to admin side of the page with auth.  List of capabilities:  -Login page  -Home page: items you can order, checkout button, nav bar  -Checklist  -Order invoices  -Profile/Admin Profile |

## Operating Environment

<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must exist>

<A diagram of the network could be included in the appendix>

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| This software will exist in windows 10 and 11 only on a desktop device like laptop/pc as a WinForms application, possibly on mobile devices in the future if implemented. Could also require ethernet/Wi-Fi if API is implemented into the software.  This software will be create on a laptop with the specs i5-8250 U, UHD Graphics card 620, and 8 gigs of ram and written in the visual studio IDE (integrated development environment) that helps me write C# in the .net framework and compile it. |

# Functional Requirements

*<Itemize the detailed functional requirements. Include how the product should respond to anticipated error conditions or invalid inputs. Requirements should be concise, complete, unambiguous, verifiable, and necessary. Each requirement should be uniquely identified with a sequence number.>*

*<Add additional rows until all functional requirements are listed>*

|  |  |  |
| --- | --- | --- |
| No. | Requirement | Notes |
| FR01 | **Run Application** | When user run this application it will open the login page and you can sign in |
| FR02 | **Sign In** | With auth you can sign in and it will open the home page |
| FR03 | **Check items details** | You can click on items details to check out specific details on items you clicked |
| FR04 | **Add to cart** | Apart of the items details page where you can add item to cart |
| FR05 | **Click checklist** | Goes to checklist page from the navbar |
| FR06 | **Add checklist items** | Will be able to add check boxes on checklist page so you can check off things to buy and the app can recommend items |
| FR07 | **Recommend items** | Wil refresh the store and recommend items based off check list with button on home page |
| FR08 | **Remove items from cart** | On the checkout page you will be able to remove items from your cart |
| FR09 | **Profile page** | From the navbar you will be able to click profile and view things on you profile like order invoices of your past orders |
| FR10 | **Admin profile page** | When you click profile if on admin account it will lead you to the admin page that has logistics etc |

# Non-Functional Requirements

*<Itemize the non-functional requirements such as user-friendliness, response rates, robustness, portability, reliability and maintainability. Write these to be specific, quantitative, and verifiable when possible. Each requirement should be uniquely identified with a sequence number.>*

*<Add additional rows until all non functional requirements are listed>*

|  |  |  |
| --- | --- | --- |
| No. | Requirement | Notes |
| NFR01 | **User-interface** | It will have a simple modern design to the app with it being user friendly and easy to navigate. No irrelevant information will be on the site to make it easy to understand |
| NFR02 | **Error Handling** | The in built code will have fail safes using validation with data to make the app work smoothly and unbreakable |
| NFR03 | **Performance** | The application will run efficiently by using quick efficient code. |

# Constraints

*<Describe any items or issues that will limit the options available to the developers>*

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| WinForms will limit the development of the application as it is a older application builder that very much slower and outdated, Also its Gui objects will limit me as I can only use what they offer in WinForms which isn’t much  Time might constraint the project as it has many ideas that can be added onto it which means I need to not get carried away with new improvements on the project and make sure I develop it. |

# Appendix

## Data Collection

*<Describe the data collection methods utilized during analysis>*

*<Justify the appropriateness of the collection methods with reference to its ability to determine needs and requirements>*

*<Data collection methods should be descriptive and not be singular words e.g. questionnaire.>*

*<Add additional lines as required>*

*<A copy of all data collection tool(s) and record of data collected should be included as part of the appendix>*

|  |
| --- |
| I used my survey (<https://forms.gle/426v9ybxFd3ynEdX7>) to convey data on my software idea. I asked questions like how current grocery shopping applications could be improved or how they are reviewed by people also asked what new features could be added to the software solution. I asked these questions so I could get a good idea on the function requirements and needs for the software idea that I had 19 responses with 60 – 70% being the age of 18 or 17 and the survey provide me with many ideas. Like past price points for items.  Also, another data collection method I used. Was research as I looked around online on trustable sources and figured out what people thought about current day grocery shopping applications that I found out many people don’t use these applications which makes it seem that current apps aren’t inviting enough to use for everyday people and that possibly need cleaner and easier to use design to make it user friendly and inviting also found that people that do use these type of applications. Don’t like how a lot of the applications don’t provide enough information about items in the store and enough about store causing people to use it less and less so another point to application is to make it more informative for user about the store and its items. I Used this type of data collection to provide a much wide perspective and more data on the software solution to myself as surveys might not give me all the data. I need which can be caused by poorly worded questions and other factors. |

## *A diagram of a grocery software system Description automatically generated*Context Diagram

## Data Flow Diagram

*A diagram of a shopping process

Description automatically generated*

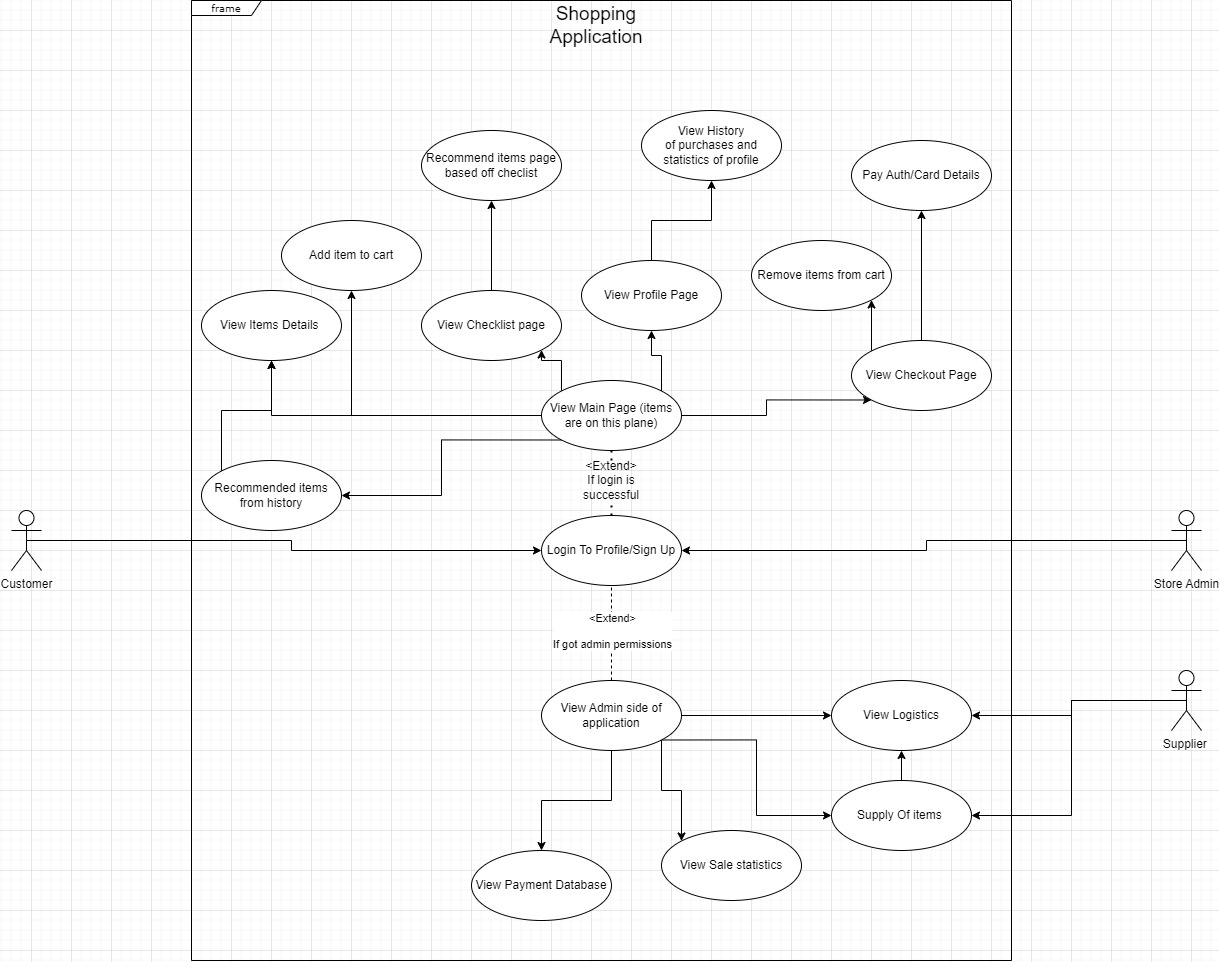
## Use Case

*<Itemize each Use Case>*

*<Add additional rows until all use cases are listed>*

|  |  |  |
| --- | --- | --- |
| No. | Use Case | Notes |
| UC01 | **Login to profile / Sign up** | The login page both admin and public accounts can use this and it logins you into home page |
| UC02 | **View main page** | When you login in it will send to you to home page |
| UC03 | **View admin page** | When you login in if you have auth you will be able to go to admin page through a button |
| UC04 | **Logistics / Sales Statistics and Payment Database (which is all the order invoices)** | This all gets accessed through the admin side of the app |
| UC05 | **View item Details** | On the home you can view all the items and when you click a specific item. You will see the details on that specific item |
| UC06 | **Add item to cart** | On the home page you can view all the items. Each item will have a add item button to add it to cart |
| UC07 | **View checklist page** | You can view checklist page from clicking the checklist button on the navbar |
| UC08 | **Recommend items based off checklist** | While on checklist page and have written a checklist for what you want to buy. You can click recommend button and it will create a list of items recommend to you |
| UC09 | **View profile page** | You will be able to view statistics about your profile and order invoices from past order on your profile page from the navbar |
| UC10 | **View checkout page** | Your able to view the checkout page from the navbar |
| UC11 | **Remove items from cart** | From the checkout page, you can remove items from your cart that you added if you don’t want to pay for them |
| UC12 | **Pay the payment/card details** | From the checkout page you can pay for your cart that all the items you added will be paid for and order invoices sent to your profile |

## Use Case Diagrams

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