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| **COMP1787 (2023/2024)** | **Requirements Management** | **Contribution: 100% of course** |
| **Module Leader:**  **Dr. Aditi Rawal** | **Coursework Term 2 (collabs)** | **Deadline Date: TBC** |
| **This coursework will be marked anonymously YOU MUST NOT PUT ANY INDICATION OF YOUR NAME IN YOUR SUBMISSION ONLY YOUR ID** | | |
| This coursework should take an average student who is up to date with tutorial work approximately 50 hours | | |
| **Learning Outcomes:**   1. Analyse and compare current approaches to requirements management within a development environment. 2. Assess the impact of stakeholders and organisational culture on the development of effective requirements and system development. 3. Relate issues associated with risk, quality, and Legal/Social/Ethical/Professional (LSEPI) to a practical scenario. 1 Analyse and compare current approaches to requirements management within a development environment. 2 Assess the impact of stakeholders and organisational culture on the development of effective requirements and system development. 3 Relate issues associated with risk, quality, and Legal/Social/Ethical/Professional (LSEPI) to a practical scenario. 1 Analyse and compare current approaches to requirements management within a development environment. 2 Assess the impact of stakeholders and organisational culture on the development of effective requirements and system development. 3 Relate issues associated with risk, quality, and Legal/Social/Ethical/Professional (LSEPI) to a practical scenario. | | |
| **Plagiarism** is presenting somebody else’s work as your own. It includes copying information directly from the Web or books without referencing the material; submitting joint coursework as an individual effort; copying another student’s coursework; stealing or buying coursework from someone else and submitting it as your own work.  Suspected plagiarism will be investigated and if found to have occurred will be dealt with according to the procedures set down by the University.  **All material copied or amended from any source (e.g. internet, books) must be referenced correctly according to the reference style you are using. Your work will be submitted for electronic plagiarism checking.  Any attempt to bypass our plagiarism detection systems will be treated as a severe Assessment Offence.** | | |

**Coursework Submission Requirements**

* An electronic copy of your work for this coursework should be fully uploaded by 11.30pm (local time) on the Deadline Date.
* The last version you upload will be the one that is marked.
* For this coursework you must submit a single PDF document. In general, any text in the document must not be an image (i.e. must not be scanned) and would normally be generated from other documents (e.g. MS Office using "Save As .. PDF").
* There are limits on the file size (see the relevant course Moodle page).
* Make sure that any files you upload are virus-free and not protected by a password or corrupted otherwise they will be treated as null submissions.
* You must NOT submit a paper copy of this coursework.
* All coursework must be submitted as above. Under no circumstances can they be accepted by academic staff.

The University website has details of the current Coursework Regulations, including details of penalties for late submission, procedures for Extenuating Circumstances, and penalties for Assessment Offences. See: <https://www.gre.ac.uk/policies/undergraduate-and-postgraduate-taught>

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**Detailed Specification**

This coursework must be undertaken individually. To start working on the assigned tasks, carefully read the attached case study. Then, complete the given deliverables according to the instructions below.

**Important instructions**

**Avoid Copying:**

* Don't use other students' previous work as a template. It will be detected and could lead to lower grades or even zero marks.
* Refrain from including content from classmates or other unauthorized sources. This can result in a deduction of marks.

**Focus on Relevant Information:**

* While the case study is crucial, don't copy the entire thing into your report. Only include the sections you've personally worked on.

**Deliverables**

There are **three** sections to this coursework. Make sure that you complete all sections.

**Assessment Criteria**

**Section A** – 20% of the marks

**Section B** – 40% of the marks

**Section C** – 30% of the marks

**Conclusion and Assumptions –** 5%

**Use professional standard and formatting, professional writing style, language, and use Harvard style of referencing. –** 5%

# **Case Study: "Green Groceries Online Platform"**

Green Groceries is a medium-sized company specializing in organic and locally sourced grocery products. The company has gained a solid reputation over the past five years, primarily through collaborations with local farmers and eco-conscious suppliers. With a desire to expand its market reach and make sustainable products more accessible, Green Groceries aims to launch an online platform within the next three months.

Green Groceries doesn't have an in-house software development department and prefers to outsource its software projects. The company has experienced challenges in the past with traditional 'waterfall' projects, and after careful consideration, they have chosen System Concepts (SC) to develop their online platform using SCRUM and Agile concepts.

**Green Groceries Personnel:**

CEO and Founder - The visionary behind the project and the primary decision-maker. Committed to the project's success and actively involved in the planning and execution.

Financial Controller - Interested in the project, with a tendency to strive for perfection. Despite a busy schedule, aims to participate actively in meetings.

Operations Manager - An experienced professional with a background in Agile software development from a previous role. Responsible for the logistics and distribution teams and willing to allocate resources for the project.

Chief Accountant - Represents the Financial Controller in meetings and has the authority to make decisions on their behalf. Well-versed in the company's various departments.

Logistics Manager - Unable to commit directly but willing to empower a representative from the logistics team to make decisions on their behalf.

Marketing Manager - Engaged in the project, certified as a Workshop Facilitator and Agile Project Manager. Willing to contribute insights from a marketing perspective.

**About System Concepts:**

System Concepts, a reputable Agile software development consultancy, will be responsible for implementing the online platform. The company follows the DSDM Atern framework and assigns dedicated teams to each project. They can work on-site or off-site, offering flexibility in project execution.

**System Concepts Personnel:**

Millie - A skilled programmer with expertise in web development and effective communication skills.

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

Anita - Possesses strong web development skills and is also involved in volunteer work for the homeless.

Cheryl - Experienced as a Team Leader in Agile development projects, well-versed in web development.

Pat - Available part-time throughout the project, with a good understanding of web development and testing.

The collaboration between Green Groceries and System Concepts aims to deliver a robust online platform that aligns with the company's values of sustainability and accessibility. The Agile approach is expected to address the challenges faced in previous projects, providing flexibility and responsiveness to changing requirements throughout the development process.

Table 1: Base lined list of requirements for the Web site

|  |  |
| --- | --- |
| **ID** | **Requirements** |
| **1** | As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system. |
| **2** | Maintain at least 20 office plants as part of the company's commitment to a green and healthy workspace. |
| **3** | As a customer, I want to be able to change my account details to ensure my most up-to-date information is recorded. |
| **4** | Organize a virtual celebration on the website for the CEO's birthday to showcase the company's fun and friendly culture. |
| **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. |
| **6** | As a customer register an account. |
| **7** | As a Customer I want a choice of delivery slots so that I can arrange my diary appropriately. |
| **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. |
| **9** | The company should adopt pet-friendly policies to create a positive and inclusive work environment. |
| **10** | The system must be designed to handle a 30% increase in traffic during peak periods without degradation in performance. |
| **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. |
| **12** | As a Customer I want to be able to change my account details so that my most up to date details are recorded. |
| **13** | As an Order Handling Clerk I want to use the Web site to process telephone purchases so that I can stop using the paper-based system. |
| **14** | As a customer, I want to choose whether or not I am sent marketing information to avoid receiving excessive junk mail. |
| **15** | All user data, including personal information and payment details, must be encrypted to ensure the highest level of security. |
| **16** | Maintain consistent branding elements and design across the website to reinforce their brand identity. |
| **17** | The development team should participate in a team-building event every quarter to foster collaboration and a positive work environment. |
| **18** | As the Marketing Director I would like an offers or discount page so that we can inform our customers of the aforementioned. |
| **19** | As the Chief Accountant I want to the Web site to adhere to legislation regarding VAT so we are not hit with a hefty fine. |
| **20** | As the Operations Director, I want to accept all forms of payment to capture the largest market possible. |

**Section A – Management Summary (20% of the marks)**

The case study tells us that the Management Director has decided to recommend one of the approaches associated with Agile Methods to the team of System Concepts.

Produce a management summary explaining whether Agile framework would be an appropriate method to use for the project. Outline any advantages/drawbacks that you perceive. Give examples from the Case Study to support your answer.

**Your answer should be in the region of 750-1000 words.**

**Section B – High level requirements analysis and MoSCoW prioritisation (40% of the marks)**

Table 1 of the case study provides details of a Facilitated Workshop session run by the System Concepts consultants and attended by a number of the key staff in the organisation of **Green Groceries.** At the end of the session a list of ‘Base line requirements’ was produced.

**This list requirements has some inappropriate requirements and needs to be sorted out to meet the criteria for a ‘high level requirement’ - *remember, a high-level requirement should be a functional requirement that can be delivered to the user as part of an incremental approach using a timebox (or number of timeboxes).***

Using the information given **throughout the case study** to help you, complete the following:

B1. Review the ‘base line requirements’ list given in table 1.

B1.1 Identify any of the requirements that you feel are not appropriate to be considered at high level requirements, giving your reasons for this.

B1.2 Rewrite, and add to, the list to end up with a total of 8-10 ‘updated’ high level functional requirements that you feel are required for building the system. Briefly justify the need for each of your high-level requirements against information you have gathered from the case study.

**Your answer to B1 should be in the region of 500-750 words**

B2. Use the MoSCoW/Timebox rules to prioritise the requirements in your updated ‘high level requirements list’.

B2.1. Produce an updated ‘high level requirements list’ clearly showing the prioritisation you have given to each of your requirements.

B2.2 Explain how you set about prioritising the requirements and justify your reasons for the decisions that you made.

**Your answer to B2 should be in the region of 500 -750 words.**

**Section C – Legal, Social, Ethical and Professional issues (30% of the marks)**

C1. **Green Groceries** personnel needs to start considering Legal, Social, Ethical and Professional Issues (LSEPI) in relation to its day-to-day operations.Produce a management summary identifying Legal, Social, Ethical and Professional issues that a system developer for the company would need to be aware of. Provide **one** practical examples from the case study that relate to **each** aspect of LSEPI identified.

**Your answer to C1 should be in the region of 500 words**

C2.Produce a management summary outlining the purpose of a professional body, such as the British Computer Society. As a part of this, provide a practical example for each of the **four** BCS Code of Conduct sections to illustrate how the professional body may guide the choices and decisions of their members.

**Your answer to C2 should be in the region of 500 words.**

**Conclusion and Assumptions – 5% (200 - 300 words approximately)**

**Harvard style and English proficiency – 5%**

**Grading Criteria**

|  |  |
| --- | --- |
| 80% + | * An **outstanding attempt** demonstrating a genuinely unique and a deep understanding of the requirements of the assignment. * Demonstrate an outstanding understanding of the issues surrounding the application of Agile based methods to a development environment. * Demonstrate exceptional understanding of high-level requirements analysis and MoSCoW prioritisation. * Apply the MoSCoW rules thoroughly, demonstrating an outstanding understanding of the need for incremental delivery. * Demonstrate an outstanding understanding of the DPA principles and the practical role of the Data controller. * Demonstrate an outstanding understanding of the role of the professional and, in particular, the BCS code of conduct. * A deeply impressive demonstration of research, organisation, initiative, analysis, and application, worthy of publication with the required referencing. |
| 70%- 79% | * An **excellent** attempt demonstrating a clear understanding of the requirements of the assignment. * Demonstrate a thorough understanding of the issues surrounding the application of Agile based methods to a development environment. * Demonstrate a thorough understanding of high-level requirements analysis and MoSCoW prioritisation. * Apply the MoSCoW rules sensibly, demonstrating a clear understanding of the need for incremental delivery. * Demonstrate a thorough understanding of the DPA principles and the practical role of the Data controller. * Demonstrate a thorough understanding of the role of the professional and, in particular, the BCS code of conduct. * Bring original thought to the argument; |
| 60%- 69% | * Demonstrate a **good to very good understanding** of the issues surrounding the application of Agile based methods to a development environment. * Demonstrate a good understanding of high-level requirements analysis and MoSCoW prioritisation. * Apply the MoSCoW rules sensibly, demonstrating a good understanding of the need for incremental delivery. * Demonstrate a good understanding of the DPA principles and the practical role of the Data controller. * Demonstrate a good understanding of the role of the professional and, in particular, the BCS code of conduct. * Bring some original thought to the argument; |
| 50%- 59% | * A **fair attempt** demonstrating an effective understanding of the assignment. * Demonstrate understanding of some of the issues surrounding current development methodology approaches. * Demonstrate understanding of some of the issues surrounding the application of Agile based methods to a development environment. * Demonstrate understanding of some the issues relating to high level requirements analysis and MoSCoW prioritisation. * Apply the MoSCoW rules in a sensible way demonstrating some understanding of the need for incremental delivery. * Demonstrate an understanding of the DPA principles and the practical role of the Data Controller. * Demonstrate an understanding of the role of the professional and, in particular, the BCS code of conduct. * Identify some practical examples relating to the above |
| 40%- 49% | * Demonstrate a **basic understanding** of the issues surrounding the application of Agile based methods to a development environment. * Demonstrate a basic understanding of high-level requirements analysis and MoSCoW prioritisation. * Apply the MoSCoW rules in a basic way. * Demonstrate a basic understanding of the DPA principles and the practical role of the Data controller. * Demonstrate a basic understanding of the role of the professional and, in particular, the BCS code of conduct. |
| Below 39% | * Demonstrate a poor understanding of the issues surrounding the application of Agile based methods to a development environment. * Poor understanding of the requirements of the assignment. * Possibly some confusion and much irrelevant material. * Lack of clarity on the MoSCoW rules. * Demonstrate an inadequate understanding of the DPA principles and the practical role of the Data controller. * Demonstrate inadequate understanding of the role of the professional and, in particular, the BCS code of conduct. |

Green Groceries is a company specializing in organic products. The company has a solid reputation thanks to its partnership with local farmers and environmentally conscious suppliers. With the desire for the company to expand the market and strengthen the company's reputation. Green Groceries looks forward to having an online platform in the next three months. Green Groceries Ask us to build the foundation project. The implementation of the project they required the use of System Concepts (SC) for development.

Given the context of Green Groceries' plan to launch an online platform within a tight timeframe and their preference for flexibility and responsiveness, the Agile framework appears to be an appropriate method for the project. Agile methodologies, specifically SCRUM and DSDM Astern, align well with the project's objectives and the collaborative dynamic between Green Groceries and System Concepts.

The Agile framework presents a dynamic approach to software development, offering countless advantages that align perfectly with the goals of the Green Grocery Online Platform project. Agile's hallmarks of flexibility and responsiveness provide the ideal framework for navigating the complexity of modern digital solutions. With its iterative nature, Agile allows for adaptability in managing changes and absorbing new information, ensuring that the online platform remains relevant and relevant to evolving market trends and user preferences.

Furthermore, Agile's emphasis on stakeholder engagement fosters a collaborative environment in which the active participation of all stakeholders ensures that the project remains closely aligned with the Green Groceries' commitments to system accessibility and sustainability. Systems Concepts' dedication to Agile methods, including the Atern DSDM framework, fosters a team environment where diverse skills, including web development and Agile project management expertise, converge to solve solve common challenges.

One of the inherent strengths of Agile lies in incremental activities, which allow for the gradual implementation of system features. This not only supports risk management but also facilitates early risk detection and timely adjustments. Through a structured approach to continuous improvement, Agile methods encourage teams to reflect on their processes, identify areas for optimization, and make iterative changes to improve project performance and efficiency.

Furthermore, Agile promotes transparency and visibility throughout the development process, ensuring that stakeholders stay informed and engaged at every stage. By providing regular progress updates and evaluating work progress, Agile fosters a culture of trust and collaboration, allowing for more informed decision-making and alignment of expectations.

In essence, the Agile framework serves as the foundation for the successful implementation of the Green Grocery Online Platform project, empowering teams to overcome challenges, embrace change, and provide solutions. High-quality, user-cantered solutions that embody the values and aspirations of Green Grocery. Through a shared commitment to Agile principles, Green Grocery and System Concepts can chart a path towards innovation and excellence, ensuring the continued success and relevance of the industry. online platforms in a dynamic digital landscape.

However, Agile methodologies do come with inherent drawbacks that need careful consideration. One significant concern is the potential for scope creep due to the lack of clear boundaries and the continuous addition of features. In Agile projects, requirements evolve iteratively, which can sometimes lead to an expansion of the project scope beyond the initially defined boundaries. This expansion can impact timelines and budgets, as additional features may require more time and resources to implement. Moreover, stakeholder engagement and involvement are critical to the success of Agile initiatives. Stakeholder input must be regular and continuous to make decisions on time and keep the project moving forward. However, it can seriously inhibit development if important stakeholders—like the CEO, Financial Controller, or Operations Manager—become disengaged or missing from project discussions and decision-making processes.  
In my opinion, the Agile framework is well-suited for developing Green Groceries' online platform due to its flexibility, stakeholder engagement, and collaborative environment. The iterative nature of Agile ensures the company's vision is effectively realized and efficiently executed.

**For example**, the flexibility of the Agile framework is crucial for developing an online platform that is easily accessible to users. The platform must continually incorporate user requirements, feedback, and changes in project scope. With its iterative nature, the Agile framework enables continuous testing and frequent evaluation to quickly respond and adapt to market trends and user preferences and desires.

B.1.1

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| Requirements ID | Requirement Description | Stakeholder | FR/NFR | Reason |
| ROO1 | * Maintain at least 20 office plants as part of the company's commitment to a green and healthy workspace. | Operations Manager | NFR | While important for a healthy workspace, the number of office plants is a specific operational detail rather than a high-level functional requirement for the online platform. |
| ROO2 | * Organize a virtual celebration on the website for the CEO's birthday to showcase the company's fun and friendly culture. | CEO | NFR | Does not play any role in the operation of the sales website and does not provide support for customers in shopping. It may involve website features, but it doesn't contribute directly to the platform's core functionality. |
| ROO3 | * The company should adopt pet-friendly policies to create a positive and inclusive work environment. | Human Resources | NFR | This is a workplace policy and not a functional requirement for the online platform. |
| ROO4 | * The development team should participate in a team-building event every quarter to foster collaboration and a positive work environment. | Operations Manager | NFR | This is a workplace policy and not a functional requirement for the online platform, this is a team-building initiative rather than a high-level requirement for the online platform. |

B.1.2

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| --- | --- | --- | --- | --- |
| Requirements ID | Requirement Description | Stakeholder | FR/NFR | Reason |
| GE1 | As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system | Sale Staff | FR | Replace the paper-based system for the website allows managing items and invoices using a database, performing statistics, searching, sorting, and exporting data files if necessary. On the other hand, digitizing information helps manage data better, does not take up space or wastepaper, and limits waste in the environment. |
| GE2 | As a customer register an account | User | FR | Allowing customers to create accounts enables a personalized shopping experience by remembering preferences, viewing past orders, and managing payment options. This convenience aims to increase customer satisfaction and loyalty. |
| GE3 | All user data, including personal information and payment details, must be encrypted to ensure the highest level of security | Managing Director | NFR | In an era where data breaches are common, encrypting sensitive information is paramount to protecting our customers' privacy and maintaining their trust. This measure is also in compliance with global data protection regulations, safeguarding the company against potential legal issues. |
| GE4 | 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 | User | FR | Customers often require the flexibility to have orders delivered to locations other than their billing address, such as a friend's house or a workplace. Providing this option enhances convenience and accommodates varying customer needs, thereby improving the shopping experience. |
| GE5 | Separate Delivery and Invoice Addresses | User | FR | This flexibility caters to various customer scenarios, such as sending gifts directly to recipients or managing corporate purchases. It's a critical feature for accommodating the diverse needs of our customer base and enhancing the overall usability of the platform. |
| GE6 | Choice to Opt-In or Opt-Out of Marketing Information | User | FR | Giving customers control over receiving marketing communications respects their preferences and reduces the likelihood of spam, leading to a more positive relationship with the brand. It aligns with best practices for customer communication and privacy regulations. |
| GE7 | 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 | Chief Accountant | NFR | Non-compliance with VAT laws can result in significant fines and legal issues, negatively impacting the company's finances and reputation. Adhering to these regulations ensures financial integrity and compliance with the law, reflecting the company's commitment to ethical business practices. |
| GE8 | As the Operations Director, I want to accept all forms of payment to capture the largest market possible | Operations Director | FR | Accepting a wide range of payment methods, including credit cards, digital wallets, and bank transfers, meets the preferences and needs of a broad audience, removing barriers to purchase and enhancing customer convenience. It's strategic for market expansion and customer satisfaction. |
| GE9 | The system must be designed to handle a 30% increase in traffic during peak periods without degradation in performance |  | NFR | Preparing for increased traffic during sales, holidays, or marketing campaigns is essential to prevent system crashes, slow load times, and other |

B.2.1

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| --- | --- | --- | --- | --- |
| Num | Requirement ID | Requirement | Break tasks | Estimation (man.hour) |
| 1 | GE1 | As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system. | 1. Create tables in DB (60 man.hours) 2. Link and create a modal for inputting all info from telephone purchase (50 man.hours) 3. API for submission (100 man.hours) 4. Create route and method for data processing. (90 man.hours) | 300 |
| 2 | GE2 | As a customer register an account | 1. Design Registration Data Model (20man.hours)  2.Build Registration Form (10man.hours)  3.Construct Registration API (20man.hours).  4. Implement Account Confirmation Process (50man.hours) | 100 |
| 3 | GE3 | All user data, including personal information and payment details, must be encrypted to ensure the highest level of security | 1.Update Database Encryption Schemas (70man.hours).  2.Secure API Endpoints (70man.hours).  3.Automate Security Auditing (70man.hours).  4.Develop Data Encryption Monitoring (70man.hours) | 320 |
| 4 | GE4 | 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 | 1. Update Address Data Model (100man.hours).  2.Create Address Input Interface (100man.hours).  3.Develop Address Management API (100man.hours).  4.Integrate Address Verification (100man.hours) | 400 |
| 5 | GE5 | Separate Delivery and Invoice Addresses | 1. Modify the database schema to handle separate delivery and invoice addresses (60man.hours).  2.Design and implement UI components for entering and editing multiple addresses(60man.hours).  3.Build API endpoints to manage address creation, update, and retrieval (60man.hours).  4.Incorporate address verification services to ensure address validity (60man.hours). | 280 |
| 6 | GE6 | Choice to Opt-In or Opt-Out of Marketing Information | 1. Update the database to store marketing preference information(30man.hours).  2.Create interface options for users to select marketing preferences(30man.hours).  3.Develop an API to handle updating marketing preferences(50man.hours).  4.Ensure that the marketing system respects the user's preferences.(40man.hours) | 150 |
| 7 | GE7 | 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 | 1. Develop a system module to automatically calculate VAT based on legislation(30man.hours).  2.Build features for generating VAT reports and invoices that comply with legislation(30man.hours).  3.Establish a process for monitoring changes in VAT legislation(50man.hours).  4.Implement a routine for regular audits to ensure ongoing VAT compliance(40man.hours). | 150 |
| 8 | GE8 | As the Operations Director, I want to accept all forms of payment to capture the largest market possible | 1. Research and choose a range of payment gateways that cover various payment methods(40man.hours).  2.Implement and configure the selected payment gateways into the platform(40man.hours).  3.Build an API to process payments through different gateways(40man.hours).  4.Thoroughly test each payment method to ensure reliability and user-friendliness (60man.hours). | 180 |
| 9 | GE9 | The system must be designed to handle a 30% increase in traffic during peak periods without degradation in performance | 1.Evaluate the current infrastructure for capacity planning (40man.hours).  2.Architect a scalable infrastructure that can grow with increased traffic (40man.hours).  3.Set up caching mechanisms and load balancers to distribute and manage traffic(40man.hours).  4.Optimize the database configuration and queries for performance (40man.hours). | 160 |
| Summary |  |  | Total effort | 2040 |

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| --- | --- | --- | --- | --- | --- | --- |
| Requirement ID | Requirement | MoSCoW | Reason for prioritization | Effort | SUMMARY (man.hour) | Sum |
| GE1 | As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system. | Must have | Replace the paper-based system for the website allows managing items and invoices using a database, performing statistics, searching, sorting, and exporting data files if necessary. On the other hand, digitizing information helps manage data better, does not take up space or wastepaper, and limits waste in the environment. | 300 | 1120 | 55% |
| GE2 | As a customer register an account | Must have | Essential for personalizing experience and managing orders. It's fundamental to user engagement and security. | 100 |
| GE3 | All user data, including personal information and payment details, must be encrypted to ensure the highest level of security | Must have | In an era where data breaches are common, encrypting sensitive information is paramount to protecting our customers' privacy and maintaining their trust. This measure is also in compliance with global data protection regulations, safeguarding the company against | 320 |
| GE4 | 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 | Must have | Customers often require the flexibility to have orders delivered to locations other than their billing address, such as a friend's house or a workplace. Providing this option enhances convenience and accommodates varying customer needs, thereby improving the shopping experience. | 400 |
| GE5 | Separate Delivery and Invoice Addresses | Should have | This flexibility caters to various customer scenarios, such as sending gifts directly to recipients or managing corporate purchases. It's a critical feature for accommodating the diverse needs of our customer base and enhancing the overall usability of the platform. | 280 | 580 | 28% |
| GE6 | Choice to Opt-In or Opt-Out of Marketing Information | Should have | Giving customers control over receiving marketing communications respects their preferences and reduces the likelihood of spam, leading to a more positive relationship with the brand. It aligns with best practices for customer communication and privacy regulations. | 150 |
| GE7 | 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 | Should have | Non-compliance with VAT laws can result in significant fines and legal issues, negatively impacting the company's finances and reputation. Adhering to these regulations ensures financial integrity and compliance with the law, reflecting the company's commitment to ethical business practices. | 150 |
| GE8 | As the Operations Director, I want to accept all forms of payment to capture the largest market possible | Could have | Accepting a wide range of payment methods, including credit cards, digital wallets, and bank transfers, meets the preferences and needs of a broad audience, removing barriers to purchase and enhancing customer convenience. It's strategic for market expansion and customer satisfaction. | 180 | 340 | 17% |
| GE9 | The system must be designed to handle a 30% increase in traffic during peak periods without degradation in performance | Could have | Preparing for increased traffic during sales, holidays, or marketing campaigns is essential to prevent system crashes, slow load times, and other | 160 |

We arrange the priority levels according to priority levels and allocate time with the ratio Musthave: Shouldhave: Couldhave(55:28:17) with this ratio meeting MoSCoW rules with a ratio close to like Musthave: Should has: Could has ~ 60:20:20. The project can be finished on time as the estimation plan with the MoSCoW prioritization

I have utilized the Scrum framework to plan and develop systems. Scrum offers numerous benefits and is well-suited for system development. Thanks to its iterative nature, Scrum allows me to continuously inspect and adapt system functionalities. In summary, applying the Scrum methodology to system development has helped me complete the system on time and meet the requirements effectively.

A grid of a calendar

Description automatically generated with medium confidence

**Data Controller:** Data protection is a critical aspect of any business, especially when dealing with personal data collected from customers. In the context of the Green Groceries Online Platform, the Data Controller is responsible for overseeing the collection, storage, processing, and transfer of personal data in compliance with data protection laws, such as the Data Protection Act (DPA).

**Data Protection (DPA - Data Protection Act):** The Data Protection Act (DPA) outlines regulations for the processing of personal data and the rights of individuals regarding their data. It requires organizations to handle personal data responsibly, ensuring it is processed lawfully, fairly, and transparently.

**Data Privacy:** Data privacy refers to individuals' rights to control how their personal information is collected, used, and shared. It encompasses protecting sensitive data from unauthorized access, misuse, and breaches of confidentiality.

**What is a Data Controller?**

A Data Controller is an entity or individual that determines the purposes for which and the way personal data is processed. They are responsible for ensuring compliance with data protection laws and safeguarding individuals' rights over their data.

**Role of Data Controller in Green Groceries:** In the case of Green Groceries, the CEO and Founder, as the primary decision-maker, assumes the role of the Data Controller for the online platform project. The Data Controller's responsibilities include:

**Data Collection:** The Data Controller determines what data will be collected from customers during their interactions with the online platform. This may include personal information such as names, addresses, contact details, and payment information.

**Data Storage:** The Data Controller is responsible for determining how customer data will be stored securely to prevent unauthorized access or data breaches. This may involve implementing encryption methods, access controls, and secure server storage.

**Data Processing:** The Data Controller establishes procedures for how customer data will be processed, ensuring compliance with data protection principles. This includes defining who within the organization has access to the data and for what purposes.

**Data Transfer:** The Data Controller determines under what circumstances customer data may be transferred to third parties, such as payment processors or shipping providers. They must ensure that appropriate safeguards are in place to protect the data during transfer.

**Purpose for Data Usage:** The Data Controller defines the purposes for which customer data will be used, such as order fulfilment, customer support, or marketing communications. They must obtain consent from customers for each specific use of their data, where required by law.

**Example:** An example of a legal issue related to data protection in the case study is ensuring compliance with the Data Protection Act (DPA). As Green Groceries expands its operations to include an online platform, it must adhere to DPA regulations regarding the collection, storage, processing, and transfer of customer data. Failure to comply with the DPA could result in legal consequences, such as fines or legal action, and damage to the company's reputation. Therefore, the Data Controller must ensure that the online platform is designed and implemented in accordance with DPA requirements to protect customer data and uphold legal obligations.

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**Legal**

**Data Privacy:** Green Groceries must adhere to data privacy laws, ensuring that personal information collected through the online platform is handled securely and transparently. Compliance with regulations such as GDPR or CCPA is essential to protect customer privacy rights.

**Security and Fraud Detection:** Implementing robust security measures is crucial to prevent data breaches and fraudulent activities. Green Groceries should invest in encryption, secure authentication methods, and fraud detection systems to safeguard customer data.

**Compliance with Financial Regulation:** As the online platform involves financial transactions, Green Groceries must comply with financial regulations, such as PCI DSS (Payment Card Industry Data Security Standard), to ensure the security of payment information and protect against fraud.

**Guidelines for Easy Accessing:** Green Groceries should ensure that the online platform complies with accessibility guidelines, such as WCAG (Web Content Accessibility Guidelines), to make it accessible to users with disabilities and meet legal requirements for equal access to digital services.

**Intellectual Property and Licensing:** Green Groceries must respect intellectual property rights when developing the online platform, obtaining proper licenses for any third-party software or content used to avoid copyright infringement and legal disputes.

**Terms of Service and User Agreements:** Providing clear and comprehensive terms of service and user agreements is essential to outline the rights and responsibilities of both the company and users. Green Groceries should ensure these documents are legally enforceable and easily accessible to users.

**Consumer Protection:** Green Groceries should prioritize consumer protection by providing accurate product information, transparent pricing, and fair return policies. Compliance with consumer protection laws helps build trust and loyalty among customers.

**Social:**

**Accessibility:** Ensuring accessibility of the online platform is crucial to accommodate users with disabilities and promote inclusivity. Green Groceries should design a platform with accessibility features and conduct usability testing to identify and address any barriers.

**Security Awareness:** Green Groceries should promote security awareness among employees and customers to prevent data breaches and cyber threats. Training programs and informative resources can help raise awareness about best practices for protecting personal information.

**Transparency and Trust:** Transparency in business practices and communication builds trust with customers and stakeholders. Green Groceries should be transparent about their sourcing methods, pricing, and environmental initiatives to maintain trust and credibility.

**Ethical:**

**Fairness:** Green Groceries should prioritize fairness in all aspects of their operations, including pricing, promotions, and treatment of employees and suppliers. Fair business practices contribute to a positive reputation and long-term success.

**Protecting Consumers:** Green Groceries has a responsibility to protect consumers from harm, whether it's through ensuring the quality and safety of products or safeguarding their personal data from misuse or breaches.

**Protecting Business Data and Information:** Green Groceries should implement measures to protect sensitive business data and information from unauthorized access, theft, or misuse. This includes securing databases, using encryption, and restricting access to confidential information.

**Professional:**

**Compliance with Standards and Regulations:** Green Groceries should adhere to industry standards and regulations governing data protection, security, and ethical business practices. Compliance demonstrates professionalism and commitment to upholding legal and ethical standards.

**Testing for Quality Assurance (QA):** Conducting thorough testing, including functional testing, security testing, and usability testing, ensures the quality and reliability of the online platform. QA testing helps identify and address issues before the platform is launched to the public.

**Security and Data Protection:** Prioritizing security and data protection measures throughout the development process is essential to safeguard customer information and prevent unauthorized access or data breaches. Green Groceries should work with System Concepts to implement best practices for securing the online platform and customer data.

**The BCS Code of Conduct:** Green Groceries personnel, including System Concepts developers, should adhere to the BCS (British Computer Society) Code of Conduct, which outlines ethical principles and professional standards for IT professionals. Upholding the code fosters trust, integrity, and accountability in the development process.

In conclusion, addressing LSEPI considerations ensures that Green Groceries' online platform is developed and operated ethically, legally, and professionally, promoting trust, transparency, and accessibility for customers and stakeholders.