

**UNIVERSITY OF GREENWICH**  
COMP-1787-M02-2023-24– Requirements Management

Coursework

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| Student name | NGO HUYNH PHUC |
| ID number | 001391501 |
| Lecturer/Tutor name | NGUYEN KIM KHANH |
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1. **Section A – Introduction**

In this segment, the focus will be on providing an introduction to the company, elucidating its mission and pertinent details. Subsequently, the project's objectives and the rationale behind its initiation will be outlined. Finally, aspects pertaining to project development such as outsourcing, methodologies, frameworks, and the composition of the development team will be introduced. Additionally, a discourse on Agile methodology will ensue, covering its merits, drawbacks, and the rationale behind its adoption as the preferred approach for development teams.

* About company overview: Green Groceries is a growing, mid-sized company that has carved out a niche for itself over the past five years with its organic and locally sourced grocery products. The company's objective is to hire a software outsourcing team to create an online sales platform. Then, launch that platform over the next three months to expand their market reach and take their company's brand even further into the organic grocery business.
* About project aim: the project aims to create a dynamic online platform that caters to the diverse needs of Green Groceries and its stakeholders. It focuses on improving the order processing workflow from paper-based to a flexible and convenient online platform. Additionally, the platform aims to uphold the company's commitment to a green and pet-friendly environment while ensuring compliance with data protection regulations and relevant laws. For customers, the platform will offer increased flexibility and utility in account registration, personal information editing, delivery schedules, and shopping cart customization. Especially, the platform will be designed to handle a large increase in traffic during peak periods without compromising performance, ensuring a smooth user experience even during high-demand times.
* The reason to carry out this project: with a growing demand for convenience and flexibility in the grocery retail sector, Green Groceries recognizes the imperative to modernize its operations. The transition from a paper-based order processing system to a dynamic online platform not only streamlines internal processes but also enhances customer experience. By embracing technological advancements, Green Groceries aims to expand its market reach and solidify its position as a leader in the organic grocery industry.
* Aspects pertaining to project development:
  + Outsourcing

Outsourcing is crucial for Green Groceries' project given their lack of an in-house software development department. By partnering with external experts, they ensure the online platform is developed efficiently and with the latest technologies. Outsourcing allows them to focus on core activities while leveraging specialized skills in agile methodologies. It provides flexibility, scalability, and cost-effectiveness, enabling Green Groceries to deliver cutting-edge solutions aligned with their business goals.

* + Methodologies and Frameworks

In terms of methodologies, Green Groceries has decided to implement SCRUM and Agile concepts for their project. This indicates their recognition of the flexibility and adaptability of Agile, as well as the clear structure and progress management provided by SCRUM, which will help them achieve their goals effectively.

As for the framework, SCRUM is the primary choice for Green Groceries. SCRUM provides a clear structure for organizing and managing the project, with short sprints and regular meetings to monitor progress and make adjustments as necessary. Choosing SCRUM demonstrates Green Groceries' commitment to a flexible and efficient development process.

* + Development team

Moreover, Green Groceries recognizes the importance of assembling a skilled and cohesive development team to effectively implement SCRUM and Agile methodologies. The System Concepts development team comprises talented individuals with diverse expertise in software development, such as Cheryl as a Team Leader, Millie as a programmer, Peter as a web developer, Pat as a tester, and lastly, Anita, who is also a web developer.

* Agile methodology
  + What is Agile methodology

1. **Section B – Requirements analysis**
   1. **Section B1**

* **Functional requirements and non-functional requirements are not suitable for the high-level requirements:** In the table below, I will list the functional requirements and non-functional requirements that do not match the high-level requirements and state the reasons why those requirements do not match.

Table 1Functional requirements and non-functional requirements are not suitable for the high-level requirements

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Requirement Description** | **Stakeholder** | **Reason** |
|  | Maintain at least 20 office plants as part of the company's commitment to a green and healthy workspace. | Director |  |
|  | Organize a virtual celebration on the website for the CEO's birthday to showcase the company's fun and friendly culture. | Staff |  |
|  | 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. | Director |  |
|  | As a Customer I want a choice of delivery slots so that I can arrange my diary appropriately. | Customer |  |
|  | The company should adopt pet-friendly policies to create a positive and inclusive work environment. | Staff |  |
|  | As a Customer I want to be able to change my account details so that my most up to date details are recorded. (Trùng với ý 3) | Customer |  |
|  | 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. | Clerk |  |
|  | As a customer, I want to choose whether or not I am sent marketing information to avoid receiving excessive junk mail. | Customer |  |
|  | The development team should participate in a team-building event every quarter to foster collaboration and a positive work environment. | Development team |  |
|  | 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. | Accountant |  |

* **Functional requirements and non-functional requirements are suitable for the high-level requirements:** The table below outlines the functional and non-functional requirements that are in accordance with the high-level requirements, along with explanations for their alignment.

Table 2 Functional requirements and non-functional requirements are suitable for the high-level requirements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Requirements ID:** | **Requirement Description** | **Stakeholder** | **FR/NFR** | **Reason** |
|  | GG-1 | As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system. | Clerk | NFR |  |
|  | GG-2 | As a customer, I want to be able to change my account details to ensure my most up-to-date information is recorded. | Customer | FR |  |
|  | GG-3 | As a customer register an account. | Customer | FR |  |
|  | GG-4 | 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. | Customer | FR |  |
|  | GG-5 | The system must be designed to handle a 30% increase in traffic during peak periods without degradation in performance. | CEO | NFR |  |
|  | GG-6 | 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. | Customer | FR |  |
|  | GG-7 | All user data, including personal information and payment details, must be encrypted to ensure the highest level of security. | CEO | NFR |  |
|  | GG-8 | Maintain consistent branding elements and design across the website to reinforce their brand identity. | CEO | NFR |  |
|  | GG-9 | As the Marketing Director I would like an offers or discount page so that we can inform our customers of the aforementioned. | Marketing Director | FR |  |
|  | GG-10 | As the Operations Director, I want to accept all forms of payment to capture the largest market possible. | CEO | FR |  |

* 1. **Section B2**
* **Estimation for each requirement:** I will list all the high-level requirements in the table below, then break down each requirement into smaller tasks for easier assignment and management, and estimate the time and effort required for each task.

Table 3 Estimation for each requirement

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Num | Requirement ID | Requirement | Break tasks | Estimation (man.hour) |
| 1 | RQ-1 | 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 (20 man.hours) 2. Link and create a modal for inputing all info from telephone purchase (50 man.hours) 3. API for submission (100 man.hours) 4. Create route and method for data processing. (30 man.hours) | 200 |
| 2 | RQ-2 |  |  | 260 |
| 3 | RQ-3 |  |  | 300 |
| 4 | RQ-4 |  |  | 400 |
| 5 | RQ-5 |  |  | 300 |
| 6 | RQ-6 |  |  | 180 |
| 7 | RQ-7 |  |  | 150 |
| 8 | RQ-8 |  |  | 150 |
| 9 | RQ-9 |  |  | 160 |
| **Summary** |  |  | Total effort | **2100** |

* **Assign priority to each requirement according to MoSCoW rules:** In the table below, talk about the suitability of each requirement, consider which requirements are "Must have", "Should have" and "Could have" and then calculate the total proportion of requirements belonging to the above 3 categories according to the stated effort estimate for each requirement in the table, then consider whether the percentage of each section is consistent with MoSCoW rules. It is known that according to MoSCoW rules "Must have" accounts for 50 to less than 60 percent and the remaining "Should have", and "Could have" must be over 10 percent.

Table 4 Assign priority to each requirement according to MoSCoW rules

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Requirement ID** | **Requirement** | **MoSCoW** | **Reason for prioritization** | **Effort** | **SUMMARY (man.hour)** | **Scale** |
| RQ-1 | As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system. (RQ-1) | Must have | The old system has a telephone based ordering --> inherit for merging this kind of sale to an ecommerce system, this info must be added to the database --> required for VAT. tax for delivery for promotion,  … | 200 | 1160 | 55% |
| RQ-2 |  | Must have |  | 260 |
| RQ-3 |  | Must have |  | 300 |
| RQ-4 |  | Must have |  | 400 |
| RQ-5 |  | Should have |  | 300 | 630 | 30% |
| RQ-6 |  | Should have |  | 180 |
| RQ-7 |  | Should have |  | 150 |
| RQ-8 |  | Could have |  | 150 | 310 | 15% |
| RQ-9 |  | Could have |  | 160 |

1. **Section C – Legal, Social, Ethical and Professional issues**
   1. **Data Controller**
   2. **LSEPI (Legal, Social, Ethical and Professional)**
2. **Conclusion and assumptions**