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Requirement Management Report for the Case Study

"Green Groceries Online Platform"

Section – A

1. Introduction about Online Green Groceries Platform

Green Grocery, established in 2020, embodies its powerful slogan: "Quality That You Can Trust." This resonates deeply with conscientious consumers seeking authentic, safe, and wholesome food options. The platform meticulously selects a diverse range of products, from locally sourced rice varieties to ethically harvested spices and homemade spreads, all subject to rigorous quality standards. What truly sets Green Grocery apart is its unwavering dedication to food safety, from farm to doorstep. By directly sourcing from farmers and ensuring meticulous processing and delivery, Green Grocery provides chemical-free, fresh produce that consumers can rely on. Moreover, as a pioneer in Bangladesh's direct-to-consumer e-grocery landscape, Green Grocery not only offers convenience but also fosters community engagement. Through initiatives like morning breakfast sessions hosted by culinary experts, such as Alpana Habib, Green Grocery brings food enthusiasts together to celebrate the joy of good food while supporting local farmers and minimizing environmental impact.

2. Drawbacks of Traditional Software Development Methodology

2.1. Limitations in website development

The overview of the website at first was found very eye-catching, it's surprising that an online grocery store has an interface as good as a commercial website of larger companies. However, a few problems were noticed, specifically here is when entering a Gmail(trungtinlethai@gmail.com) to register an account, instead of receiving an Email for the password, nothing was seen and Once logged in, the password was unknown so it could not be changed. Next, still in the registration section, a non-existent Gmail (hhhhh@gmail.com) was tried but the system still authenticated to create a new account. It is suggested to double check this because the issue of account control and customer credentials is extremely important to merchants and customers alike.

(Below are illustrations of errors)

Register

Email Address *

trungtinlethai@gmail.com

A link to set a new password will be sent to your email address.

Your personal data will be used to support your experience throughout this website, to manage access to your account, and for other purposes described in our privacy policy.

Register

Password change

Current Password (Leave Blank To Leave Unchanged)

New Password (Leave Blank To Leave Unchanged)

Confirm New Password

Save Changes

✅ Password reset email has been sent.

A password reset email has been sent to the email address on file for your account, but may take several minutes to show up in your inbox. Please wait at least 10 minutes before attempting another reset.

Figure 1: Error Password Reset

Hello **hhhhh** (not **hhhhh**? Log out)

From your account dashboard you can view your recent orders, manage your shipping and billing addresses, and edit your password and account details.

Figure 2: Email Validation Error

When going to the purchase section, a problem was seen in the payment section. In the interfaces at the bottom, there are a series of payment methods, but when going to make a purchase, customers are not allowed to choose another form of payment. Here, there is only one payment upon receipt. This is really not subtle and can easily lose potential customers of the website.

Figure 3: Error Do not Change Payment Method

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Figure 4: Advertising Payment Method

Still on the payment page, in the interface design, in the opinion, it should not be there. It is the discount code at the top of the payment page, it is completely applicable when clicked on. It was

wanted to make it symmetrical with the login field but it's useless and there is already a similar one below to enter discount codes. In the opinion, in that part the image and name of the product should be put so that customers can see it with the name, which will be more reasonable, not just the name and price.
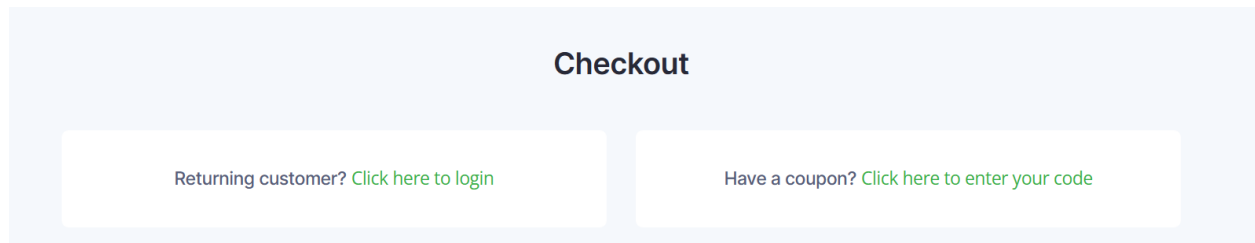
Figure 5: Function Arrangement Is Not Appropriate

And here is the final bug fix suggestion. In the opinion, the interface still has some errors possibly due to browser incompatibility. It is hoped that the website will be reviewed and improved to make it more suitable. The last thing that is wanted to say is that the website is quite great with neat layouts that attract curiosity and make one sit and study them. The Blog section is liked the most, rarely has a website been seen that can share so much information.
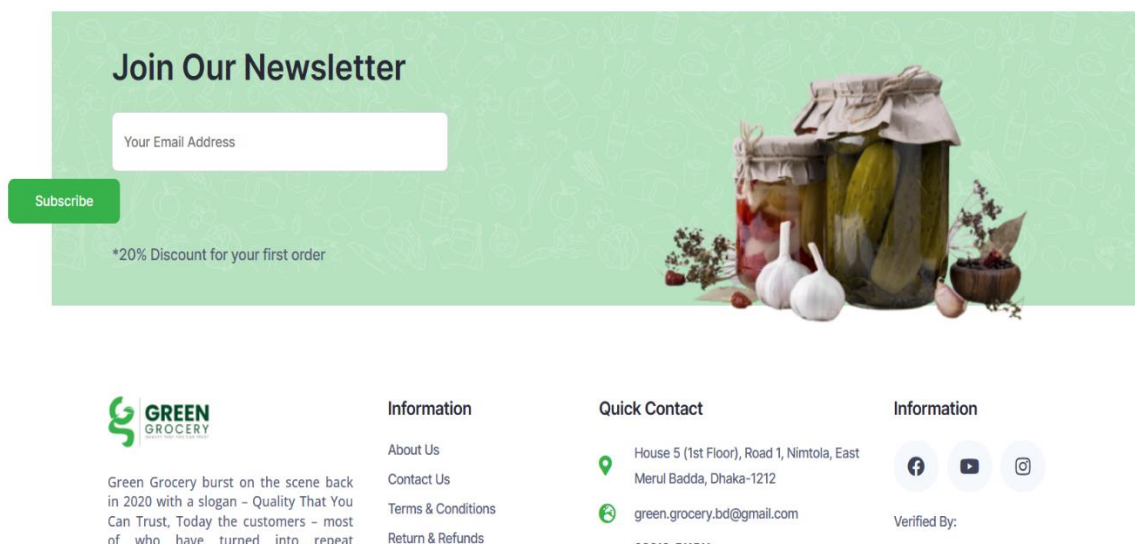
Figure 6: Css Error

2.2 Drawbacks of Traditional methods

Regarding popular communication methods, the waterfall model is widely used, with technological advances and strict requirements that constantly change during the development process. Therefore, the waterfall model has revealed its disadvantages with a rigid and unchangeable process for continuous editing to meet requirements and is time-consuming and expensive because errors or defects are often detected late in the project lifecycle, requiring extensive rework and testing, and ultimately risky because the final product is only delivered at the end of the project, leaving little room for customer feedback or validation.

3. Agile Frameworks Methods and its Overview.
3.1. Agile framework

In this initiative, the Green Groceries company has adopted the Agile framework, particularly SCRUM, for project development. This approach aligns well with the company's objectives and ethos, making it an ideal choice for the development of their online platform. The Agile model's key strengths, such as adaptability, teamwork, phased delivery, and risk management, are leveraged in this process. Additionally, several methodologies like RAD, Prototyping, Timeboxing, JAD, and the DSDM approach significantly aid in the development process. These advantages enable Green Groceries to deliver a high-quality online platform that not only caters to customer requirements but also upholds their commitment to sustainability and environmental consciousness.

3.2 Rapid Application Development (RAD) methodology

RAD is a development approach that emphasizes speed and flexibility. It uses rapid prototyping and iterative development to accelerate the development process. This approach is particularly beneficial for Green Groceries, as it allows the development team to quickly build and deploy an initial version of their web application using available frameworks and templates. Feedback from early users can then be incorporated into subsequent iterations, promoting continuous improvement.

3.3 Timeboxing

Timeboxing is a project management technique that assigns a fixed time period for each specific task or activity. This helps teams stay focused, manage scope, and meet deadlines. Timeboxing can be applied in two ways: product-based and activity-based.
Product-based: In product-based timeboxing, fixed time periods are set for delivering incremental products. In Agile development, this often corresponds to the release of new features or functionality. For the Green Groceries project, product-based timeboxes, also known as

sprints in SCRUM methodology, could be set up. Each sprint would focus on delivering a set of prioritized features or user stories.

Activity-based: In activity-based timeboxing, fixed time periods are allocated to specific activities or tasks within a project. For the Online Green Grocery Platform project, time frames could be allocated for each activity and requirement. This ensures effective progress and a clear evaluation cadence.

By leveraging both product- and activity-based timeboxing, Green Groceries can enhance its online platform delivery while effectively managing project activities and resources.

3.4 Prototyping

Prototyping is a development technique that involves building a quick and inexpensive test system for demonstration and evaluation. For Green Groceries, as they embark on developing their online platform, prototyping can play a crucial role in ensuring that the final product meets the needs of both the company and the customer.

3.5 Dynamic Systems Development Methodology (DSDM)

DSDM is an Agile framework that provides a structured approach to software development. It focuses on delivering repeatable and incremental business value while ensuring that projects are completed on time and within budget. By adopting DSDM principles and practices, Green Groceries can successfully deliver high-quality software solutions that meet stakeholder needs while adapting to changing requirements and market conditions.

3.6 Joint Application Development (JAD)

 Adopting JAD can greatly benefit the development of Green Grocery's online platform. JAD sessions facilitate requirements gathering, problem-solving, decision-making, prototyping, and risk reduction by engaging stakeholders from different departments and roles. This collaborative approach ensures alignment with stakeholder needs, accelerates project progress, and fosters teamwork and commitment to project success.

3.7 Scrum methodology

Scrum is an Agile framework that emphasizes iterative and incremental development. It focuses on time-bound work called sprints, which typically last two to four weeks. The Scrum method is very suitable for developing Green Groceries' online platform. By organizing work into iterations according to the initial requirements outlined in the project, it can be completed within the originally estimated deadline. Additionally, daily stand-up meetings occur within each sprint to help the team stay on the same page, while regular sprint reviews and retrospectives enable continuous improvement.

4. Systematic workflow of Green Groceries Online Platform done with Agile Method:
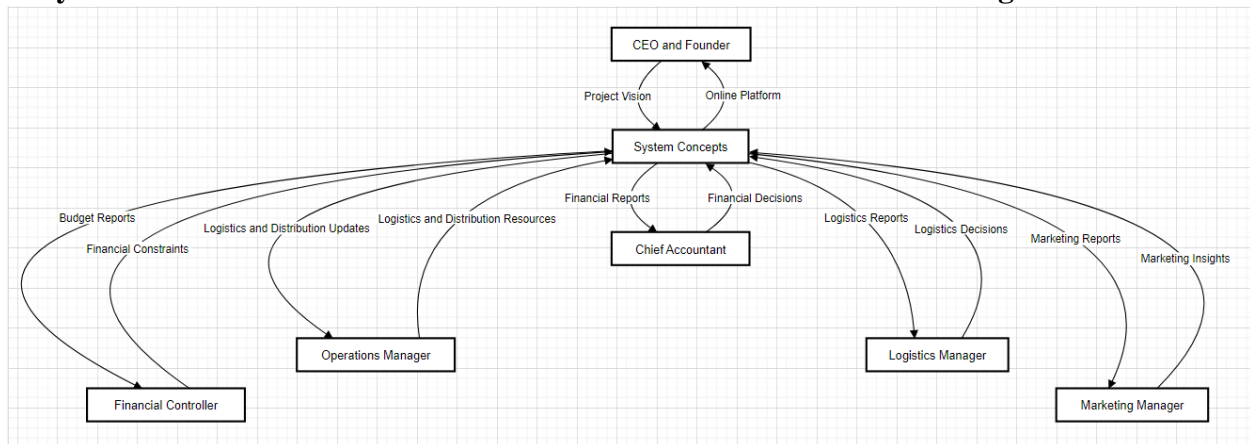
Figure 7: Architecture diagram of the Green Groceries Platform

CEO and Founder: This individual sits at the top of the organizational hierarchy, steering the company's direction and making key business decisions. They are the source of the project's vision and are the primary recipient of the online platform developed by System Concepts.

System Concepts: This group or entity is tasked with bringing the project vision to life. They receive the vision from the CEO and Founder and collaborate with the Chief Accountant, Logistics Manager, and Marketing Manager. Their role is to construct and refine the online platform, which they then deliver to the CEO and Founder.

Chief Accountant: This role is pivotal in managing the company's finances. They are responsible for financial reporting and decision-making, which can encompass budget allocation and financial planning. They liaise with System Concepts to exchange financial information and updates.

Operations Manager: This role is in charge of managing the company's daily operations. They receive budget reports and logistics and distribution updates, and operate within the company's financial constraints. They report to the Financial Controller.

Logistics Manager: This role is responsible for orchestrating logistics operations to ensure the efficient delivery of goods. They handle logistics reports, decisions, resources, and updates, and are involved in the development of the online platform through their connection with System Concepts.

Marketing Manager: This role is tasked with devising and executing marketing strategies to boost the company's product and service visibility. They manage marketing reports and insights but do not have a direct connection with System Concepts or the CEO/Founder, indicating their focus is primarily on external market activities.

Financial Controller: This role supervises the company's financial operations. They are linked to budget reports and financial constraints, signifying their fundamental role in the company's financial management.

Sprint 1:
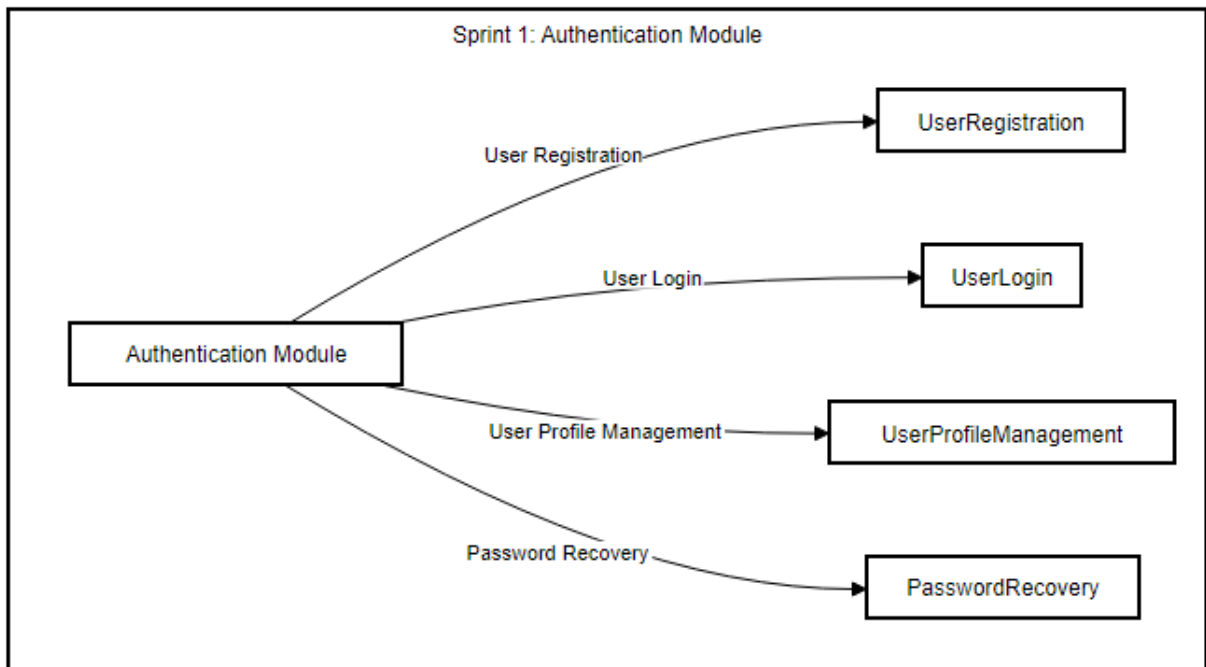
Figure 8: Authentication module DFD diagrams

Authentication Module: This is the core component of the flowchart, linked to four operations: User Registration, User Login, User Profile Management, and Password Recovery.

User Registration: This operation signifies the user registration feature. When a newcomer wishes to utilize the application, they must first register. This operation collects the user's information and establishes a new account in the system.

User Login: This operation signifies the user login feature. It is tasked with validating the user's credentials and providing access to the system.

User Profile Management: This operation enables users to manage their profile data. Users can modify their details, change their password, and carry out other profile-related tasks.

Password Recovery: This operation is employed when users forget their password. It assists users in retrieving their password, typically by sending a password reset link to their registered email address.

Daily meeting:

Sprint 1: Authentication Module - This sprint is the foundation of the user's interaction with the system. The team will work on creating a secure and efficient authentication system. The daily meetings will focus on the progress of user registration, where new users can create their accounts; user login, which allows registered users to access their accounts; user profile management, which lets users update their personal information and preferences; and password recovery, which assists users in regaining access to their accounts in case they forget their passwords. The sprint review will involve demonstrating these functionalities and gathering feedback for future improvements.

Sprint 2:
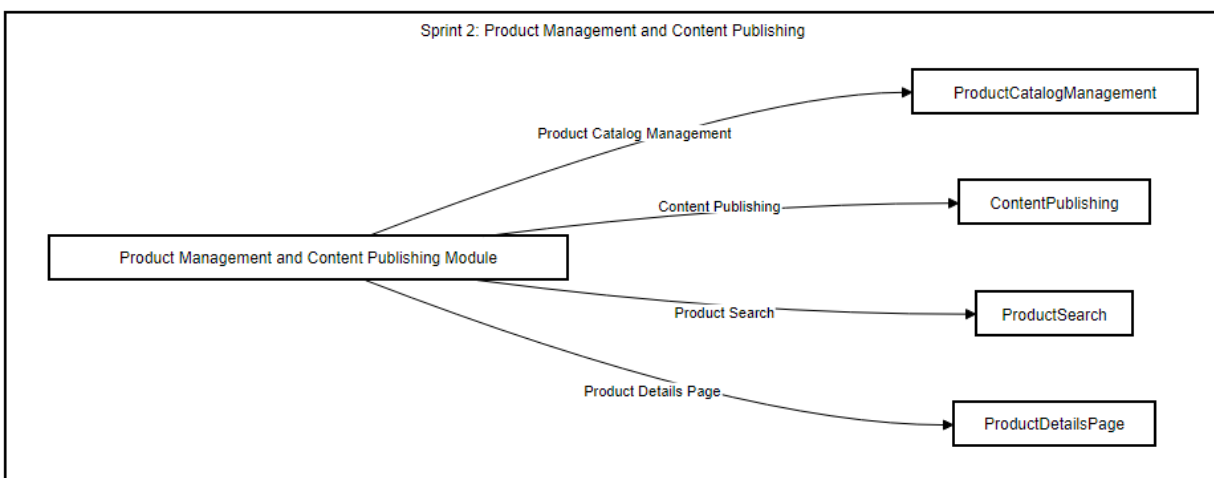
Figure 9: Product Catalog Management

Product Catalog Management: This element is potentially in charge of overseeing the product catalog within the system. It could encompass tasks such as the addition, modification, or deletion of products from the catalog.

Content Publishing: This element is presumably tasked with the publication of product-related content. This might encompass product descriptions, images, reviews, and so on.

Product Search: This element is presumably utilized for product searches within the system. It could involve searching for products based on various parameters such as name, category, price, etc.

Product Details Page: This element likely symbolizes the page where product details are exhibited. It could encompass details such as product description, price, reviews, etc.

Daily meeting:

Sprint 2: Product Management and Content Publishing - This sprint is crucial for the core functionality of the grocery system. The team will work on the product catalog, which includes

adding, updating, and removing products. They will also work on content publishing, which involves creating and managing content related to the products. The daily meetings will discuss the progress on these tasks. The sprint review will involve demonstrating these functionalities, discussing their effectiveness, and gathering feedback for enhancements.

Sprint 3:
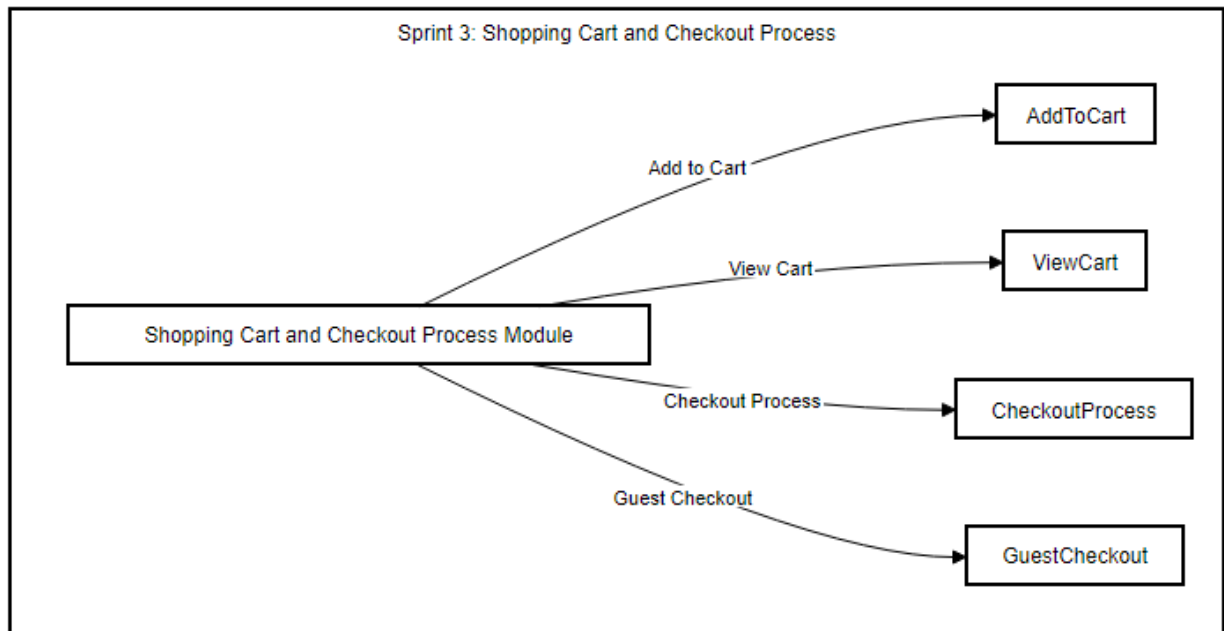
Figure 10: Shopping Cart and Checkout

Add to Cart: This action leads to a module labeled "AddToCart." It represents the process where a customer adds items to their online shopping cart.

View Cart: This action leads to a module labeled "ViewCart." It represents the process where a customer views the contents of their shopping cart.

Checkout Process: This action leads to a module labeled "CheckoutProcess." It represents the process where a customer proceeds to finalize their purchase, including providing shipping information and payment details.

Guest Checkout: This action leads to a module labeled "GuestCheckout." It represents the process where a customer, who does not have an account or does not wish to log in, can still make a purchase.

Daily meeting:

Sprint 3: Shopping Cart and Checkout Process - This sprint is all about the user's shopping experience. The team will work on the shopping cart functionality, which allows users to add products they wish to purchase. They will also work on the checkout process, which involves calculating the total cost, including taxes and shipping, and allowing the user to place the order. The daily meetings will focus on the development of these features. The sprint review will include a demonstration of the shopping cart and checkout process, discussion on their efficiency, and gathering feedback for improvements.

Sprint 4:
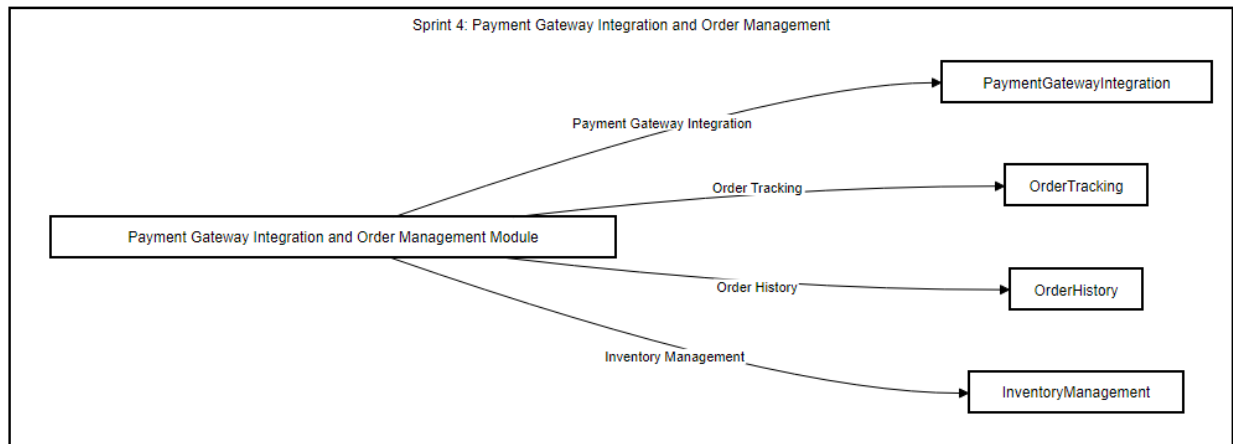
Figure 11: Integration of Payment Gateway

Integration of Payment Gateway: This refers to the action that triggers the "PaymentGatewayIntegration" module. It signifies the procedure in which an e-commerce platform collaborates with a payment gateway to enable online transactions. This integration is crucial as it allows for the secure processing of credit card, debit card, and other forms of electronic payments.

Tracking of Orders: This function triggers the "OrderTracking" module. It represents the mechanism that allows customers to keep an eye on their order status. This attribute elevates the shopping journey by offering customers live updates on their order's progression, from the instant they are submitted to the point of delivery.

History of Orders: This action activates the "OrderHistory" module. It encapsulates the process that allows customers to review their past orders. This functionality is important as it gives customers the ability to track their spending, repeat previous orders, and manage returns or exchanges. It also provides valuable insights into their shopping habits and preferences.

Daily meeting:

Sprint 4: Payment Gateway Integration and Order Management - This sprint is about completing the purchase and managing the orders. The team will work on integrating a secure payment gateway for processing payments. They will also work on order management functionalities, which include tracking the status of the order, viewing order history, and

managing inventory. The daily meetings will discuss the progress on these tasks. The sprint review will involve demonstrating these functionalities, discussing their reliability, and gathering feedback for enhancements.

Sprint 5:
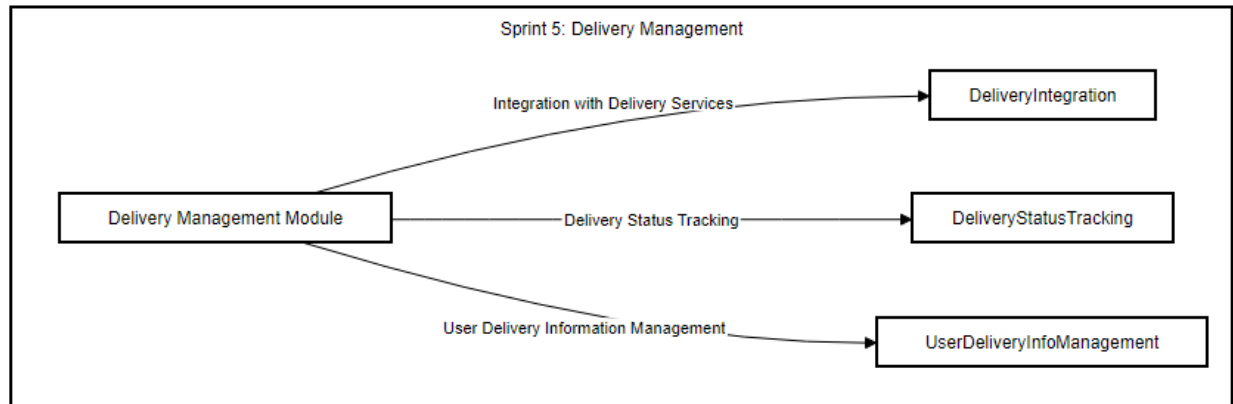
Figure 12: DeliveryIntegration

Incorporation of Delivery Services: This action corresponds to a module named "DeliveryIntegration." It signifies the phase where the e-commerce platform collaborates with various delivery services to ensure the seamless and efficient delivery of products to customers.

Monitoring of Delivery Status: This action initiates the "DeliveryStatusTracking" module. It embodies the process that enables customers to keep track of the progress of their delivery, offering transparency and enhancing the overall customer experience.

Management of User Delivery Information: This action triggers the "UserDeliveryInfoManagement" module. It encapsulates the process of managing the delivery information of a customer. This could include functionalities like saving multiple addresses, updating an address, or selecting a preferred delivery option. This feature is crucial as it provides customers with flexibility and personalization in their delivery options.

Daily meeting:

Sprint 5: Delivery Management - This sprint is about getting the products to the customers. The team will work on integrating with delivery services to ship the orders. They will also work on tracking delivery status and managing user delivery information. The daily meetings will focus on the development of these features. The sprint review will include a demonstration of the delivery management features, discussion on their accuracy, and gathering feedback for improvements.

Sprint 6:
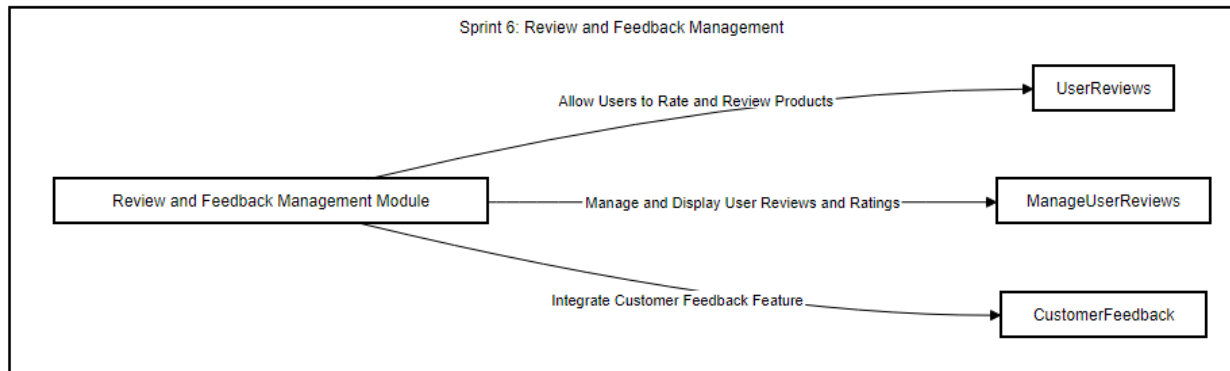
Figure 13: Product Rating and Reviewing

Product Rating and Reviewing: This action corresponds to a module named "UserReviews." It signifies the procedure where customers are allowed to rate and review the products they have purchased, providing valuable feedback for both the business and other customers.

Handling and Showcasing User Reviews and Ratings: This action initiates the "ManageUserReviews" module. It embodies the process of managing and displaying user reviews and ratings on the product page, enhancing transparency and aiding other customers in their purchasing decisions.

Incorporation of Customer Feedback: This action triggers the "CustomerFeedback" module. It encapsulates the process of integrating customer feedback into the system, which is crucial for the continuous improvement of products and services offered by the business. This feature allows the business to understand customer needs better and make necessary adjustments.

Daily meeting:

Sprint 6: Review and Feedback Management - This sprint is about improving the system based on user feedback. The team will work on allowing users to rate and review products, managing and displaying these reviews, and integrating a customer feedback feature. The daily meetings will discuss the progress on these tasks. The sprint review will involve demonstrating these functionalities, discussing their usefulness, and gathering feedback for enhancements.

Sprint 7:
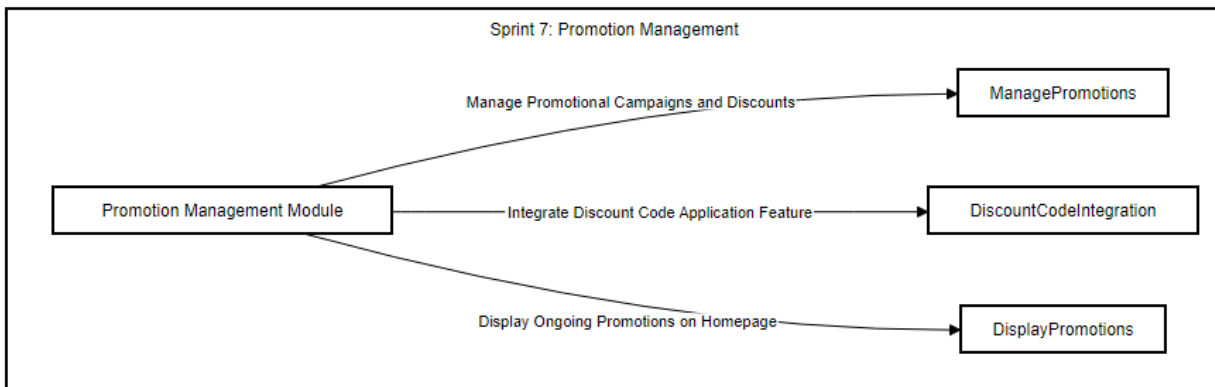
Figure 14: Administration of Promotional Campaigns and Discounts

Administration of Promotional Campaigns and Discounts: This action is linked to a module named "ManagePromotions." It signifies the procedure where promotional campaigns and discounts are orchestrated and controlled.

Incorporation of Discount Code Feature: This action triggers the "DiscountCodeIntegration" module. It encapsulates the process of integrating a feature into the system that allows customers to apply discount codes during their purchase.

Showcasing Active Promotions on Homepage: This action initiates the "DisplayPromotions" module. It represents the process of displaying ongoing promotions on the homepage, making them easily visible to customers. This can help attract customers and stimulate sales.

5. Merit of Using Agile Concepts

Amidst the bustling aisles of Green Groceries, the digital realm comes alive. Agile concepts, like whispers carried by the wind, weave through the corridors of code. Scrum ceremonies unfold—a dance of daily stand-ups, sprint planning, and retrospectives. The CEO, Financial Controller, Operations Manager, Chief Accountant, Logistics Manager, and Marketing Manager gather virtually, their avatars donning digital badges of expertise. Transparency reigns supreme; progress bars inch forward, revealing the canvas of the online platform. Stakeholders, once distant figures, now wield keyboards as their swords, shaping the destiny of pixels and pathways. Value drips from each line of code, like dew on morning leaves. And in this virtual garden, Green Groceries blossoms—a testament to collaboration, adaptability, and the evergreen spirit of Agile

Daily meeting:

Sprint 7: Promotion Management - This sprint is about attracting and retaining customers. The team will work on managing promotional campaigns and discounts, integrating a discount code application feature, and displaying ongoing promotions on the homepage. The daily meetings will focus on the development of these features. The sprint review will include a demonstration

of the promotion management features, discussion on their impact, and gathering feedback for improvements.

Section - B

High Level Requirement Analysis using MOSCOW Rules:

1. Base Line Requirements Review.

1.1. Given Requirement Analysis using Moscow Rules.

ID	Requirement List	MOSCOW Rules Applied	Reasons
1	As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system.	Must have	This is a Must have because it's essential for the basic functionality of the system. Without this feature, the Order Handling Clerk would not be able to process telephone purchases.
2	Maintain at least 20 office plants as part of the company's commitment to a green and healthy workspace.	Could have	This is a Must have because it's essential for the basic functionality of the system. Without this feature, the Order Handling Clerk would not be able to process telephone purchases.
3	As a customer, I want to be able to change my account details to ensure my most up-to-date information is recorded.	Must have	This is a Must have because it's crucial for maintaining accurate customer information in the system.
4	Organize a virtual celebration on the website for the CEO's birthday to showcase the company's fun and friendly culture.	Could have	This is a Could have because while it promotes company culture, it's not a core functionality of the system.
5	As the Managing Director I want to be ensured that the site is Data Protection Act safe so that we do not get fined hundreds of thousands of pounds.	Must have	This is a Must have because compliance with the Data Protection Act is legally required to avoid fines.
6	As a customer register an account.	Must have	This is a Must have because without this feature, customers would not be able to use the system.
7	As a Customer I want a choice of delivery slots so that I can arrange my diary appropriately.	Should have	This is a Should have because while it enhances user experience, it's not critical for the basic functionality of the system.
8	As a customer, I want to be able to modify my shopping cart so that I can change my mind about what I want to buy.	Must have	This is a Must have because it's a fundamental feature of any online shopping system.

9	The company should adopt pet-friendly policies to create a positive and inclusive work environment.	Could have	This is a Could have because while it promotes a positive work environment, it's not directly related to the functionality of the system.
10	The system must be designed to handle a 30% increase in traffic during peak periods without degradation in performance.	Must have	This is a Must have because the system needs to be able to handle peak traffic to ensure a smooth user experience.
11	As a customer, I want to enter separate delivery and invoice addresses so that I can receive bags when staying at a friend's house.	Should have	This is a Should have because it enhances user experience by providing flexibility in delivery options, but it's not critical for the basic functionality of the system.
12	As a Customer I want to be able to change my account details so that my most up to date details are recorded.	Must have	This is a Must have because it's crucial for maintaining accurate customer information in the system.
13	As an Order Handling Clerk I want to use the Web site to process telephone purchases so that I can stop using the paper-based system.	Must have	This is a Must have because it's essential for the basic functionality of the system. Without this feature, the Order Handling Clerk would not be able to process telephone purchases.
14	As a customer, I want to choose whether or not I am sent marketing information to avoid receiving excessive junk mail.	Should have	This is a Should have because it enhances user experience by giving them control over the marketing information they receive, but it's not critical for the basic functionality of the system.
15	All user data, including personal information and payment details, must be encrypted to ensure the highest level of security.	Must have	This is a Must have because it's legally and ethically required to protect user data.
16	Maintain consistent branding elements and design across the website to reinforce their brand identity.	Should have	This is a Should have because it enhances user experience and promotes the company's brand, but it's not critical for the basic functionality of the system.
17	The development team should participate in a team-building event every quarter to foster collaboration and a positive work environment.	Could have	This is a Could have because while it promotes a positive work environment, it's not directly related to the functionality of the system.
18	As the Marketing Director I would like an offers or discount page so that we can inform our customers of the aforementioned.	Should have	This is a Should have because it enhances user experience by providing them with valuable information, but it's not critical for the basic functionality of the system.
19	As the Chief Accountant I want to the Web site to adhere to legislation regarding VAT so we are not hit with a hefty fine.	Must have	This is a Must have because it's crucial for maximizing the customer base and revenue.

20	As the Operations Director, I want to accept all forms of payment to capture the largest market possible.	Must have	This is a Must have because it's crucial for maximizing the customer base and revenue.

1.2. Updated High Level Functional Requirements.

ID	High-Level Functional Requirements	Justifications / Recommendations
1	Order Processing System	Replaces the paper-based system, improving efficiency and reducing errors.
2	Account Management	Enhances user experience by allowing customers to manage their account details and preferences.
3	Delivery Options	Provides flexibility to customers and improves customer satisfaction.
4	Shopping Cart Modification	Allows customers to change their mind about what they want to buy, enhancing user experience.
5	Data Protection	Ensures legal compliance and builds trust with customers by protecting their personal and payment information.
6	Website Performance	Ensures a smooth user experience even during peak traffic periods.
7	Branding and Design	Reinforces brand identity and provides a consistent user experience across the website.
8	Discount Page	Helps to attract and retain customers by informing them of the latest deals.
9	VAT Legislation Compliance	Ensures legal compliance and avoids financial penalties.
10	Payment Options	Captures the largest market possible by accepting all forms of payment.

2. Time Box Rules for the Updated High Level Functional Requirements:

2.1. Prioritization for the list of requirements.

ID	Updated High-Level Functional Requirements	Priority Levels/Role	Time Scale
1	Order Processing System	High/ Order Handling Clerk	30 days
2	Account Management	High/ Customer	14 days
3	Delivery Options	High/ Customer	30 days
4	Shopping Cart Modification	High/ Customer	60 days

5	Data Protection	High/ Data Protection Officer	14 days
6	Website Performance	Moderate/ IT Team	7 days
7	Branding and Design	High/ Marketing Team	7 days
8	Discount Page	High/ Marketing Team	14 days
9	VAT Legislation Compliance	Moderate/ Finance Team	7 days
10	Payment Options	Low/ Operations Director	14 days

2.2. Explanation about Prioritizing the Requirements and the decisions taken for the Green Groceries Online platform.

1. **Order Processing System (ID:1):** This is a high priority because it directly impacts the core business operations. The time scale is relatively longer due to the complexity of integrating a new system.

2. **Account Management (ID:2):** This is crucial for enhancing the user experience and ensuring customer satisfaction, hence it's a high priority. The time scale is shorter as it involves modifications to existing functionalities**.**

3. **Delivery Options (ID:3):** This is a high priority as it directly affects customer satisfaction and sales. The time scale is longer due to the need to coordinate with logistics partners.

4. **Shopping Cart Modification (ID:4)** This is a high priority as it directly impacts the user experience and sales. The time scale is longer due to the complexity of the task.

5. **Data Protection (ID:5):** This is a high priority due to legal obligations and the importance of customer trust. The time scale is shorter as it involves strengthening existing security measures.

6. **Website Performance (ID:6)** This is a moderate priority as it impacts user experience but doesn't directly affect core business operations. The time scale is short as it involves optimizations to existing systems.

7. **Branding and Design (ID:7)**: This is a high priority as it impacts the company's image and customer perception. The time scale is short as it involves aesthetic changes.

8. **Discount Page (ID:8):** This is a high priority as it can drive sales and customer engagement. The time scale is moderate as it involves creating a new page and integrating it with the existing system.

9. **VAT Legislation Compliance (ID:9):** This is a moderate priority as it is a legal requirement but doesn't directly impact customer experience. The time scale is short as it involves updating the existing financial system.

10. **Payment Options (ID:10):** This is a low priority as it enhances customer convenience but doesn't directly impact core business operations or customer experience. The time scale is moderate as it involves integrating new payment methods.

Section - C

1. Legal, Social, Ethical, and Professional Issues (LSEPI) in Green Groceries Online Platform:

1.1. Legal issue explanation with one case study example:

Legal issues pertain to the necessity for businesses to adhere to laws and regulations. For the online platform of Green Groceries, a crucial legal concern is the compliance with data protection laws such as the General Data Protection Regulation (GDPR) in the European Union or the California Consumer Privacy Act (CCPA) in the United States.

Example: Suppose Green Groceries fails to secure customer data adequately, leading to a data breach. In this case, they could face legal penalties under data protection laws, not to mention the damage to their reputation.

- European Parliament, 2021. RegData/etudes/STUD/2021/656318/EPRS_STU(2021)656318(ANN1)_EN.pdf. [online] Available at: https://www.europarl.europa.eu/RegData/etudes/STUD/2021/656318/EPRS_STU%2820 21%29656318%28ANN1%29_EN.pdf [Accessed 31 March 2024].

1.2. Social issue explanation with one case study example:

Social issues relate to the impact of business activities on society at large. For Green Groceries, a significant social issue is ensuring that their online platform is accessible and inclusive to all users.

Example: If Green Groceries' online platform is not designed to be accessible to individuals with disabilities, it could exclude a significant portion of the population, leading to social inequality and potential legal issues.

- Pew Research Center, 2021. The state of online harassment. [online] Available at: https://www.pewresearch.org/internet/2021/01/13/the-state-of-online-harassment/ [Accessed 31 March 2024].

1.3. Ethical issue explanation with one case study example:

Ethical issues involve considerations of right and wrong in business practices. For Green Groceries, an important ethical issue is ensuring the ethical sourcing of their products and transparency in their operations.

Example: If Green Groceries claims that their products are organic and locally sourced but fails to provide evidence to support these claims, they could be accused of greenwashing, which could damage their reputation and customer trust.

- OHCHR, 2021. *Moderating online content: fighting harm or silencing dissent*. [online] Available at: https://www.ohchr.org/en/stories/2021/07/moderating-online-content-fighting-harm-or-silencing-dissent [Accessed 31 March 2024].

1.4. Professional issue explanation with one case study example:
Professional issues involve maintaining professional standards of conduct and competence. For Green Groceries, this means ensuring the quality and reliability of their online platform.

Example: If the development team at Green Groceries fails to address technical issues in a timely and professional manner, it could lead to delays in the project and dissatisfaction among stakeholders.
- Big Think, 2021. *Challenges of online learning*. [online] Available at: https://bigthink.com/plus/challenges-of-online-learning/ [Accessed 31 March 2024].

2. Discussion about the BCS code and how the professionals following the practices of BCS code with their team members or co-workers.

2.1. Introduction about the professional body of BCS code:
The British Computer Society (BCS) serves as a professional organization for those in the field of information technology, advocating for the advancement and education of computing. The BCS Code of Conduct outlines the ethical guidelines and professional duties that IT professionals are expected to follow.

2.2. Public Interest - Practical example with explanation:
The BCS Code of Conduct emphasizes the importance of serving the public interest. For instance, IT professionals working on the Green Groceries Online Platform might prioritize features that promote sustainability and fair trade, thereby serving the public interest by contributing to social and environmental wellbeing.

Case Study:
In the case of the Green Groceries Online Platform, IT professionals could serve the public interest by designing an intuitive interface that simplifies the process of finding and buying sustainable products. They could also incorporate features that inform users about the environmental impact of each product, thereby encouraging eco-friendly shopping habits.

2.3. Duty to Relevant Authority - Practical example with explanation:
IT specialists are obligated to adhere to applicable laws and regulations. For instance, in the case of the Green Groceries Online Platform, this could entail guaranteeing adherence to e-commerce rules and data privacy legislations.

Case study:
To fulfill their duty to the relevant authority, IT professionals working on the Green Groceries Online Platform would need to ensure that the platform adheres to all applicable laws and

regulations. This could involve integrating secure payment systems to safeguard users' financial data and ensuring that the company's data collection practices are in line with privacy laws.

2.4. Duty to the profession - Practical example with explanation:
The BCS Code of Conduct emphasizes the importance of upholding the reputation of the IT profession. For instance, IT professionals working on the Green Groceries Online Platform might strive to deliver a high-quality, reliable platform that reflects positively on the profession.

Case study:
IT professionals could uphold the reputation of the IT profession by delivering a top-notch online platform for Green Groceries. This could involve using state-of-the-art, efficient coding practices, rigorously testing the platform to ensure it is bug-free, and ensuring the platform is user-friendly and accessible.

2.5. Profession Competence and Integrity - Practical example with explanation:
IT professionals are expected to perform their work with competence and integrity. In the context of the Green Groceries Online Platform, this might involve conducting thorough testing to ensure the platform is secure and functions as intended.

Case study:
To demonstrate professional competence and integrity, IT professionals working on the Green Groceries Online Platform could conduct comprehensive testing to ensure the platform is secure and operates as expected. They could also commit to continuous learning and development to stay abreast of the latest technologies and best practices in e-commerce platform development. They should also be transparent and honest with Green Groceries about the progress of the project, including any challenges or setbacks.

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