



# **COMP1787**

## **REQUIREMENTS MANAGEMENT**

<b>Subject Code:</b>	COMP1787
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## Section A - Management Summary

### 1. Introduction about Green Groceries Online Platform.

Green Groceries, a medium-sized company specializing in organic and locally sourced groceries, has built a strong reputation over the past five years by collaborating with local farmers and environmentally conscious suppliers. Looking to expand its market presence and offer sustainable products to a wider audience, Green Groceries plans to launch an online platform within the next three months. Lacking an internal software development team, the company opts to outsource its software projects. After facing difficulties with traditional 'waterfall' projects previously, Green Groceries has decided to engage System Concepts (SC) to develop their online platform, utilizing SCRUM and Agile methodologies for improved efficiency and adaptability.

About System Concepts (SC), this is an Agile software development consulting company that has been tasked with implementing the online platform. Utilizing the DSDM Atern framework, the company assigns dedicated teams to each project and offers the flexibility of working on-site or off-site.

The partnership between Green Groceries and System Concepts aims to provide a flexible online platform. The Agile approach was expected to address the challenges encountered in this project, providing the ability to adapt and respond to evolving requirements during the development phase.

#### **Aim of the project**

The aim of the project for Green Groceries is to launch an online platform within the next three months. This initiative stems from the company's desire to expand its market reach and make sustainable products more accessible to a wider audience. By transitioning from a traditional brick-and-mortar setup to an online platform, Green Groceries aims to overcome geographical limitations and cater to customers beyond its local vicinity. The project aligns with the company's values of sustainability and accessibility, seeking to leverage technology to enhance its offerings and increase its market presence.

**Reasons for Carrying Out the Project:**

- **Market Expansion:** By establishing an online presence, Green Groceries aims to reach a broader customer base beyond its physical locations. This expansion into the digital realm allows the company to tap into new markets and increase its revenue streams.
- **Accessibility:** An online platform provides convenience for customers, allowing them to browse, purchase, and receive organic and locally sourced grocery products from the comfort of their homes. This accessibility enhances the overall customer experience and fosters loyalty among existing customers while attracting new ones.
- **Sustainability:** As a company committed to sustainability, Green Groceries recognizes the environmental benefits of transitioning to an online platform. By reducing the need for customers to travel to physical stores, the company can minimize its carbon footprint and contribute to environmental conservation efforts.
- **Competitive Advantage:** In today's competitive market landscape, an online platform is essential for staying relevant and competitive. By offering an online shopping experience, Green Groceries can differentiate itself from competitors, attract tech-savvy consumers, and stay ahead of industry trends.

**Development of the Online Platform:**

- **Outsourcing:** Green Groceries opts to outsource its software development projects due to the lack of an in-house software development department. This allows the company to leverage the expertise and resources of external partners, such as System Concepts, a reputable Agile software development consultancy.
- **Methodologies:** The development of the online platform follows Agile principles, specifically SCRUM methodology. This iterative approach enables the project team to adapt to changing requirements, prioritize features based on customer needs, and deliver incremental value throughout the development process.
- **Framework:** System Concepts adopts the DSDM Atern framework for developing the online platform. This framework emphasizes collaboration, flexibility, and delivering business value iteratively. It provides a structured approach to software development while allowing for rapid iterations and continuous improvement.

- **Development Team:** System Concepts assigns a dedicated team comprising skilled programmers and web developers to the project. This team, led by experienced professionals, is responsible for implementing the online platform according to Green Groceries' requirements and specifications. The collaboration between Green Groceries and System Concepts aims to deliver a robust online platform that aligns with the company's values and meets the needs of its customers.

## 2. Methodologies

To successfully implement the Green Groceries project, the System Concepts (SC) team needs to find an appropriate software development method. Below is a table of definitions, advantages, and disadvantages of the Agile method

*Figure 1 Agile Methodologies*



*Table 1 Definitions, advantages, and disadvantages of the Agile method*

Definitions	Advantages	Disadvantages
The Agile methodology is a project management approach	<ul style="list-style-type: none"> <li>Satisfy the customer early and continuous delivery</li> </ul>	<ul style="list-style-type: none"> <li>Lack of documentation</li> </ul>

## Section A - Management Summary

<p>focused on completing projects through incremental and iterative steps. It involves breaking down projects into short-term development cycles, prioritizing quick delivery, adapting to changes, and fostering collaboration among team members.</p> <p>(<a href="https://www.coursera.org/articles/what-is-agile-a-beginners-guide">https://www.coursera.org/articles/what-is-agile-a-beginners-guide</a>)</p>	<ul style="list-style-type: none"> <li>• Encourage changing requirements during collaboration with the customer</li> <li>• Encourage knowledge sharing and visibility between the business and development team</li> <li>• Encourage constant communication and sharing of thoughts</li> <li>• Focus on delivering working software quickly</li> <li>• Encourage constant development and improvement without compromising on software quality</li> <li>• Encourage self-organising and lack of micro-management (<a href="https://www.bespokesoftwaredevelopment.com/blog/agile-project-management-methodology-advantages-disadvantages/#:~:text=is%20Agile%20Methodology%3F-,Agile%20methodology%20is%20an%20iterative%20and%20incremental%20approach%20to%20software,the%20basis%20of%20the,ir%20priority.">https://www.bespokesoftwaredevelopment.com/blog/agile-project-management-methodology-advantages-disadvantages/#:~:text=is%20Agile%20Methodology%3F-,Agile%20methodology%20is%20an%20iterative%20and%20incremental%20approach%20to%20software,the%20basis%20of%20the,ir%20priority.</a>)</li> </ul>	<ul style="list-style-type: none"> <li>• Developer skill set and training: Agile development requires the development team to have certain soft skills to be able to liaise with the business team</li> <li>• Lack of planning and project management software: Agile methodology focuses on short delivery cycles rather than long-term vision and planning. This can result in difficulty for the management team in estimating</li> <li>• Scope creep: Scope creep is fairly common during agile development because of loosely defined software requirements</li> <li>• Taking more on the plate in one iteration can result in the agile team rushing to deliver the iteration and compromising on quality controls.</li> </ul>
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Based on the table of definitions, advantages and disadvantages of Agile methods and in the context of the case study of Green Groceries, utilizing the Agile framework for the development of Green Groceries' online platform appears to be a suitable approach. Agile methodology emphasizes incremental and iterative development, which aligns well with the company's goal of launching the platform within the next three months and adapting to the dynamic nature of the market.

### 3. Choose Scrum Agile Framework.



*Figure 2 Scrum Methodologies*

Green Groceries has opted to utilize the Scrum framework for the development of its online platform in collaboration with System Concepts. The decision to apply Scrum is based on several factors and considerations:

#### **Advantages of Scrum:**

- Flexibility: allows the team to adapt to changing requirements and market conditions effectively. This is especially beneficial for Green Groceries as the company aims to deliver a robust online platform in the relatively short period of three months. Scrum's iterative approach allows project teams to prioritize features based on customer needs and deliver added value throughout the development process.



## Section A - Management Summary

- Transparency: Daily stand-up meetings, sprint reviews, and sprint retrospectives provide opportunities for stakeholders, including Green Groceries personnel and System Concepts developers, to stay informed about the project's progress, identify potential issues early, and make informed decisions.
- Collaboration: Collaboration is a key aspect of Scrum, with cross-functional teams working together to achieve common goals.
- Continuous Improvement: This iterative feedback loop enables System Concepts and Green Groceries to enhance their processes, address any issues or challenges encountered during development, and deliver a higher-quality product.

### **Disadvantages of Scrum:**

- Complexity: Although Scrum offers many benefits, implementation can also be complex, especially for teams or organizations new to Agile methods
- Resource intensive: Scrum requires dedicated commitment from all stakeholders, including time, resources, and effort.

**Conclusion:** Overall, the decision to apply the Scrum framework to develop the Green Grocery online platform seems appropriate given the project's goals, timeline, and collaborative nature. Scrum offers a number of benefits, including flexibility, transparency, collaboration, and continuous improvement, consistent with company goals and values. However, it is essential for System Concepts and Green Grocery to be mindful of potential challenges and ensure effective implementation of Scrum practices to maximize project success. judgment.

## **4. Summarize for section B**

First, create a table of requirements that are not high-level requirements and their reasons: create a table listing requirements that are not considered high-level, including detailed designs, technical specifications, or other specific factors. Provide reasons why each requirement is not considered high-level, often related to focusing on specific details rather than the overall objectives of the system.

Next, create a table of requirements that are high-level requirements and their reasons: create a table listing requirements considered high-level, focusing on the functions and overarching goals of the system. Provide reasons why each requirement is considered high-level, often because they are directly related to the overall goals and main functions of the system.

Then, determine a specific time to divide tasks and estimate requirements in the high-level requirements list: determine a specific time frame (timebox) to break down tasks into smaller tasks and estimate the completion time of each task. Proceed to estimate the details of the requirements in the high-level requirements list, ensuring that each requirement is clearly defined and can be implemented within the specified time frame. Finally, use the MoSCoW method to prioritize requirements in the requirements list: use the MoSCoW method to classify requirements into different priority groups, including Must have, Should have, Could have, and Won't have. Identify the requirements that need to be prioritized the most to ensure that the most important requirements are implemented first, while also identifying requirements that can be postponed or eliminated if necessary.

### **5. Summarize for section C**

First, we focus on protecting the information and data of customers, employees, and organizations. We examine legal regulations, standards, and security measures to ensure that information is safely protected and compliant with information security regulations. Next, we discuss the objectives and roles of a professional organization such as The British Computer Society (BCS) in promoting and safeguarding standards and ethical principles in the IT industry. We consider how BCS can assist Green Groceries in addressing IT and data management issues.

Finally, we analyze and discuss the legal, social, ethical, and professional issues that Green Groceries may face in conducting business operations. These issues include regulations on data protection, customer privacy rights, employee rights, social and environmental responsibilities, as well as ethical and professional standards in the business industry.

## Section B - High level requirements analysis and MoSCoW prioritisation

### 1. B1 - Table of requirements that do not high-level requirements and their reasons

*Table 2 Table of requirements that do not high-level requirements and their reasons*

Requirement ID	Requirement Description	Stakeholder	Functional/Non-Functional	Reason
GG-01	Maintain at least 20 office plants as part of the company's commitment	CEO and Founder	Non-Functional	<ul style="list-style-type: none"><li>• While important for the company's values and culture, it is not directly related to the functionality of the online platform.</li><li>• It is not related to the core business goals or goals of the online platform.</li><li>• This requirement is related to office management and organizational culture, focusing on creating a favorable and environmentally friendly work environment rather than directly contributing to the functionality or goals of the online platform. gland.</li><li>• Does not directly affect the functionality or features of the online platform that is the main focus of the project.</li></ul>

## Section B - High level requirements analysis and MoSCoW prioritisation

<b>GG-02</b>	Organize a virtual celebration on the website for the CEO's birthday	CEO and Founder	Functional	<ul style="list-style-type: none"> <li>• While important for company culture, it is not directly related to the functionality of the online platform. The challenges and goals identified in this case study do not clearly state the need for a 360-degree view of the customer relationship.</li> <li>• The main aim of the online platform is to expand market reach and make sustainable products more accessible. Holding a virtual celebration of the CEO's birthday does not directly contribute to achieving this goal.</li> <li>• Not directly related to users accessing the online platform to buy groceries.</li> </ul>
<b>GG-03</b>	The site is Data Protection Act safe	Managing Director	Non-Functional	<ul style="list-style-type: none"> <li>• Requirements relate to the technical aspects of the system's security measures rather than its functional features.</li> <li>• Implementing modern protocols such as HTTPS ensures secure data transmission, increasing protection during the exchange of information between users and websites.</li> </ul>

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				<ul style="list-style-type: none"> <li>Modern development frameworks, such as bcrypt, provide strong encryption for sensitive data, contributing to improved overall security.</li> </ul>
<b>GG-04</b>	Enter separate delivery and invoice addresses	Customer	Functional	<ul style="list-style-type: none"> <li>The requirement to enter separate delivery and invoice addresses and adopt pet-friendly policies does not directly align with the primary goal of the project, which is to launch an online platform for selling organic groceries.</li> <li>While the requirement involves aspects related to third-party delivery services, it may not be directly relevant to the core functionalities of the online platform itself.</li> <li>Implementing separate delivery and invoice addresses and pet-friendly policies may aim to broaden market accessibility and inclusivity, potentially targeting a global market.</li> </ul>
<b>GG-05</b>	Adopt pet-friendly policies	Staff	Non-Functional	<ul style="list-style-type: none"> <li>similar to the GG-2</li> </ul>

## Section B - High level requirements analysis and MoSCoW prioritisation

				<ul style="list-style-type: none"> <li>Implementing pet-friendly policies involves establishing guidelines and practices within the company's organizational framework.</li> <li>While important for internal organizational culture, the adoption of pet-friendly policies may not directly contribute to achieving the primary business goal of launching an online platform for selling organic groceries. Therefore, it is considered a lower priority requirement in the context of the project's objectives.</li> </ul>
<b>GG-06</b>	Designed to handle a 30% increase in traffic during peak periods without degradation in performance.	Staff	Non-Functional	<ul style="list-style-type: none"> <li>This requirement falls under nonfunctional criteria, focusing on the performance and security aspects of the online platform.</li> <li>The requirement emphasizes the need for the platform to maintain optimal performance even during periods of high traffic.</li> <li>While crucial for the long-term scalability and reliability of the platform, this level of performance optimization may not be essential for the initial prototype development. Therefore, it is</li> </ul>

## Section B - High level requirements analysis and MoSCoW prioritisation

				considered a lower priority requirement in the early stages of the project.
<b>GG-07</b>	Encrypted to ensure the highest level of security.	Staff	Non-Functional	<ul style="list-style-type: none"> <li>• This requirement pertains to the security aspect of the online platform, focusing on data encryption to safeguard sensitive information.</li> <li>• Encryption is a technical measure aimed at ensuring data security and integrity, highlighting its importance in protecting user data.</li> <li>• Contemporary development frameworks often come equipped with built-in encryption functionalities, making it easier to implement robust security measures without significant additional effort or resources.</li> </ul>
<b>GG-08</b>	Maintain consistent branding elements and design across the website	Staff	Non-Functional	<ul style="list-style-type: none"> <li>• This requirement focuses on maintaining consistency in branding elements and design throughout the website to ensure a cohesive user experience.</li> <li>• The requirement lacks specific guidelines or standards for implementing brand identity</li> </ul>

## Section B - High level requirements analysis and MoSCoW prioritisation

				<p>elements, making it subjective and potentially challenging to measure or implement effectively.</p> <ul style="list-style-type: none"> <li>• Brand identity is an evolving aspect of a company's image and may undergo refinements and enhancements over time.</li> </ul>
<b>GG-09</b>	Participate in a team-building event every quarter	COO		<ul style="list-style-type: none"> <li>• This requirement pertains to organizing team-building events every quarter, aiming to foster collaboration and a positive work environment among the development team.</li> <li>• While team-building events are valuable for improving team dynamics and morale, they may not directly contribute to achieving the primary business goals or the core objectives of the project. Therefore, they are considered non-high requirements in terms of project prioritization.</li> </ul>



## 2. B2 - Table of requirements that high-level requirements and their reasons

*Table 3 Table of requirements that high-level requirements and their reasons*

Requirement ID	Requirement Description	Stakeholder	Functional/Non-Functional	Reason
<b>GG-01</b>	Use the website to process telephone purchases, replacing the paper-based system.	Sale staff	Functional requirement	<ul style="list-style-type: none"> <li>Processing phone purchases through websites is a common feature in many e-commerce applications, demonstrating its importance and relevance in the industry.</li> <li>Most people have a phone number, making this feature accessible to many users.</li> <li>It brings convenience to older users</li> <li>Facilitating phone purchases fits with Green Groceries' business goal of expanding market reach and making products more accessible to a diverse customer base.</li> </ul>
<b>GG-02</b>	change account details to ensure	Customer	Functional requirement	<ul style="list-style-type: none"> <li>Essential for e-commerce functionality: Account profiles are fundamental in e-commerce platforms,</li> </ul>

## Section B - High level requirements analysis and MoSCoW prioritisation

	my most up-to-date information is recorded.			<p>allowing users to manage their personal information for a variety of purposes</p> <ul style="list-style-type: none"> <li>Ensuring that users can update their account details reflects a commitment to data security and privacy, which is important for maintaining trust and regulatory compliance.</li> <li>Updated account details facilitate a personalized experience, allowing businesses to tailor their services to individual preferences</li> </ul>
<b>GG-03</b>	Register an account for customer	Customer	Functional requirement	<ul style="list-style-type: none"> <li>Account registration is required for users to access features</li> <li>Registered account enables personalization features</li> <li>Registered accounts provide a means for businesses to engage with customers through targeted promotions</li> <li>Registering an account allows for secure management of financial information</li> </ul>
<b>GG-04</b>	modify my shopping.	Customer	Functional requirement	<ul style="list-style-type: none"> <li>Allowing users to modify their shopping carts gives them the flexibility to change their selections before</li> </ul>

## Section B - High level requirements analysis and MoSCoW prioritisation

				<p>making a final purchase decision, enhancing the shopping experience and reducing frustration.</p> <ul style="list-style-type: none"> <li>• This feature allows users to add, remove or adjust the number of items in the shopping cart according to their preferences, resulting in a smoother and more user-friendly shopping process..</li> </ul>
<b>GG-05</b>	choice of delivery slots	Customer	Functional requirement	<ul style="list-style-type: none"> <li>• This requirement directly impacts the functionality of the online platform by ensuring performance scalability.</li> </ul>
<b>GG-06</b>	choose whether or not sent marketing information to avoid receiving excessive junk mail.	Customer	Functional requirement	<ul style="list-style-type: none"> <li>• Giving users the option of whether or not to receive marketing communications ensures compliance with spam laws and regulations, minimizing the risk of legal consequences for the company.</li> <li>• The platform demonstrates a commitment to customer satisfaction and builds trust with the user base, leading to higher customer retention rates.</li> <li>• Allowing users to control their marketing preferences ensures that marketing efforts are targeted to people who are truly interested</li> </ul>

## Section B - High level requirements analysis and MoSCoW prioritisation

<b>GG-07</b>	Web site to adhere to legislation regarding VAT	Chief Accountant	Functional requirement	<ul style="list-style-type: none"> <li>• Compliance with VAT laws is a legal requirement that all businesses must comply with in order to operate legally in their jurisdiction.</li> <li>• Ensuring that the website is VAT compliant demonstrates the company's commitment to integrity and financial transparency. It builds trust between customers and stakeholders, reassuring them that the company operates ethically and responsibly.</li> <li>• The company will minimize the risk of facing legal consequences or financial loss due to non-compliance.</li> </ul>
<b>GG-08</b>	Accept all forms of payment	Operations Director	Functional requirement	<ul style="list-style-type: none"> <li>• Accepting all forms of payment provides maximum convenience to customers, allowing them to choose their preferred payment method.</li> <li>• Offering multiple payment options gives the company a competitive advantage over its competitors</li> <li>• By accepting diverse payment methods, the company expands its reach and market reach.</li> </ul>

### 3. B3 - The Timebox to breaking task and estimation the requirements in high requirements list.

*Table 4 The Timebox to breaking task and estimation the requirements in high requirements list.*

Requirement ID	Requirement	Break tasks	Estimation (man.hour)
GG-01	Use the website to process telephone purchases, replacing the paper-based system.	<ol style="list-style-type: none"> <li>1. Develop backend functionality for processing telephone purchases (50 man.hours)</li> <li>2. Integrate with existing database for order management (50 man.hours)</li> <li>3. Implement user interface for order handling clerk (50 man.hours)</li> </ol>	150
GG-02	Change account details	<ol style="list-style-type: none"> <li>1. Develop backend functionality for account management (50 man.hours)</li> <li>2. Implement user interface for account details modification (40 man.hours)</li> <li>3. Test functionality across different devices and browsers ( 40 man.hours)</li> </ol>	130
GG-03	register an account	<ol style="list-style-type: none"> <li>1. Develop backend functionality for user registration (100 man.hours)</li> </ol>	300

## Section B - High level requirements analysis and MoSCoW prioritisation

		<ol style="list-style-type: none"> <li>2. Implement user interface for account registration (100 man.hours)</li> <li>3. Set up email verification process (100 man.hours)</li> </ol>	
<b>GG-04</b>	Choice of delivery slots	<ol style="list-style-type: none"> <li>1. Design delivery slot selection feature (100 man.hours)</li> <li>2. Develop backend functionality for managing delivery slots (150 man.hours)</li> <li>3. Implement user interface for selecting delivery slots (150 man.hours)</li> </ol>	400
<b>GG-05</b>	Modify shopping cart	<ol style="list-style-type: none"> <li>1. Enhance shopping cart functionality for item modification (100 man.hours)</li> <li>2. Implement user interface for modifying shopping cart (200 man.hours)</li> <li>3. Test functionality across different scenarios (120 man.hours)</li> </ol>	420
<b>GG-06</b>	Choose whether or not I am sent marketing information to avoid receiving excessive junk mail.	<ol style="list-style-type: none"> <li>1. Develop user preference settings for marketing communication (100 man.hours)</li> </ol>	

## Section B - High level requirements analysis and MoSCoW prioritisation

		<ol style="list-style-type: none"><li>2. Implement user interface for managing marketing preferences (70 man.hours)</li><li>3. Ensure compliance with relevant regulations (e.g., GDPR) (30 man.hours)</li></ol>	200
SC-07	The website to adhere to legislation regarding VAT.	<ol style="list-style-type: none"><li>1. Review VAT legislation and requirements (50 man.hours)</li><li>2. Update pricing and invoicing modules accordingly (100 man.hours)</li><li>3. Conduct testing and verification of VAT compliance (50 man.hours)</li></ol>	200
SC-08	Accept all forms of payment to capture the largest market possible	<ol style="list-style-type: none"><li>1. Integrate various payment gateways (e.g., credit card, PayPal) (50 man.hours)</li><li>2. Implement backend logic for handling different payment methods (50 man.hours)</li><li>3. Test payment processing workflows thoroughly (60 man.hours)</li></ol>	260

### 4. B4 - The MoSCoW to prioritise the requirements in requirements list.

#### Introduction to MOSCOW Prioritization

MOSCOW is a prioritization technique used in project management to categorize requirements into four distinct categories: Must-haves, Should-haves, Could-haves, and

Won't-haves. This method helps stakeholders prioritize features and functionalities based on their importance to the project's success.

**MOSCOW Categories:**

**Must-Haves (M):** These are essential requirements that must be implemented for the project to be considered successful. Failure to meet these requirements could jeopardize the project's viability or compliance with critical standards.

**Should-Haves (S):** These requirements are important but not critical for the initial release of the project. They enhance the product's functionality and user experience but can be deferred to a later stage if necessary.

**Could-Haves (C):** These are desirable but optional features that could add value to the project if resources and time allow. They are often considered for inclusion after addressing must-have and should-have requirements.

*Table 5 The MoSCoW to prioritise the requirements in requirements list.*

Requirement ID	Requirement	MoSCoW	Reason
SC-01	Process telephone purchases online	Must have	Essential for transitioning from a paper-based system to digital processing, improving efficiency and accuracy.
SC-02	Change account details	Must have	Critical for maintaining accurate customer information and enhancing user experience.
SC-03	Register an account	Must have	Fundamental for user engagement and enabling features like personalized shopping and order tracking.
SC-04	Choice of delivery slots	Could have	Enhances customer experience and flexibility but not critical for basic functionality.



## Section B - High level requirements analysis and MoSCoW prioritisation

<b>SC-05</b>	Modify shopping cart	Should have	Improves user convenience but not as critical as core functionalities like account management.
<b>SC-06</b>	Choose marketing information preferences	Must have	Enhances user control and experience but not essential for basic site functionality.
<b>SC-08</b>	Adhere to legislation regarding VAT	Must have	Critical for legal compliance and avoiding penalties, ensuring financial integrity.
<b>SC-09</b>	Accept all forms of payment	Must have	Essential for maximizing sales potential and catering to diverse customer preferences.

According to the project's urgency as stated in the case study of Trust Bank, the MIS project needs to be completed as soon as possible, assuming a minimum completion time of 3 months with 8 developers. So total effort is 2160 man.hour (4 developers full time + 1 developer part time) \* 8 hours/day \* 5 days/week \* 4 weeks/month \* 3 months

**Table 6 Table of MoSCoW**

<b>Must have</b>	<b>1180 man.hours</b>	<b>57,28 %</b>
<b>Should have</b>	420 man.hours	20,23 %
<b>Could have</b>	460 man.hours	19.41 %
<b>Total</b>	<b>2050 man.hours</b>	<b>100 %</b>

## Section C - Legal, Social, Ethical and Professional issues

### 1. C1 - Discuss about data protection

Data protection encompasses the practices, policies, and technical measures put in place to ensure the privacy, confidentiality, integrity, and availability of data. It involves protecting data from unauthorized access, use, disclosure, alteration, and destruction, with the goal of safeguarding individuals' rights and ensuring compliance with relevant laws and regulations.

Data protection is crucial for the Green Groceries Online Platform to ensure the security and privacy of customer data. Here's a breakdown of various aspects related to data protection:

#### **Data Collection:**

Personal information: Names, addresses, contact details, and payment information collected during account registration and checkout processes.

- Transactional data: Details of purchases, order history, and preferences.
- User behavior: Website interactions, browsing history, and preferences.

#### **Data Storage:**

- Secure servers: Utilize encrypted databases and secure servers to store sensitive customer information.
- Access controls: Implement strict access controls to limit access to data to authorized personnel only.
- Regular backups: Perform regular backups of data to prevent loss in case of system failures or cyber attacks.

#### **Data Processing:**

- Encryption: Encrypt sensitive data both at rest and in transit to prevent unauthorized access.
- Data anonymization: Anonymize or pseudonymize personal data where possible to enhance privacy.

- **Data validation:** Implement validation checks to ensure the accuracy and integrity of data inputs.

**Data Transfer:**

- **Secure protocols:** Use secure communication protocols such as HTTPS for data transfer to protect against interception and tampering.
- **VPNs:** Utilize virtual private networks (VPNs) for secure remote access and data transfer between systems.

**Purpose for Data Usage:**

- **Order processing:** Use customer data to process orders, manage deliveries, and provide customer support.
- **Personalization:** Utilize customer data to personalize shopping experiences, recommend products, and send targeted marketing communications.
- **Compliance:** Ensure compliance with data protection regulations such as GDPR to protect customer rights and privacy.

## **2. C2 - The purpose of a professional body - The British Computer Society**

### **Purpose of a Professional Body**

The BCS Code of Conduct, established by the British Computer Society, sets out the principles and ethical guidelines that members of the organization must adhere to in the course of their professional practice. Here are 4 key codes of conduct from BCS and examples of Green Groceries Online Platform:

- **Public interest:** Members have an obligation to act in the public interest, respecting privacy, confidentiality and data security. Green Groceries ensures that all user data, including personal information and payment details, is encrypted to ensure the highest level of security
- **Professional competence and integrity:** Members only commit to perform work or provide services that they are competent to perform and have the necessary skills to perform. In the Green Groceries project, System Concepts, the Agile software

development consulting company selected by Green Groceries, appointed specialized teams of skilled programmers and web developers to deploy the online platform

- **Obligations to relevant authorities:** Members have an obligation to respect the legal authority of employers, customers and relevant laws governing their work. For example: Members have a duty to respect the legal authority of employers, customers and the relevant laws governing their work.

- **Obligations to the profession:** Members have an obligation to maintain and enhance the integrity, reputation and interests of the profession. For example, Green Grocer aims to provide a robust online platform that aligns with the company's values of sustainability and accessibility, thereby maintaining the integrity and reputation of the profession

In summary, adherence to the BCS Code of Conduct helps guide the decisions and actions of professionals at Green Groceries, promoting ethical behavior, professional excellence, and societal welfare in the field of software development and digital commerce.

### **3. C3 - Legal, social, ethical, and professional issues that Green Groceries may be faced with.**

Green Groceries, as it embarks on its online platform development, must consider various Legal, Social, Ethical, and Professional Issues (LSEPI) to ensure responsible and sustainable business practices. Here's a summary of key considerations:

#### **Legal Issues:**

- **Data Privacy:** Ensuring the protection of customer data collected during online transactions and account registrations to comply with data protection laws such as GDPR or CCPA.
- **Security and Fraud Detection:** Implementing robust security measures to prevent unauthorized access to customer information and detect fraudulent activities.
- **Compliance with Financial Regulation:** Adhering to financial regulations related to online transactions, including PCI DSS compliance for payment card processing.

## Section C - Legal, Social, Ethical and Professional issues

- **Intellectual Property and License:** Ensuring that the online platform does not infringe on intellectual property rights of others and obtaining necessary licenses for software and content used on the platform.
- **Terms of Service and User Agreements:** Drafting clear and comprehensive terms of service and user agreements to govern the use of the online platform and protect the company's interests.

### **Social Issues:**

- **Impact to All Citizens:** Considering the social impact of the online platform on all stakeholders, including customers, employees, local communities, and the environment.
- **Accessibility:** Ensuring that the online platform is accessible to all users, including those with disabilities, by following accessibility standards and guidelines.
- **Technical Education for Consumers:** Providing educational resources and support to help consumers navigate and use the online platform effectively and safely.
- **Security Awareness:** Promoting awareness among customers about online security best practices to protect their personal information and prevent cyber threats.
- **Transparent and Trust:** Building transparency and trust with customers by being transparent about data practices, security measures, and business operations.

### **Ethical Issues:**

- **Fairness:** Ensuring fairness in pricing, product availability, and customer service practices to maintain trust and integrity in business operations.
- **Protecting Consumer:** Safeguarding the interests and rights of consumers by respecting their privacy, honoring their preferences, and providing fair and accurate information.
- **Protecting Business Data and Info:** Implementing measures to protect sensitive business information and trade secrets from unauthorized access, disclosure, or misuse.

### **Professional Issues:**

- **Compliance with Standards and Regulations:** Ensuring compliance with industry standards, best practices, and regulatory requirements relevant to e-commerce and online platforms.
- **Test for QA:** Conducting thorough testing and quality assurance to ensure the reliability, functionality, and security of the online platform before its launch.
- **Security and Data Protection:** Implementing strong security measures to protect customer data and sensitive information stored on the online platform from cyber threats and breaches.

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