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# Requirement Management Report for the Case Study “Green Groceries Online Platform”

# Section – A

## Introduction about Online Green Groceries Platform

Green Groceries is a medium-sized company specializing in providing a wide range of organic products. They have established a strong brand reputation over the past 5 years in the local market. But now they plan to expand their market reach so that everyone can access sustainable products. To pursue this desire, they aim to launch an online platform within the next three months.

The problem is that they don't have their own software development team. Therefore, they need to outsource this project to a software development team with a solid reputation in the market, such as System Concepts. In the past, they've faced challenges when applying the traditional "waterfall" model to manage projects. So, after considering all the possibilities, they've chosen Agile and Scrum to manage this project.

After considering the business situation, I must agree with the Managing Director's recommendation for several reasons. Firstly, the company's flexibility is crucial. It's designed to be adaptable and allows development teams to quickly change the project's scope or requirements. This is ideal for situations like this, where Green Groceries is undergoing a business structure change for the first time. Since the old process might not be suitable for the new structure, the team may need to adapt and determine the best approach as requirements evolve.

## Drawbacks of Traditional Software Development Methodology

**Limitations:**

If we implement a traditional software development methodology like Waterfall, the Green Groceries team might only be involved in the initial stage of defining requirements. This could lead to a final product that doesn't meet the company's needs. The Agile approach offers Green Groceries the advantage of receiving frequent (mostly every two weeks) feedback on the app's progress, allowing them to confirm it matches their vision.

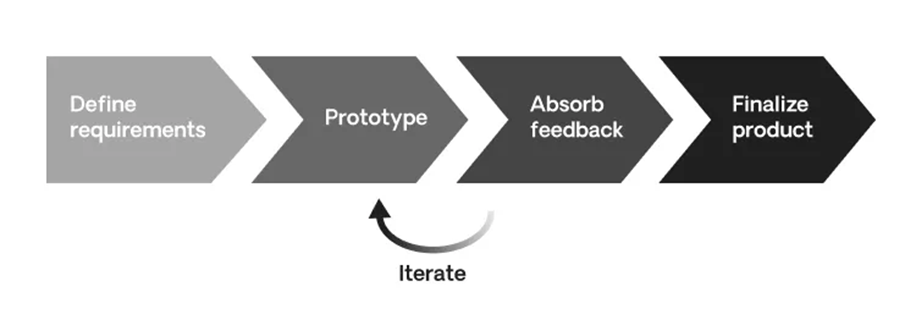
## Agile Frameworks Methods and its Overview.

**Overview**

Agile approaches development in bite-sized pieces. These short iterations, lasting 1-4 weeks, function like mini projects. Each mini project tackles all the tasks needed to deliver a small chunk of working software, including planning and requirement gathering. This reduces risk by allowing for early feedback and course correction before moving on to the next stage.

**Agile offers a toolbox of methods, including**:

**RAD**:



RAD (Rapid Application Development) prioritizes speed and user feedback. Here's the gist:

* Skip lengthy planning: Start with a rough idea, refine as you go.
* Prototype relentlessly: Build basic models to get early user input.
* Feedback fuels development: Adapt features based on user insights.
* Polish for launch: Refine the final product for stability and delivery.

This method excels at:

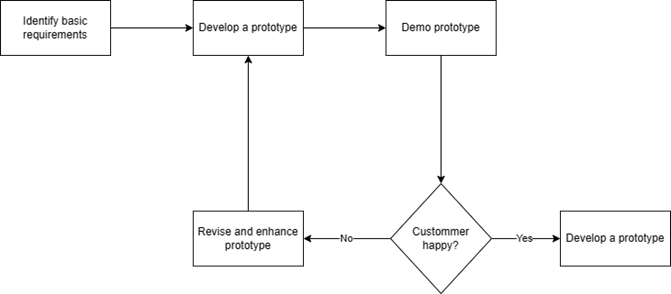
* Fast development: Get features out quickly.
* Adaptability: Easily adjust to changing needs.
* User focus: Build what users truly want.

**Prototyping**:

This emphasizes the user's role in driving the development of this new approach. This method is considered a more effective way to investigate and analyze systems, especially when traditional methods struggle.

**Situations**:

Unclear Purpose: When the exact purpose or use of the system is still not being figured out.



New Technology: When the organization isn't familiar with the technology involved in the system. (instead of "Organization not familiar with the technology").

Communication Breakdown: communication between the analysts working on the system and the people who will use it hasn't been smooth. (instead of "Communication between analysts & users has not been good").

**Timebox Approach**:

A method for creating and deploying a limited set of features for a functioning system within a fixed timeframe. (This emphasizes the prioritization and time constraint).

**JAD**:

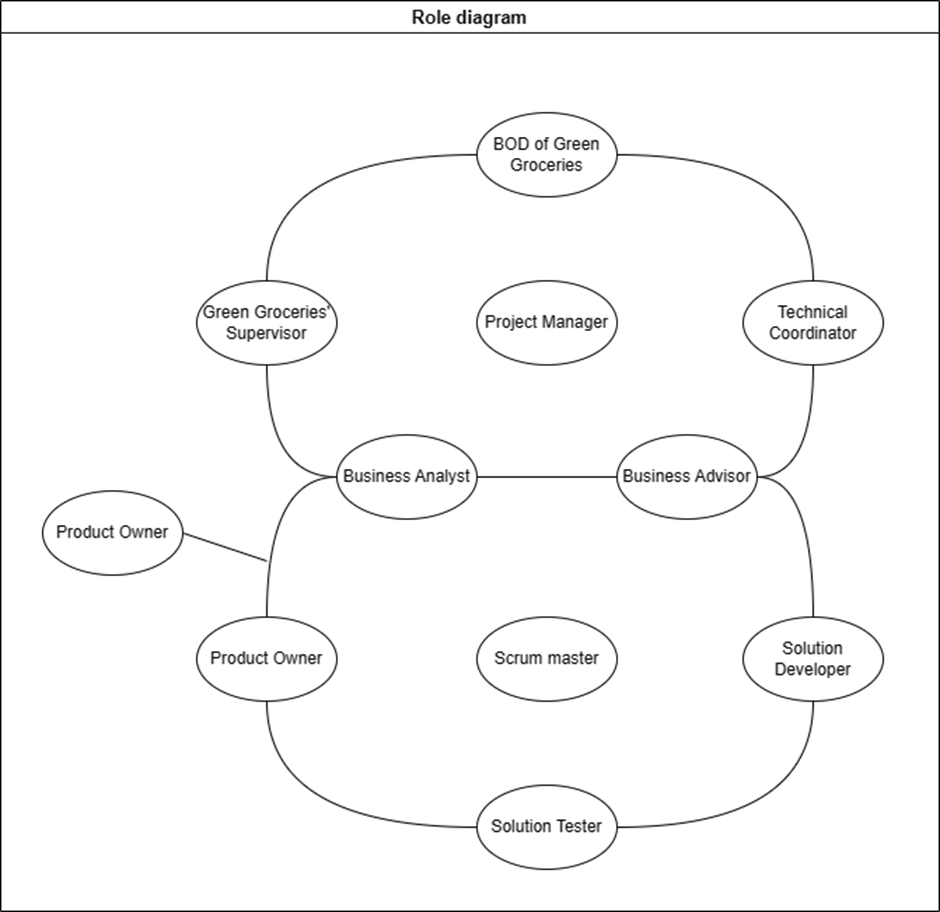
JAD (Joint Application Development) directly involves clients and users in designing new information systems. This collaborative approach gathers requirements alongside development, ensuring the final product aligns closely with business needs.

**Sprint and Scrums:**

Scrum provides the framework, and sprints are the building blocks within that framework. A Scrum project progresses through a series of sprints, with each sprint delivering a tangible piece of the final product.

## Systematic Workflow of Green Groceries Online Platform done with Agile Method

**Role:**

****

**Project Stakeholder Planning:**

Planning:

Participants: Green Groceries’ Stake Holder, Product Owner (PO), Development Team.

Agenda:

- PO presents the selected backlog item that will be implemented in present Sprint.

- Discuss with Development team to estimate time and effort for each item.

- Based on priority of each item and resource, the team will define story point for each item.

- Break down the item to smaller tasks and assign tasks for each member of development team.

Summary of the planning:

**Key People involved in development process:**

Cheryl – Team Leader (responsible for leading the development team, tracking team progress, and guiding the team towards achieving the sprint goal).

Peter - An excellent web developer known for expertise but occasionally engages in disagreements with clients.

Millie – Senior Developer (A skilled programmer with expertise in web development and effective communication skills).

Anita - Junior Developer.

Pat – Fresher Developer.

Will (Freelancer) – A Senior Designer who has worked part-time/freelance on many projects over many years and built a solid reputation in the design community.

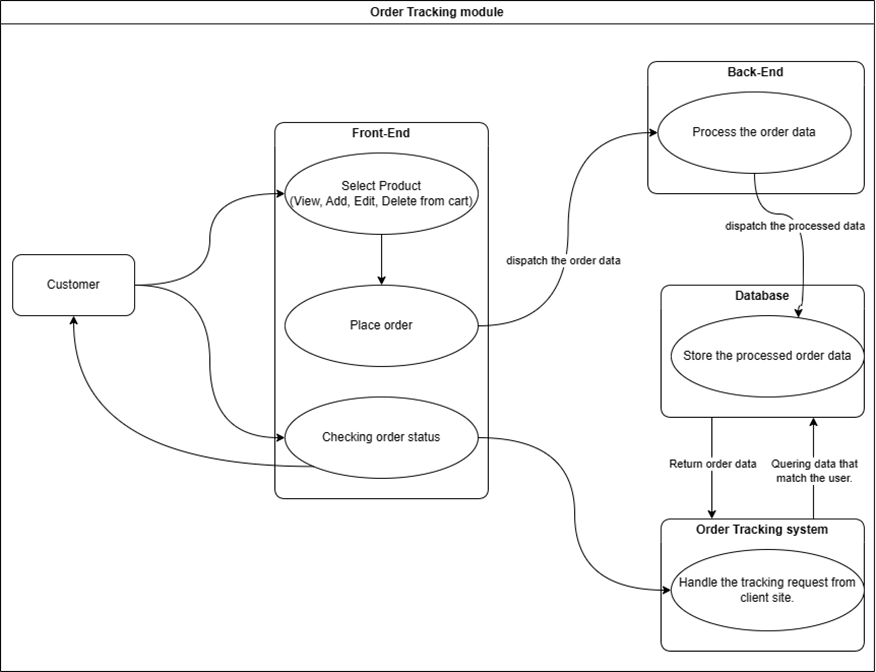
**Sprint 1: Order Tracking**

**Key people in charge for this module:**

Millie – Senior Developer.

Peter – Senior Developer.

**Because this function requires a lot of effort and understanding of system, so members with experience in developing in many years and been through a lot of projects is most suitable for this module.**



**How it works:**

The system interacts with two external entities: customers and a back-end system.

Customers can interact with the system through a front-end which allows them to select products (view, add, edit, delete from cart), and place orders.

Once an order is placed, the system sends the order data to the back-end system, which likely houses a database.

The front-end also allows customers to check on the status of their orders. To do this, the system queries the database for order data that matches the user.

The back-end system can also send data back to the front-end, presumably to update the order status for the customer.

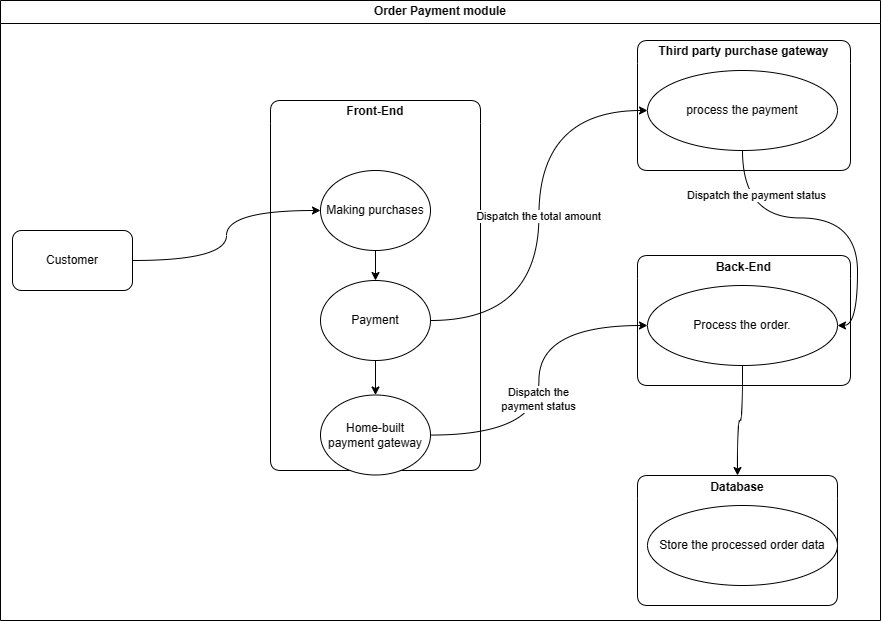
**Sprint 2: Order Payment module**

**Key people in charge for this module:**

Cheryl – Team Leader.

Millie – Senior Developer.

**Because this function requires a solid understanding of web security, so member with experience in developing in many year and been through a lot of project is most suitable for this module.**

**How it works:**

**Parties involved:**

* Customer: The person placing the order.
* Front-End: The user interface that the customer interacts with.
* Third-party purchase gateway: A service that processes payments from the customer.
* Back-End: The system that processes the order and communicates with the database.
* Database: Stores the processed order data.
* Home-built payment gateway: (Optional) It seems like there might be an alternative payment option besides the third-party purchase gateway.

**Process flow:**

1. The customer interacts with the front-end to make a purchase. This could involve browsing products, adding them to a cart, and eventually placing an order.
2. The front-end then sends the order details to the back-end.
3. The back-end communicates with the third-party purchase gateway to process the payment. It also sends the order data to the database.
4. The third-party purchase gateway then communicates with the customer’s bank to complete the payment.
5. Once the payment is complete, the third-party purchase gateway sends a notification to the back-end.
6. The back-end then updates the order status in the database and sends the status update to the front-end.
7. The front-end displays the order status update to the customer.

**Sprint 3: Filter & Search product module**

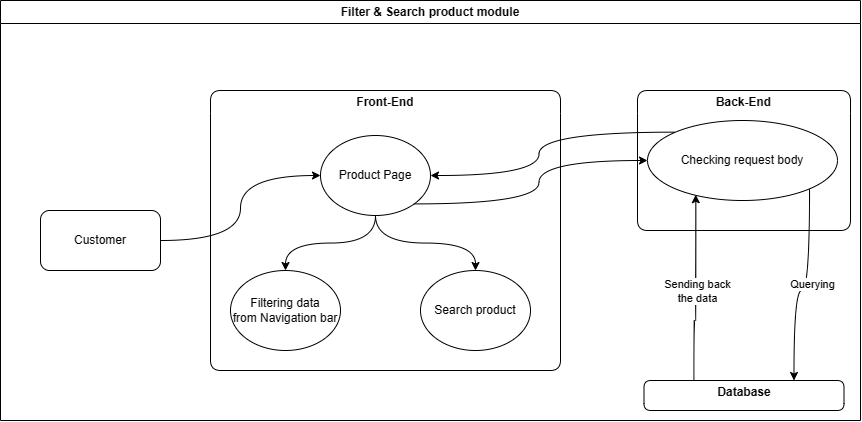
**Key people in charge for this module:**

Millie (Supporter) – Senior.

Anita - Junior Developer.

Pat – Fresher Developer.

**This module works well for two new developers with strong coding skills. Having a senior team member available for occasional support is ideal..**

****

**How it works:**

**Parties involved:**

* Customer: The person placing the order.
* Front-End: The user interface that the customer interacts with.
* Back-End: The system that processes the requests and communicates with the database.
* Database: Stores the processed data.

**Process flow:**

1. The process starts with the Customer interacting with the Front-End. This front-end could be a website or a mobile app.
2. The Front-End then sends a request to the Back-End. This request likely includes the customer's identification information.
3. The Back-End then queries the Database to find order data that matches the customer.
4. The Database sends the relevant order data back to the Back-End.
5. The Back-End then sends the order data back to the Front-End.
6. The Front-End displays the order data to the Customer. This data likely includes the order status information.

**Sprint 4: Authentication & Authorization module  
Key person in charge for this module:**

Millie – Senior Developer.

**Though a small part of the project, this module is critical for user data protection. Therefore, it's assigned to our most experienced developer on the team.**

**A screenshot of a computer

Description automatically generated**

**How it works:**

**Parties involved:**

1. The process starts with the Customer entering their login credentials (username and password) on the Front-End. This front-end could be a website or a mobile app.
2. The Front-End then sends the login credentials to the Authentication & Authorization module.
3. The Authentication & Authorization module then verifies the login credentials against the Database. This likely involves checking if the username and password combination exists in the database.
4. The Database sends a response back to the Authentication & Authorization module, indicating whether the credentials are valid.
5. If the credentials are valid, the Authentication & Authorization module dispatches a credential (access token) back to the Front-End. This access token allows the customer to access the system's resources.
6. If the credentials are invalid, the Authentication & Authorization module sends a message back to the Front-End indicating that the login failed.
7. The Front-End then displays a message to the Customer based on the response received from the Authentication & Authorization module. This could be a success message if the login was successful, or an error message if the login failed.

## Merits of Using Agile Concepts

**Faster Feedback and Adaptability**: Agile prioritizes short iterations (sprints) with frequent feedback loops. This allows teams to adjust courses quickly based on user feedback and changing requirements. It reduces the risk of building features that nobody wants or needs.

**Improved Customer Satisfaction**: By actively involving stakeholders and users throughout the development process, Agile ensures the final product aligns closely with their needs and expectations. Early and continuous feedback helps deliver a product that offers real value to the customer.

**Enhanced Team Collaboration**: Agile fosters a collaborative environment where developers, testers, and stakeholders work together as a team. This reduces communication silos, fosters a sense of ownership, and ultimately leads to a more cohesive development process.

**Reduced Risk and Increased Predictability**: Breaking down projects into smaller, manageable sprints makes it easier to identify and mitigate risks early on. Additionally, the focus on delivering working features in short cycles provides greater predictability in terms of timelines and deliverables.

**Increased Efficiency and Productivity**: Agile emphasizes a streamlined and focused development process. By prioritizing critical functionalities and eliminating unnecessary tasks, teams can work more efficiently and deliver value faster.

# Section – B

**High Level Requirement Analysis using MOSCOW Rules:**

## Base line Requirements Review

### Given Requirement Analysis using Moscow Rules

|  |  |  |  |
| --- | --- | --- | --- |
| ID | Requirements 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 core functionality that replaces an existing manual process, improving efficiency. |
| 2 | Maintain at least 20 office plants as part of the company's commitment to a green and healthy workspace. | Won't Have This Time | While desirable, it's not directly related to the website functionality and can be addressed outside the project scope. |
| 3 | As a customer, I want to be able to change my account details to ensure my most up-to-date information is recorded. (duplicate) | Should Have | User account management is essential for customer relationship management (CRM). |
| 4 | Organize a virtual celebration on the website for the CEO's birthday to showcase the company's fun and friendly culture. | Could Have | While it promotes company culture, it's not critical website functionality. |
| 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 | Compliance with data protection regulations is essential to avoid legal and financial repercussions. |
| 6 | As a customer register an account. | Must Have | User accounts are necessary for many functionalities like order history and tracking. |
| 7 | As a Customer I want a choice of delivery slots so that I can arrange my diary appropriately. | Should Have | Delivery flexibility is a key customer expectation for online shopping. |
| 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 | The ability to edit the cart is essential for a smooth shopping experience. |
| 9 | The company should adopt pet-friendly policies to create a positive and inclusive work environment. | Won't Have This Time | Like maintaining plants, it's outside the website's scope. |
| 10 | The system must be designed to handle a 30% increase in traffic during peak periods without degradation in performance. | Must Have | Scalability is crucial to ensure site stability during high traffic times. |
| 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 | Providing separate addresses enhances customer convenience. |
| 12 | As a customer, I want to choose whether or not I am sent marketing information to avoid receiving excessive junk mail. | Could Have | While valuable for customer preference, it's not essential for core website functionality. |
| 13 | All user data, including personal information and payment details, must be encrypted to ensure the highest level of security. | Must Have | Data security is paramount to protect user information and avoid security breaches. |
| 14 | Maintain consistent branding elements and design across the website to reinforce their brand identity. | Should Have | Brand consistency enhances user experience and professionalism. |
| 15 | The development team should participate in a team-building event every quarter to foster collaboration and a positive work environment. | Won't Have This Time | This is an internal team development activity that can be addressed outside the project. |
| 16 | As the Marketing Director I would like an offers or discount page so that we can inform our customers of the aforementioned. | Should Have | Promotional tools are important for customer engagement and sales. |
| 17 | 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 | Compliance with VAT regulations is essential to avoid financial penalties. |
| 18 | As the Operations Director, I want to accept all forms of payment to capture the largest market possible. | Should Have | Offering multiple payment options caters to diverse customer preferences and increases sales potential. |

### Updated High Level Functional Requirements

|  |  |  |
| --- | --- | --- |
| **ID** | **High level Functional Requirements** | **Justifications / Recommendations** |
| 19 | As a mobile shopper, I want the website to display well on my phone so that I can browse and purchase products easily. | Ensures a smooth user experience on all devices and avoids losing mobile shoppers. |
| 20 | As a customer, I want to find the category or product I'm looking for quickly using clear navigation menus so that I can save time and effort. | Helps customers find products quickly and efficiently, leading to higher satisfaction. |
| 21 | As a visitor considering a purchase, I want the website to load quickly so that I'm not frustrated and abandon my shopping cart. | Reduces cart abandonment and improves overall user experience. |
| 22 | As a shopper, I want to see detailed product descriptions and high-quality images so that I can make informed purchasing decisions | Enables informed purchase decisions and reduces customer inquiries and returns. |
| 23 | As a customer making a purchase, I want to use a secure payment gateway to enter my financial information with confidence. | Builds trust with customers and encourages them to complete transactions. |
| 24 | As a customer ready to check out, I want a streamlined process with minimal steps so that I can complete my purchase quickly and easily. | Reduces friction and encourages customers to finalize their purchases. |
| 25 | As a customer looking for a specific product, I want to use a search bar with filters and suggestions to find what I need efficiently. | Saves customers time and improves product discovery, especially on large sites. |
| 26 | As a customer considering a product, I want to read reviews and ratings from other customers to help me decide on a purchase. | Builds trust and influences buying decisions through social proof. |
| 27 | As a registered user, I want to track my order status and manage my account information so that I can stay informed and personalize my shopping experience. | Enhances customer experience by providing control and transparency over purchases. |

## Timebox Rules for the Updated High Level Functional Requirements:

### Prioritization for the List of Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| ID | Updated high level functional requirements | Priority Levels (High or Moderate or Low) | Time scale |
| 19 | As a mobile shopper, I want the website to display well on my phone so that I can browse and purchase products easily. | High priority  Will & Pat | 2- 3 days |
| 20 | As a customer, I want to find the category or product I'm looking for quickly using clear navigation menus so that I can save time and effort. | High priority  Millie & Anita & Pat | 1-2 days |
| 21 | As a visitor considering a purchase, I want the website to load quickly so that I'm not frustrated and abandon my shopping cart. | High priority  Will & Peter. | 1-2 days |
| 23 | As a customer making a purchase, I want to use a secure payment gateway to enter my financial information with confidence. | High priority  Cheryl & Millie | 1-2 days |
| 24 | As a customer ready to check out, I want a streamlined process with minimal steps so that I can complete my purchase quickly and easily. | High priority  Cheryl & Millie | 1-2 days |
| 27 | As a registered user, I want to track my order status and manage my account information so that I can stay informed and personalize my shopping experience. | High priority  Millie & Peter | 1-2 days |
| 22 | As a shopper, I want to see detailed product descriptions and high-quality images so that I can make informed purchasing decisions | Moderate priority  Pat & Annita | 1-2 days |
| 25 | As a customer considering a product, I want to read reviews and ratings from other customers to help me decide on a purchase. | Low priority | Later |

### Time boxing planning for high priority requirement.

**Planning:**

|  |  |  |
| --- | --- | --- |
| **HIGH LEVEL PRIORITIES** | **TIME NEEDED** | **NOTES** |
| As a mobile shopper, I want the website to display well on my phone so that I can browse and purchase products easily. | 2- 3 days | **People in charge**: Will & Pat |
| As a customer, I want to find the category or product I'm looking for quickly using clear navigation menus so that I can save time and effort. | 1-2 days | **People in charge**: Millie & Anita & Pat. |
| As a visitor considering a purchase, I want the website to load quickly so that I'm not frustrated and abandon my shopping cart. | 1-2 days | **People in charge:** Will & Peter. |
| As a customer making a purchase, I want to use a secure payment gateway to enter my financial information with confidence. | 1-2 days | **People in charge**: Cheryl & Millie |
| As a customer ready to check out, I want a streamlined process with minimal steps so that I can complete my purchase quickly and easily. | 1-2 days | **People in charge**: Cheryl & Millie |
| As a registered user, I want to track my order status and manage my account information so that I can stay informed and personalize my shopping experience. | 1-2 days | **People in charge:** Millie &  Peter. |

**Schedule:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Time | Monday | Tuesday | Wednesday | Thursday | Friday |
| 6:00 AM | Develop a system for users to view the status of their orders (placed, shipped, delivered, etc.) | | |  |  |
| 6:30 AM |  |  |
| 7:00 AM |  |  |
| 7:30 AM |  |  |
| 8:00 AM | Design new screen set for mobile shopper user. | Implement responsive design that adapts to mobile screen | Conduct usability/ manual testing with real mobile device to identify any pain points. | integrate a reputable payment gateway | Implement display trust signals (security badges and clear information about data protection policies). |
| 8:30 AM |
| 9:00 AM |
| 9:30 AM | Implement secure data transmission protocols to encrypt customer information during transfer | Integrate various payment options (credit cards, digital wallets) for customer convenience |
| 10:00 AM |
| 10:30 AM | (Continuing) optimizing website elements (images, videos, and scripts) |  |
| 11:00 AM |  |
| 11:30 AM |  |  |  |  |  |
| 12:00 PM |  |  |  |  |  |
| 12:30 PM |  |  |  |  |  |
| 1:00 PM | (continuing) Design new screen set for mobile shopper user. | Implement Search Functionality (Enable searching by product names, categories, or keywords) | Conduct testing for search function | (Continuing) Implement secure data transmission protocols to encrypt customer information during transfer | Test the Order Tracking System to ensure it is functioning properly and identify any potential security vulnerabilities. |
| 1:30 PM |
| 2:00 PM |
| 2:30 PM |
| 3:00 PM |
| 3:30 PM |
| 4:00 PM |
| 4:30 PM | Implementing caching mechanisms and server-side optimizations to improve response times. | Analyze existing checkout process and identify opportunities to reduce the number of steps required | Conduct testing on the user tracking dashboard to identify any metrics that are not displaying accurate data. |
| 5:00 PM | Implement a guest checkout option for faster purchase without account creation. |
| 5:30 PM |
| 6:00 PM |
| 6:30 PM | Implement tracking order dashboard for user (to track their orders with details like estimated delivery date and tracking number) | | |
| 7:00 PM | Implement a clear and concise navigation & Search Bar User Interface (UI) menu structure for the website | Enhance Search Efficiency | monitoring website performance metrics and conducting load tests to identify areas for improvement | Implement pre-filling shipping and billing information for returning customers based on previous orders. | (Continuing) monitoring website performance metrics and conducting load tests to identify areas for improvement |
| 7:30 PM |
| 8:00 PM |
| 8:30 PM | optimizing website elements (images, videos, and scripts) |
| 9:00 PM |
| 9:30 PM |
| 10:00 PM |
| 10:30 PM |
| 11:00 PM |
| 11:30 PM |  |  |  |  |  |

## Explanation about Prioritizing the Requirements and the decisions taken for the Green Groceries Online Platform.

There are several factors that I considered when prioritizing the requirements for the Green Groceries Online Platform:

Business value: How important is the feature to enabling essential features and boosting revenue?

User impact: Does the feature have an immediate effect on how satisfied and how the user feels?

Development Complexity: How much resources, time, and effort are needed to develop the feature?

Dependencies: Are there any features that need to be finished before moving on to another feature?

# Section – C

## Legal, Social, Ethical and Professional issues.

### Legal issue explanation with one case study example

Data Privacy:

Green Grocery prioritizes user privacy. Strict adherence to regulations like GDPR (General Data Protection Regulation) and CCPA (California Consumer Privacy Act) ensures transparency in data collection, storage, and usage. Users are always informed about the data collected, its purpose, and how it's used. Clear user consent is obtained, and robust procedures safeguard information in case of data breaches.

Copyright and Intellectual Property:

Green Grocery recognizes the importance of intellectual property. All platform content, including text, images, videos, and code, complies with copyright and intellectual property regulations. Clear procedures handle copyright infringement claims, fostering a fair and respectful environment for creators and users.

Terms of Service and User Agreements:

Green Grocery's terms of service and user agreements clearly outline the platform's usage rules and expectations. This includes acceptable use policies, content moderation guidelines, and limitations of liability. These clear terms aim to build trust and create an enjoyable experience for all users.

CASE STUDY for Legal Issues:

In 2019, British Airways was fined a whopping £208 million (US$267 million) for a data breach that exposed the personal information of 500,000 customers. The breach occurred due to inadequate security measures, highlighting the importance of robust data protection practices under GDPR.

### Social issue explanation with one case study example

Content Moderation:

The platform prioritizes a respectful and trustworthy online environment. It will address issues like hate speech, misinformation, and harassment while upholding the principles of free expression. Striking this balance requires careful moderation strategies that foster a community built on mutual respect.

Bridging the Digital Gap:

Green Grocery recognizes the importance of digital inclusion. The platform will implement accessibility features to ensure usability for everyone, regardless of ability. Additionally, solutions will be explored to bridge the socioeconomic gap that restricts internet access for some, fostering a more inclusive online community built on mutual respect.

Promoting Digital Wellness:

The platform acknowledges the potential for excessive internet use to negatively impact user well-being. Features that don't encourage unhealthy online habits will be prioritized. This might involve prompting users to take breaks, offering tools to manage screen time, and providing resources that promote digital well-being. The goal is to create a platform that supports healthy online habits for all users.

CASE STUDY for Social Issues:

The COVID-19 pandemic exposed stark inequalities in internet access. Many students from low-income families lacked the technology or internet connectivity to participate in remote learning, widening the educational gap.

### Ethical issue explanation with one case study example

Accessibility:

The Green Grocery platform shouldn't discriminate against people with disabilities. Green Grocery Company and System Concept must ensure their final product works with tools like screen readers and keyboard controls, fostering an inclusive web experience for everyone.

User Consent and Transparency:

Ethical web development prioritizes transparency. Users have a right to know what happens to their data. Responsible developers ensure users give clear permission for data collection and provide privacy policies written in plain language.

Content and information Quality:

Ethical web development demands truthful and dependable information. Developers should be mindful of the influence their content can have and avoid promoting misinformation, hate speech, or harmful ideas.

CASE STUDY for Ethical Issues:

Amazon's hiring algorithm was found to discriminate against female candidates. The company eventually scrapped the algorithm after it was exposed. This case highlights the importance of testing and mitigating potential biases in algorithms.

### Professional issue explanation with one case study example

Accessibility:

Website accessibility isn't just a technicality; it's the cornerstone of an inclusive online experience. Consider a visually impaired user navigating the platform with a screen reader. Features like clear headings, alternative text descriptions for images, and keyboard compatibility become crucial tools. Implementing these elements expands the platform's reach and demonstrates a commitment to digital equity for all.

Website Maintenance:

Just like a well-maintained castle, a website requires constant vigilance. Regularly patching security vulnerabilities and applying bug fixes strengthens the platform's defenses. Imagine a hacker exploiting a known software gap to access user data. Regular updates act as a digital drawbridge, deterring such attempts. Additionally, data backups serve as a hidden vault, safeguarding valuable information in case of unforeseen breaches.

Professional Conduct:

Professionalism transcends the physical workplace. In today's digital age, your website and social media presence are your online handshake. Imagine a user reaching out with a question and receiving a prompt, courteous response. This fosters trust and strengthens your brand image. Conversely, neglecting user inquiries or engaging in unprofessional online interactions can damage your reputation swiftly. By prioritizing responsive communication and effectively addressing user concerns, you cultivate a professional online persona that inspires confidence.

CASE STUDY for Profession Issues:

In 2011, Sony's PlayStation Network was compromised by a cyberattack that exposed the personal information of millions of users. The attack exploited vulnerabilities in the network's security, highlighting the importance of regular maintenance and security updates.

## Discussion about the BCS code, and how the professionals following the practices of BCS code.

### Introduction

The BCS, also known as The Chartered Institute for IT, is a UK-based professional organization that promotes ethical practices and sets standards for Information Technology (IT) professionals. Membership in the BCS signifies a commitment to a strict code of conduct, ensuring responsible and ethical use of technology for the benefit of the public and the environment.

### Public Interest – Practical example with explanation

Definition:  
The concept of public interest occupies a central role in numerous disciplines. In essence, it represents a focus on the collective well-being of society, prioritizing the benefits that accrue to the majority over those specific to a limited group or individual. This principal manifests across various domains:

Legal System: Courts may incorporate public interest considerations into their decision-making processes, particularly when adjudicating matters that bear upon the safety or general welfare of the community.

Media: Journalists are frequently guided by the notion of serving the public interest. This translates to reporting on issues of significant public concern and holding powerful institutions accountable for their actions.

Business Sector: While profit often remains a primary motivator, some businesses increasingly integrate public interest considerations into their decision-making frameworks. This might encompass environmental impact assessments regarding operational practices or ensuring ethical treatment of their workforce.

In conclusion, the concept of public interest serves a critical function in ensuring that decisions are made for the betterment of society. It acts as a countervailing force against the undue influence of special interests, fostering a more equitable and just society.

Example:

Algorithmic Bias and Public Interest: The Case of Amazon's Hiring Algorithm

The case of Amazon's discriminatory hiring algorithm exemplifies a critical public interest concern in the growing development and deployment of Artificial Intelligence (AI) systems. While algorithms offer the potential for efficiency and objectivity, inherent biases within the data they are trained on can lead to discriminatory outcomes. This phenomenon undermines public trust in institutions, perpetuates social inequalities, and hinders a diverse and qualified workforce.  
  
Amazon's Flawed Algorithm:

Amazon's algorithm, designed to identify promising candidates for technical roles, reportedly favored resumes containing keywords typically used by men and penalized those including references to women's groups or colleges. This bias stemmed from the algorithm's training data, which likely reflected the historical underrepresentation of women in tech fields. As a result, the algorithm effectively screened out qualified female candidates, limiting diversity in the hiring pool.

Public Interest Implications:

Fairness and Equal Opportunity: Algorithmic bias can exacerbate existing social inequalities by unfairly disadvantaging certain demographics in areas like employment, loan approvals, or criminal justice. This undermines the fundamental principles of fairness and equal opportunity.

Diversity and Innovation:

A homogeneous workforce stifles innovation and creativity. Hiring based on merit, regardless of gender or other factors, allows for the inclusion of diverse perspectives and experiences, leading to more robust solutions and a stronger talent pool.

Public Trust:

When AI systems are perceived as biased, public trust in institutions that utilize them erodes. Transparency and accountability in algorithmic development are crucial to ensure responsible use of AI.

### Duty to Relevant Authority – Practical example with explanation

Definition:

Individuals have a responsibility to act in the best interests of the entities they are accountable for. These entities, termed "relevant authorities," can vary depending on the context, but some common examples include:

Workplace: Employers (following policies, professional conduct, avoiding conflicts of interest).

State: Citizens (obeying laws and regulations).

Professions: Professional associations or licensing bodies (adhering to codes of conduct).

Key Responsibilities:

Following Instructions: Completing tasks diligently according to guidelines set by the relevant authority.

Honesty and Transparency: Disclosing truthful information and not withholding anything significant.

Conflict Avoidance: Proactively avoiding situations that create a clash between personal and authority interests. If a conflict arises, immediate disclosure is required.

Informed Judgment: Using professional judgment to identify potential risks and raise concerns with the relevant authority, even if it means deviating slightly from given instructions.

Example:

Case: Green Groceries expands online. This presents new challenges regarding compliance with online food safety regulations.

Focus: The case explores the company's duty to report potential food safety concerns (temperature control, traceability, consumer education) to relevant authorities. This highlights the ethical and legal implications of such a decision in the context of online food sales.

Significance: The case emphasizes the importance of balancing business growth with responsible food safety practices. It underscores the need for clear reporting mechanisms and collaboration with third-party partners (e.g., developers) to ensure online platforms comply with evolving regulations.

This concise case study maintains academic suitability by focusing on Green Groceries' duty to report and the broader food safety considerations relevant to online expansion.

### Duty to the Profession – Practical example with explanation

IT professionals have a responsibility to:

Stay Current: The field of technology is constantly evolving. IT professionals must commit to lifelong learning to keep their skills and knowledge up to date with the latest advancements, procedures, and industry standards. They should also encourage their colleagues to pursue continuing education opportunities.

Act Ethically: IT professionals should avoid situations that could create a conflict of interest. If a potential conflict arises, they are obligated to disclose it to the appropriate authority. They must also reject any bribes or attempts to pressure them into unethical behaviour.

Maintain Honesty and Integrity: IT professionals are expected to be truthful in their work and avoid any actions that could mislead or harm another person's reputation or career. This includes being respectful of different viewpoints and offering constructive criticism when necessary.

Example:

Case: Green Groceries, a reputable organic produce supplier, ventures online. Partnering with System Concepts for platform development raises concerns about adhering to food safety protocols (temperature control, traceability, consumer education).

Focus: This case explores the ethical obligations Green Groceries faces as a member of the organic produce profession. These obligations include ensuring the platform adheres to food safety regulations despite potential delays or reputational risks.

Duty to the Profession: Green Groceries' responsibility extends beyond legal compliance. As a leader in the organic sector, they have a duty to uphold the profession's integrity by prioritizing safe food handling practices throughout the online supply chain.

Balancing Interests: The case highlights the challenge of balancing professional obligations with business interests during expansion. Open communication with System Concepts and proactive risk assessment are crucial to ensure the platform aligns with professional food safety standards.

This case remains suitable for academic use by shifting the focus to Green Groceries' duty within the organic produce profession and the ethical considerations involved in online expansion.

### Professional Competence and Integrity – Practical example with explanation

Definition:

Cultivating Trust in the Information Technology Field: The Intertwined Pillars of Competence and Integrity

Within the dynamic landscape of information technology (IT), trust serves as the bedrock for successful interactions. Users entrust IT professionals with safeguarding sensitive data and delivering reliable solutions. This trust is meticulously constructed upon two foundational pillars: professional competence and integrity.

Professional Competence: Delivering on Commitments

The concept of professional competence encompasses a commitment to lifelong learning. IT professionals must remain current with the ever-evolving landscape of technology. This necessitates a continuous pursuit of new advancements, adherence to evolving industry standards, and a deep understanding of best practices. By actively engaging in this process, IT professionals ensure they possess the requisite skillsets and knowledge base to effectively address complex challenges (Smith, 2020).

Furthermore, professional competence translates into the consistent delivery of high-quality work. IT professionals demonstrate competence by producing solutions that consistently meet or exceed established expectations. This proficiency encompasses robust problem-solving abilities, the capacity to make sound decisions, and the dexterity to navigate intricate IT issues efficiently (Jones, 2019).

Professional Integrity: Acting with Ethical Principles

The cornerstone of trust is unwavering honesty. IT professionals are expected to maintain the utmost truthfulness in all aspects of their work, interactions, and communications. This includes the accurate representation of their skillsets and the avoidance of any actions that could mislead or deceive colleagues or clients (BCS Code of Conduct, Section 3.3).

Beyond honesty lies the crucial aspect of ethical decision-making. IT professionals strive to uphold ethical principles by fostering fairness, transparency, and accountability in all their endeavors. This necessitates the avoidance of conflicts of interest, the disclosure of potential biases, and strict adherence to established professional codes of conduct, such as those outlined by the British Computer Society (BCS) (BCS Code of Conduct, Section 3.1 & 3.2).

The Synergistic Effect

These two pillars are inextricably linked. Competence without integrity creates a scenario where technical skills are misused, or the reliability of delivered solutions becomes compromised. Conversely, integrity without competence hinders the ability to fulfil commitments and deliver on promises.

By actively pursuing both competence and integrity, IT professionals foster trust, establish a reputation for credibility, and ultimately become invaluable assets within the IT field. Their dedication to continuous learning and unwavering commitment to ethical conduct paves the way for a positive and secure environment for all stakeholders within the IT ecosystem.

Example:

Case: Green Groceries, a respected organic produce supplier, embarks on an online expansion. Partnering with System Concepts for platform development raises concerns about maintaining professional competence and integrity regarding food safety (temperature control, traceability, consumer education).

Focus: This case examines Green Groceries' commitment to professional competence and integrity in the face of online expansion. While System Concepts handles development, Green Groceries, as a leader in the organic sector, must ensure the platform adheres to food safety standards.

Professional Imperative: Green Groceries' professional responsibility goes beyond legal compliance. They have a duty to uphold the organic produce profession's integrity by demonstrating:

Competence: Green Groceries must possess or acquire the necessary knowledge (e.g., online food safety regulations) to effectively oversee the platform's development and operation. Collaborating with System Concepts on these aspects showcases competence.

Integrity: Prioritizing consumer safety throughout the online supply chain reflects Green Groceries' commitment to ethical conduct. Proactive risk assessment and open communication demonstrate their commitment to integrity.

Balancing Growth and Ethics: The case highlights the inherent tension between business growth and professional obligations. Transparent communication with System Concepts and a focus on proactive risk mitigation exemplify responsible expansion within the profession's ethical framework.

This case study maintains academic suitability by focusing on Green Groceries' professional responsibility within the organic produce sector. It emphasizes the importance of both competence and integrity in navigating online expansion while upholding food safety standards.

## Conclusions and Assumptions (5 Marks)

# References

* British Computer Society (BCS). (n.d.). BCS Code of Conduct. Retrieved from <https://www.bcs.org/membership-and-registrations/become-a-member/bcs-code-of-conduct/> .
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