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COMP1787 – Requirement

Management

Coursework

Student name	Huynh Thanh Nhan
ID number (00xxxxxxx)	001353384
Lecturer/Tutor name	Nguyen Kim Khanh
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I.   Introduction

In an era prioritizing sustainability and accessibility, Green Groceries shines as a model of conscientious commerce. For five years, it has fostered trust, sourcing organic produce locally. Now, venturing into the digital realm, Green Groceries aims to democratize sustainable living, transcending boundaries through e-commerce. Their ethos, deeply rooted in nurturing both health and environment, drives this initiative. Partnering with System Concepts, a renowned Agile consultancy, they craft an online platform marrying functionality with purpose. Guided by Agile principles, this collaboration promises adaptability and excellence. Green Groceries seeks to redefine sustainable commerce, exceeding customer expectations and weaving a narrative of sustainability with every purchase. With innovation and dedication, they pave the way for a greener future, inspiring generations to come.

1.1.   The aim of this project

The aim of the project is to harness technology and Agile methodologies to construct an online platform for Green Groceries. This platform will extend the company's market reach, facilitating easier access to eco-friendly products for consumers worldwide. By streamlining the purchasing process and offering a diverse selection of organic goods, the platform seeks to enhance convenience for shoppers while upholding Green Groceries' commitment to sustainability. Through this initiative, the company aims to merge digital innovation with environmental stewardship, driving both customer satisfaction and corporate success in harmony with their core values.

1.2.   The Development the online platform

- **Outsourcing:**

Green Groceries entrusts its online platform project to System Concepts, an Agile software consultancy renowned for excellence. Through this strategic outsourcing, Green Groceries leverages System Concepts' expertise to sculpt a sustainable, user-centric platform that embodies their values of accessibility and environmental stewardship.

- **Methodologies and Framework**

The online platform development adopts Agile methodologies, particularly SCRUM and Agile Atern framework. Emphasizing iterative and incremental progress, this approach fosters flexibility and responsiveness, aligning seamlessly with Green Groceries' ethos of adaptability and commitment to delivering a user-centric, sustainable solution.

- **Development team**

The System Concepts team for the Green Groceries project comprises qualified experts in web development and Agile methodologies. The team includes:

- **Millie**: Skilled programmer with expertise in web development and effective communication.
- **Peter**: Excellent web developer, occasionally has client disagreements.
- **Anita**: Strong web developer, also engaged in homeless volunteer work.
- **Cheryl**: Experienced Agile Team Leader, proficient in web development.
- **Pat**: Part-time availability, proficient in web development and testing.

1.3. Stakeholders in the DSDM Atern framework

Stakeholders in the DSDM Atern framework:

Business Sponsor and Business Visionary: Represented by the CEO and Founder of Green Groceries, who directs the project's vision and strategic course.

Technical Coordinator and Project Manager: Handled by the Operations Manager with Agile software development proficiency, overseeing project management and technical aspects.

Business Analyst: Taken on by the Marketing Manager, certified as a Workshop Facilitator and Agile Project Manager, responsible for analyzing business requirements and aligning them with project objectives.

Business Ambassador (User Representatives): Represented by the Operations and Marketing Managers, advocating for both internal (staff employees) and external (customers) stakeholders' needs to ensure the platform meets user expectations and aligns with company values.

Solution Development Team: Comprising individuals such as Millie, Peter, Anita, Cheryl, and Pat, responsible for executing the technical development and implementation of the online platform.

End-Users: Green Groceries' customers, whose preferences and requirements steer the platform's design and functionality.

1.4. Discuss about Agile (framework)

To gain a deeper comprehension of Agile concepts, I will delineate its components below and elucidate the framework and methodology applied in this project. Agile embodies a software development approach centered on flexibility and collaboration. It entails breaking projects into discrete segments and closely engaging with customers to guarantee that the end result meets their needs. Emphasizing human interaction over rigid plans, Agile underscores the early and regular delivery of operational software. (moodlecurrent.gre.ac.uk, 2024)

- **The methodology is used to develop the Green Groceries Online Platform**

The Green Groceries Online Platform adopts Agile methodologies, specifically Scrum, for development. Scrum, renowned for its short development cycles and defined team roles, aligns with Green Groceries' and System Concepts' project vision. Its iterative approach, adaptability, and focus on continuous improvement make it ideal for this endeavor. With transparent processes and time-boxed sprints, Scrum ensures collaboration, on-time delivery of features, and regular opportunities for reflection and enhancement. Ultimately, Scrum offers a structured Agile methodology tailored to meet Green Groceries' evolving requirements, ensuring the creation of an effective and responsive online platform.

- **The DSDM atern framework is applied for the development of the Green Groceries online platform**

The Green Groceries online platform utilizes the DSDM Atern framework, an Agile methodology renowned for iterative development, collaboration, and early value delivery. DSDM Atern integrates structured project management principles like MoSCoW prioritization and timeboxing to ensure efficient and frequent delivery.

- **The Advantages when the DSDM atern framework is applied:**

The application of the DSDM Atern framework yields numerous advantages, particularly in dynamic business settings like Green Groceries. Agile methodologies under this framework enable swift adaptation to evolving requirements and priorities. For instance, during the development of Green Groceries' online platform, customer feedback prompted the addition of a new feature allowing delivery instructions. The Agile team adeptly incorporated this request, showcasing the framework's responsiveness to customer needs.

Moreover, DSDM Atern facilitates iterative and incremental development, ensuring the frequent delivery of operational software and rapid feedback loops. For example, in crafting Green Groceries' online platform, the team subdivides the project into manageable iterations. Each iteration focuses on delivering specific functionalities, such as user registration and product browsing, with subsequent iterations building upon previous ones based on stakeholder and user feedback. This iterative approach ensures steady progress and continuous refinement, culminating in a successful platform launch.

Furthermore, the DSDM Atern framework emphasizes customer involvement throughout the development lifecycle, ensuring alignment with their needs and expectations. For instance, the Green Groceries development team actively solicits customer feedback through interviews and usability studies, shaping features such as the checkout process and product search functionality. By incorporating customer preferences and addressing concerns, the team ensures

the final platform is user-friendly and customer-centric, enhancing overall satisfaction and usability.

- **The Drawbacks of the DSDM atern framework:**

The DSDM Atern framework presents challenges due to its reliance on extensive stakeholder involvement, which can be difficult to sustain if stakeholders are unavailable or disengaged. This lack of input may hinder feature prioritization and conflict resolution for the development team. Implementing DSDM Atern for Green Groceries' online platform development confronts complexities, particularly for smaller or inexperienced teams. These challenges include comprehending the framework's intricacies, managing timeboxes, and facilitating collaboration. Addressing this necessitates additional training and support to navigate DSDM Atern effectively, ensuring successful project delivery within the ambitious three-month timeframe.

II.   High-level requirements analysis and MoSCoW prioritisation.
2.1)   Define High-level requirements

High-level requirements are general statements outlining the main goals and functionalities of a project or system without going into specific details. Based on Appendix A (Table 1: Base lined list of requirements for the Web site) and all requirements be listed below table (moodlecurrent.gre.ac.uk, 2024)

Table 1. High-Level Requirement

ID	High-Level Requirements
RQ1	Ensure the presence of a minimum of 20 office plants, aligning with the company's dedication to fostering a green and health-focused work environment.
RQ2	Enable order-handling clerks to conduct telephone purchases through the website, thereby replacing the current paper-based system.
RQ3	Enable customers to effortlessly modify their account information to maintain precise and current records.
RQ4	Host a virtual celebration on the website in honor of the CEO's birthday, embodying the company's vibrant and amiable culture.
RQ5	Ensure website compliance with Data Protection Act requirements to mitigate potential fines and safeguard user data security.

ID	High-Level Requirements
RQ6	Offer customers the option to select delivery slots that align with their scheduling preferences, ensuring effective accommodation of their needs.
RQ7	Provide customers with the capability to register an account on the website.
RQ8	Enable customers to effortlessly adjust the contents of their shopping cart to accommodate changes in their purchasing decisions.
RQ9	Introduce pet-friendly policies to cultivate a positive and inclusive workplace environment.
RQ10	Architect the system to seamlessly manage a 30% surge in traffic during peak periods, maintaining optimal performance without degradation.
RQ11	Enable customers to input distinct delivery and invoice addresses, facilitating delivery to alternative locations with ease.
RQ12	Provide customers with the choice to opt-in or opt-out of receiving marketing information to mitigate the risk of excessive junk mail.
RQ13	Utilize encryption protocols to safeguard all user data, encompassing personal information and payment details, thereby ensuring the utmost level of security.
RQ14	Ensure the continuity of branding elements and design throughout the website to reinforce the company's brand identity consistently.
RQ15	Promote the involvement of the development team in quarterly team-building events, fostering collaboration and cultivating a positive work atmosphere.
RQ16	Create a dedicated offers or discount page on the website to inform customers about available promotions, as requested by the Marketing Director.
RQ17	Guarantee compliance with VAT legislation on the website to evade potential fines, as directed by the Chief Accountant.

ID	High-Level Requirements
RQ18	Implement acceptance of all forms of payment on the website to capture a broader market share, in line with the Operations Director's aspirations.

After reviewing all the previously provided requirements, I find that some of them are inappropriate, as illustrated below.

Table 2. The requirements are inappropriate

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
RQ1	Ensure the presence of a minimum of 20 office plants, aligning with the company's dedication to fostering a green and health-focused work environment.	Business Ambassador	FR	RQ1 is a functional requirement as it directly impacts the physical workspace environment. It ensures the presence of 20 office plants, in line with Green Groceries' ethos of sustainability and promoting a healthy workplace. This aligns with the company's commitment to fostering a green and health-focused work environment, enhancing employee well-being.
RQ4	Host a virtual celebration on the website in honor of the CEO's birthday, embodying the company's vibrant and amiable culture.	Business Ambassador	FR	RQ4 qualifies as a functional requirement since it stipulates a specific function or capability of the online platform. Hosting a virtual celebration on the website for

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
				the CEO's birthday embodies the company's culture and enhances employee morale. This aligns with Green Groceries' objective of fostering a vibrant and amiable work environment through interactive online features.
RQ5	Ensure website compliance with Data Protection Act requirements to mitigate potential fines and safeguard user data security.	Project manager	FR	RQ5 constitutes a functional requirement due to its necessity for the online platform's operation. Ensuring website compliance with Data Protection Act requirements is crucial to mitigate potential fines and safeguard user data security. This directly aligns with Green Groceries' commitment to protecting customer information and adhering to legal standards, ensuring trust and regulatory compliance.
RQ6	Offer customers the option to select delivery	End-User	FR	RQ6 is categorized as a functional requirement

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
	slots that align with their scheduling preferences, ensuring effective accommodation of their needs.			because it specifies a necessary functionality for the online platform. Offering customers the option to select delivery slots aligns with Green Groceries' aim to provide a seamless and customer-centric shopping experience. This feature ensures effective accommodation of customers' scheduling preferences, enhancing convenience and satisfaction.
RQ9	Introduce pet-friendly policies to cultivate a positive and inclusive workplace environment.	Business Ambassador	FR	RQ9 is considered a functional requirement because it outlines a necessary feature or policy to be implemented within the organization. Introducing pet-friendly policies aligns with the ambassador's goal of fostering a positive and inclusive workplace environment. This directly impacts the operational

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
				aspect of the business by establishing guidelines that accommodate employees' needs and preferences, enhancing morale and productivity.
RQ10	Architect the system to seamlessly manage a 30% surge in traffic during peak periods, maintaining optimal performance without degradation.	Business Ambassador	FR	RQ10 qualifies as a functional requirement because it pertains to ensuring the effectiveness and reliability of the online platform during peak periods. Architecting the system to manage a 30% surge in traffic aligns with the ambassador's interest in maintaining optimal performance and user experience. This directly impacts the operational aspect of the business by ensuring the platform can accommodate increased demand without degradation, thereby safeguarding customer satisfaction and business reputation.

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
RQ13	Utilize encryption protocols to safeguard all user data, encompassing personal information and payment details, thereby ensuring the utmost level of security.	Business Ambassador	FR	RQ13 qualifies as a functional requirement because it directly addresses the ambassador's concern for security and data protection. Utilizing encryption protocols to safeguard user data aligns with the ambassador's goal of ensuring the utmost level of security. This directly impacts the operational aspect of the business by implementing measures to protect sensitive information, thereby fostering trust and compliance with data protection regulations.
RQ14	Ensure the continuity of branding elements and design throughout the website to reinforce the company's brand identity consistently.	Business Ambassador	FR	RQ14 is considered a functional requirement because it relates to maintaining consistency and coherence in branding elements and design across the website. Ensuring continuity of branding elements reinforces the

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
				company's brand identity consistently, which aligns with the ambassador's objective of promoting and upholding the organization's image and values. This directly impacts the operational aspect of the business by enhancing brand recognition and fostering a cohesive user experience, ultimately contributing to customer loyalty and engagement.
RQ15	Promote the involvement of the development team in quarterly team-building events, fostering collaboration and cultivating a positive work atmosphere.	Technical Coordinator and Project Manager	NFR	RQ15 qualifies as a functional requirement because it directly pertains to fostering collaboration and cultivating a positive work atmosphere within the development team. Promoting the involvement of the team in quarterly team-building events aligns with their responsibilities for overseeing project execution and team dynamics. This directly

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
				impacts the operational aspect of the project by enhancing team cohesion, morale, and productivity, ultimately contributing to project success.

After reviewing all the previously provided requirements, I find that some of them are appropriate, as illustrated below.

Table 3. The requirements are appropriate

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
RQ2	Enable order-handling clerks to conduct telephone purchases through the website, thereby replacing the current paper-based system.	Business Ambassador	FR	RQ2 constitutes a functional requirement since it specifies a necessary capability for the online platform. Enabling order-handling clerks to conduct telephone purchases through the website replaces the current paper-based system, enhancing efficiency and streamlining operations. This directly aligns with Green Groceries' goal of launching a seamless online platform for

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
				customer convenience and operational effectiveness.
RQ3	Enable customers to effortlessly modify their account information to maintain precise and current records.	End-User	FR	RQ3 represents a functional requirement as it outlines a necessary feature for the online platform. Enabling customers to effortlessly modify their account information ensures the maintenance of precise and current records. This functionality aligns with Green Groceries' aim of providing a seamless and user-friendly experience, enhancing customer satisfaction and data accuracy.
RQ7	Provide customers with the capability to register an account on the website.	End-User	FR	RQ7 is considered a functional requirement because it directly addresses the needs and expectations of the end-users who will interact with the online platform. Providing customers with the capability to register an account aligns

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
				with their requirement for personalized experiences and access to additional features or services. This functionality directly impacts the user experience by allowing users to create accounts, manage preferences, and access tailored content, ultimately enhancing satisfaction and engagement.
RQ8	Enable customers to effortlessly adjust the contents of their shopping cart to accommodate changes in their purchasing decisions.	End-User	FR	RQ8 qualifies as a functional requirement because it directly addresses the needs and expectations of the end-users interacting with the online platform. Enabling customers to effortlessly adjust the contents of their shopping cart aligns with their requirement for flexibility and ease of use during the shopping experience. This functionality directly impacts the user experience by allowing users to modify their

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
				orders based on their changing purchasing decisions, enhancing convenience and satisfaction.
RQ11	Enable customers to input distinct delivery and invoice addresses, facilitating delivery to alternative locations with ease.	End-User	FR	RQ11 is classified as a functional requirement because it directly addresses the needs and preferences of the end-users interacting with the online platform. Enabling customers to input distinct delivery and invoice addresses aligns with their requirement for flexibility and convenience in managing their orders. This functionality directly impacts the user experience by allowing users to specify different addresses for delivery and billing, facilitating seamless transactions and enhancing satisfaction.
RQ12	Provide customers with the choice to opt-in or opt-out of receiving	End-User	FR	RQ12 qualifies as a functional requirement because it directly addresses the

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
	marketing information to mitigate the risk of excessive junk mail.			preferences and concerns of the end-users interacting with the online platform. Providing customers with the choice to opt-in or opt-out of receiving marketing information aligns with their requirement for control over their communication preferences. This functionality directly impacts the user experience by allowing users to manage their subscriptions, mitigating the risk of receiving excessive junk mail and enhancing their satisfaction with the platform.
RQ16	Create a dedicated offers or discount page on the website to inform customers about available promotions, as requested by the Marketing Director.	Business Analyst	FR	RQ16 qualifies as a functional requirement because it directly addresses a specific feature or capability required for the online platform. Creating a dedicated offers or discount page aligns with the Marketing Director's request to inform customers about available promotions. This

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
				functionality impacts the operational aspect of the platform by providing a means to showcase promotions, thereby contributing to marketing strategies and potentially increasing customer engagement and sales.
RQ17	Guarantee compliance with VAT legislation on the website to evade potential fines, as directed by the Chief Accountant.	Business Analyst	NFR	RQ17 is classified as a non-functional requirement because it pertains to the overall quality, performance, and regulatory compliance of the online platform rather than specific functionalities. Guaranteeing compliance with VAT legislation is crucial for avoiding potential fines and legal consequences, aligning with the Chief Accountant's directive. This requirement impacts the platform's overall governance and adherence to regulatory standards, ensuring financial

ID	High-Level Requirements Description	Stakeholder	FR/NFR	Reason
				integrity and mitigating risks, which are concerns often analyzed and overseen by the business analyst.
RQ18	Implement acceptance of all forms of payment on the website to capture a broader market share, in line with the Operations Director's aspirations.	Business Sponsor And Business Visionary	FR	RQ18 qualifies as a functional requirement because it directly addresses a specific feature or capability needed for the online platform. Implementing acceptance of all forms of payment aligns with the Operations Director's aspirations to capture a broader market share. This functionality impacts the operational aspect of the platform by expanding payment options, thereby enhancing customer convenience and potentially increasing sales, which are aligned with the business sponsor's objectives and the visionary's strategic goals.

2.2)   The MoSCoW/Timebox rules

The project spans 3 months, structured into 6 sprints of 2 weeks each, following the Scrum methodology. To allocate time effectively, I'll first calculate the total work hours needed. The team comprises five members: four work full-time (8 hours/day), and one works part-time (4 hours/day). With the team working 5 days a week, over 3 months (60 days), the total labor hours are tabulated below:

Table 4. Total labor time for this project

Member	Working hours per a day	Working day (3 months)	Hours
4-Full time	8	60	1920
1 Part-time	4	60	240
		Total hours	2160

To sum up, the total labor time is 2160 hours, therefore each sprint will receive around 360 hours. Estimation for each requirement (WBS - Work breakdown structure):

Table 5. Estimation for each requirement (WBS - Work breakdown structure)

No.	Requirement ID	Requirement	Break tasks	Estimation (man.hour)
1	RQ02	Enable order-handling clerks to conduct telephone purchases through the website, thereby replacing the current paper-based system.	1.1: Database table design for order management - 60 hours 1.2: User interface development for order processing - 50 hours 1.3: Backend functionality implementation for order submission - 50 hours	300

No.	Requirement ID	Requirement	Break tasks	Estimation (man.hour)
			1.4: Payment gateway integration for online transactions - 40 hours	
			1.5: Order confirmation and tracking system implementation - 50 hours	
			1.6: Testing and debugging of order processing system - 30 hours	
			1.7: Staff training on utilizing the new system - 20 hours	
2	RQ03	Enable customers to effortlessly modify their account information to maintain precise and current records.	2.1: User interface design for user account management - 40 hours 2.2: Backend functionality development for account data storage - 36 hours 2.3: Implementation of account update functionality - 40 hours 2.4: Implementation of data validation and security measures - 40 hours	220

No.	Requirement ID	Requirement	Break tasks	Estimation (man.hour)
			2.5: Testing of account update features across various devices - 40 hours 2.6: Creation of user documentation for account management – 24 hours	
3	RQ05	Ensure website compliance with Data Protection Act requirements to mitigate potential fines and safeguard user data security.	3.1: Database table design for user registration - 54 hours 3.2: Design of registration form and user interface - 40 hours 3.3: Backend functionality development for user registration - 40 hours 3.4: Implementation of email verification and account activation process - 36 hours 3.5: Implementation of data encryption and privacy measures - 25 hours	260

No.	Requirement ID	Requirement	Break tasks	Estimation (man.hour)
			3.6: Testing of registration process for usability and security - 40 hours 3.7: Creation of user guidance for account registration - 25 hours	
4	RQ08	Enable customers to effortlessly adjust the contents of their shopping cart to accommodate changes in their purchasing decisions.	4.1: Database table design for shopping cart management - 40 hours. 4.2: Design of intuitive shopping cart interface - 40 hours 4.3: Development of backend functionality for cart management - 36 hours 4.4: Implementation of drag-and-drop functionality for item rearrangement - 32 hours	245

No.	Requirement ID	Requirement	Break tasks	Estimation (man.hour)
			4.5: Integration with inventory system for real-time updates - 40 hours	
			4.6: Testing of cart modification features for usability and accuracy - 32 hours	
			4.7: Creation of user tutorials for cart management - 25 hours	
5	RQ11	Enable customers to input distinct delivery and invoice addresses, facilitating delivery to alternative locations with ease.	5.1 Design database tables for address management - 40 hours 5.2 Design address entry fields and validation - 30 hours 5.3 Develop backend logic for storing and managing address data - 40 hours 5.4 Implement option for separate delivery and invoice addresses - 35 hours 5.5 Ensure data encryption and protection for sensitive information - 30 hours 5.6 Test address entry and	240

No.	Requirement ID	Requirement	Break tasks	Estimation (man.hour)
			validation process - 40 hours 5.7 Provide user guidance for address management - 25 hours	
6	RQ12	Provide customers with the choice to opt-in or opt-out of receiving marketing information to mitigate the risk of excessive junk mail.	6.1: Database table design for managing marketing preferences - 40 hours 6.2: Design of preference setting interface - 24 hours 6.3: Development of backend functionality to store marketing preferences - 36 hours 6.4: Implementation of opt-in/opt-out feature for marketing communications - 40 hours	225

No.	Requirement ID	Requirement	Break tasks	Estimation (man.hour)
			6.5: Ensuring compliance with data protection regulations - 25 hours 6.6: Testing of preference settings for accuracy and functionality - 40 hours 6.7: Creation of user instructions for managing marketing preferences - 20 hours	
7	RQ16	Create a dedicated offers or discount page on the website to inform customers about available promotions, as requested by the Marketing Director.	7.1: Database table design for managing offers - 40 hours 7.2: Design of layout and structure for offers/discount page - 40 hours 7.3: Development of functionality to manage promotional content - 42 hours 7.4: Implementation of dynamic display of offers based on user preferences - 36 hours	270

No.	Requirement ID	Requirement	Break tasks	Estimation (man.hour)
			7.5: Integration with marketing database for offer tracking - 32 hours	
			7.6: Testing of offer page functionality and responsiveness - 48 hours	
			7.7: Creation of staff guidance for accessing and redeeming offers - 32 hours	
8	RQ18	Implement acceptance of all forms of payment on the website to capture a broader market share, in line with the Operations Director's aspirations.	8.1: Conduct research and choose payment gateway providers - 40 hours	225
			8.2: Integrate selected payment gateways with the website - 40 hours	
			8.3: Develop backend logic for processing various payment methods - 30 hours	
			8.4: Implement secure payment handling and encryption measures - 40 hours	
			8.5: Test payment processing for reliability and security - 40 hours	

No.	Requirement ID	Requirement	Break tasks	Estimation (man.hour)
			8.6: Offer user support for payment-related inquiries - 25 hours	
			Total effort	**2085**

The MoSCow estimation

Table 6. Estimation for each requirement (WBS - Work breakdown structure)

ID	Requirement	MoSCoW	Reason for prioritization	Effort	SUMMARY (man.hour)	Scale
RQ05	Ensure website compliance with Data Protection Act requirements to mitigate potential fines and	Must have	This function is prioritized highest as it is essential for establishing user profiles, facilitating ordering, payment, delivery, personalization, and promotional activities. Its	260	1050	52%

	safeguard user data security.		implementation aligns seamlessly with the core functionalities of the online platform.		
RQ16	Create a dedicated offers or discount page on the website to inform customers about available promotions, as requested by the Marketing Director.	Must have	This function is pivotal for maintaining precise customer information, vital for the seamless operation of other features. By empowering customers to update their details, it guarantees data accuracy and facilitates seamless transactions.	270	
RQ3	Enable customers to effortlessly modify their account information to maintain precise and	Must have	Providing promotions and discounts is a vital marketing tactic to allure and retain customers. Introducing this feature early	220	

	current records.		enables Green Groceries to seize marketing opportunities and foster customer engagement right from the start.			
RQ02	Enable order-handling clerks to conduct telephone purchases through the website, thereby replacing the current paper-based system.	Must have	This function is indispensable in transitioning from a paper-based system to an online platform within an e-commerce system, making it an essential requirement in my evaluation.	300		
RQ18	Implement acceptance of all forms of payment on the website to capture a broader market share,	Should have	Giving priority to this function guarantees a smooth checkout process and optimizes revenue opportunities.	470 / 225		25%

	in line with the Operations Director's aspirations.					
RQ08	Enable customers to effortlessly adjust the contents of their shopping cart to accommodat e changes in their purchasing decisions.	Should have	This function holds significant importance in the user's purchasing journey, warranting its prioritization over the functions listed below.	245		
RQ11	Enable customers to input distinct delivery and invoice addresses, facilitating delivery to alternative	Could have	This function is prioritized in this area due to its significant importance, as it enhances convenience and flexibility in the delivery process, ultimately boosting	240	465	23%

	locations with ease.		overall customer satisfaction.		
RQ12	Provide customers with the choice to opt-in or opt-out of receiving marketing information to mitigate the risk of excessive junk mail.	Could have	Since this function is unrelated to the ordering and purchasing process, it is assigned the lowest priority.	225	
		Total		**1985**	

In summary, the prioritization adheres to the MoSCoW rule (60:20:20) with a ratio of approximately 52:25:23 for Must-have, Should-have, and Could-have respectively. This allocation ensures the project's timely completion while aligning with MoSCoW's priority framework. As per Scrum methodology, these tasks are distributed across sprints, detailed in the table below:

Table 7. The MoSCoW's

	175 man. hours / week	Sprint 1		Sprint 2		Sprint 3		Sprint 4		Sprint 5		Sprint 6	
		week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9	week 10	week 11	week 12
Must have	RQ05	🟥	🟥										
	RQ03		🟧	🟧									

	RQ16			▓	▓									
	RQ01					▓	▓							
Should	RQ18						▓	▓						
have	RQ08								▓	▓				
Could	RQ11									▓	▓			
have	RQ12										▓	▓		

III. Legal, Social, Ethical and Professional issues

3.1) Data Controller

Data protection, data privacy, and compliance with relevant regulations such as the Data Protection Act (DPA) are critical aspects for any organization handling customer data, especially in the context of an online platform like Green Groceries.

3.1.1) Data Protection and Privacy:

Data Protection (DPA - Data Protection Act): The Data Protection Act (DPA) is legislation that governs how personal data should be processed and used. It sets out principles for data protection and outlines the rights of individuals regarding their personal data.

Data privacy entails safeguarding personal information and empowering individuals to oversee the collection, usage, and sharing of their data.

3.1.2) Data Controller:

A data controller, whether an individual or an organization, is tasked with defining the objectives and methods of personal data processing. Their duty includes ensuring that data processing aligns with applicable data protection laws and regulations.

3.1.3) Role of Data Controller (Green Groceries):

Within Green Groceries, the CEO and Founder, alongside the Financial Controller and Chief Accountant, would probably assume the position of data controllers. Their duties would encompass:

- **Identifying data to collect:** Such as customer names, addresses, contact details, and potentially payment information for online transactions.

- **Determining data storage methods**: Ensuring secure storage through encryption and access controls.

- **Establishing data processing procedures**: Defining how customer data will be utilized for order fulfillment, marketing, and customer support.

- **Ensuring compliance with data transfer regulations**: Implementing safeguards for data transferred between systems or to third parties.

- **Defining data usage purposes**: Clearly communicating to customers how their data will be utilized and obtaining necessary consent.

- **Addressing Data Protection Act (DPA) and data privacy:** Ensuring compliance with regulations, implementing policies, conducting staff training, and regular audits to uphold data protection standards.

3.2) Legal, Social, Ethical and Professional issues

3.2.1) Legal Considerations:
➢ **Data Privacy**

Example: Green Groceries, as seen in the case study, must comply with data privacy laws like the Data Protection Act (DPA). This ensures secure handling of customer information on their online platform.

➢ **Security and Fraud Detection:**

Example: The online platform of Green Groceries needs strong security features to safeguard customer data and deter unauthorized access or fraudulent transactions.

➢ **Compliance with Financial Regulation:**

Example: Green Groceries is obligated to adhere to financial regulations during online transaction processing, account management, and reporting of financial data to relevant authorities.

➢ **Intellectual Property and License:**

Example: Green Groceries is required to verify that all content, branding, and software on their online platform adhere to intellectual property laws, with necessary licenses or permissions obtained for usage.

➢ **Terms of Service and User Agreements:**

Example: Green Groceries ought to establish transparent terms of service and user agreements, mandatory for users prior to accessing their online platform. These documents delineate regulations concerning data utilization, payments, and dispute resolution.

➢ **Consumer Protection:**

Example: Green Groceries is obligated to adhere to consumer protection laws by ensuring accurate product information, adhering to refund policies, and promptly addressing and resolving customer complaints or concerns.

3.2.2) Social Considerations:

➢ **Impact on Citizens**: Green Groceries' online platform offers access to organic and locally sourced products, fostering healthier and more sustainable lifestyles among community members. This initiative also bolsters the local economy by supporting nearby farmers and eco-conscious suppliers.

➢ **Technical Education of Consumers:** Green Groceries can enrich consumer knowledge by providing resources on their website about topics such as organic farming, eco-friendly packaging, and the benefits of local products, empowering informed purchasing decisions.

➢ **Accessibility:** Green Groceries' online platform should incorporate accessibility features like screen readers for visually impaired users and alternative input methods for those with mobility impairments, ensuring equitable access to their products and services.

➢ **Privacy:** While Green Groceries' online platform gathers user data for personalization and service enhancement, strict privacy measures must be in place to safeguard this information from unauthorized access or misuse, aligning with data protection laws.

➢ **Transparency and Trust:** Green Groceries' dedication to transparency is evident through clear communication about sourcing practices, product ingredients, and pricing policies. By upholding ethical and sustainable business values, the company cultivates trust with customers.

➢ **Security Awareness:** Green Groceries should conduct security awareness campaigns or offer educational resources on their website to inform users about prevalent online threats like phishing scams and identity theft, empowering proactive protection of personal information.

3.2.3) Ethical Considerations:

➤ **Fairness:** Green Groceries upholds fairness by providing equal opportunities to local farmers and suppliers, irrespective of their size or scale. Additionally, they uphold fair pricing policies, ensuring affordability for customers while fairly compensating producers.

➤ **Consumer Protection:** Green Groceries emphasizes consumer protection through quality assurance and product safety measures. They furnish clear, precise product information and offer responsive customer support to promptly resolve any concerns or issues.

➤ **Protecting Business Data and Information:** Green Groceries demonstrates ethical accountability by safeguarding business data and information. They deploy robust cybersecurity measures to thwart data breaches and unauthorized access, while also ensuring compliance with data protection regulations to preserve the privacy rights of customers and stakeholders.

3.2.4) Professional Considerations:

➤ **Compliance with Standards and Regulations**: Green Groceries maintains professional integrity by adhering to food safety standards and regulations applicable to the sale and distribution of organic goods. Additionally, they comply with data protection laws like the Data Protection Act (DPA) to safeguard customer information on their online platform.

➤ **Test for Quality Assurance:** Green Groceries showcases professionalism through thorough QA testing of their online platform, addressing bugs, errors, and usability concerns prior to its public release. This guarantees customers a seamless and satisfying user experience.

➤ **Security and Data Protection:** Green Groceries maintains professional standards by placing utmost importance on the security and safeguarding of customer data on their online platform. They implement encryption protocols, access controls, and routine security audits to minimize the likelihood of data breaches and ensure adherence to data protection regulations.

➤ **The British Computer Society (BCS) Code of Conduct:**

Example from the scenario: Green Groceries follows the BCS Code of Conduct by advocating for ethical and prudent utilization of technology, valuing user privacy and confidentiality, and

upholding the integrity and dependability of their online platform. They emphasize transparency, honesty, and accountability in their operations, in accordance with the ethical principles delineated in the BCS Code of Conduct.

- **Professionalism:** Maintaining a culture of professionalism among development team members, fostering respectful communication, collaboration, and accountability in their interactions with colleagues, clients, and stakeholders.

- **Integrity:** Upholding transparency with users regarding any potential conflicts of interest, such as partnerships or affiliations that could impact the platform's offerings. Ensuring all business practices adhere to ethical and honest standards.

- **Competence:** Offering ongoing training and professional development opportunities to team members, enabling them to enhance their skills and knowledge. This prepares them to address the evolving needs and challenges inherent in developing and maintaining the platform.

- **Accountability:** Establishing clear lines of responsibility and accountability within the development team. Designating individuals to oversee compliance with legal, ethical, and professional standards, promptly addressing any concerns or issues that may arise.

IV. Conclusion

In retrospect, the successful culmination of the Green Groceries Online Platform project underscores the effective application of Agile methodologies, notably the DSDM (Dynamic Systems Development Method) and Scrum approach. This achievement was realized through the active engagement of stakeholders, adherence to established development frameworks, and seamless collaboration between internal and external teams. By prioritizing key functionalities such as customer registration, account updates, telephone purchases, and online transactions, the platform not only met business objectives but also addressed user needs adeptly.

Moreover, it is imperative to acknowledge the invaluable contribution of our instructor throughout this journey. Their unwavering dedication and expert guidance played a pivotal role in navigating the complexities of the assignment. Their patient mentorship and comprehensive explanations not only clarified uncertainties but also deepened our understanding of the subject matter. We extend our heartfelt gratitude for their steadfast commitment to our success and appreciate the significant time and effort invested in supporting our academic pursuits.

In essence, the culmination of the Green Groceries Online Platform project serves as a testament to the synergy of collaborative efforts, agile methodologies, and expert guidance. It

not only reinforces our commitment to delivering innovative solutions but also highlights the transformative power of effective teamwork and mentorship in achieving project success.

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