

**UNIVERSITY OF GREENWICH**  
Module code – Module name

Assessment name

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| Student name | Huu Duy Do |
| ID number (00xxxxxxx) |  |
| Lecturer/Tutor name | Kim Khanh Nguuyen |
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1. Introduction

1.1. Green Groceries

I'm a Business Analyst in a software company and I was tasked with performing a thorough analysis of the requirements for Green Grocery's online platform project. Green Groceries is a reputable medium-sized company specializing in organic and locally sourced grocery products. Over the previous five years, the company has established a strong reputation, mostly because of partnerships with nearby farmers and suppliers who value the environment. With a strong commitment to sustainability and a desire to expand their market reach, Green Groceries has embarked on the journey of launching an online platform within the next three months. Nowadays, business developments in digital technology are gradually growing strongly and carry out lots of benefits for the business about the ability to expand markets and reach customers more easily. Green Groceries has recognized the significance of digital transformation in today's market landscape and aims to leverage technology to make sustainable products more accessible to a wider audience. From that, they decided to develop an online platform. They hired an outsource software company to help them develop the projects because their company does not have any software development department. Before, the company has been difficult in the past with traditional 'waterfall' projects because the waterfall is not flexible because it follows a sequential approach with each phase. In addition, testing typically occurs towards the end of the development cycle and brings out a lot of risk and may make the project fail. So that, after careful consideration they make the decision to use Agile and SCRUM methodologies to develop their online platform with System Concepts (SC).

1.2. Aims of project

Develop an online platform for the Green Groceries company. The project is being carried out to help the company solve the market today and help them expand the market and reach the customer more easily.

1.3. Outsourcing

There isn't an internal software development department at Green Grocery. So that, an online platform that will be analyzed and developed by a reputable external Agile software development company.

1.4. Methodology

In this project, we will use the scrum method to develop an online platform for the Green Groceries company. Scrum emphasizes cooperation, adaptability, and iterative development, completely changing the way software development projects are conducted. In other words, scrum refers to a tightly knit team working together, adaptability, and delivering value in short cycles help enhance the efficiency and quality of the project. Fundamentally, Scrum breaks the project up into more manageable and smaller components. With scrum the teams can react swiftly to shifting demands and market conditions thanks to the iterative process, which guarantees that the finished product successfully satisfies client expectations. The Scrum plan will be delivered in brief cycles of one month or less, increments of valuable work are referred to as Sprints. Throughout Sprint, input is continuously received, enabling process and deliverable adjustments. (Scrum, 2024)

A diagram of a scrum

Description automatically generated

Figure 1. Scrum processing

1.5. Framework

With the framework, we will use the Dynamic Systems Development Method (DSDM) to apply in the project. DSDM is the proven framework for Agile PM and created in 1994 by founding members of the DSDM consortium (Now Agile Business Consortium). The Dynamic Systems Development Method (DSDM) offers a methodical approach to quick and iterative software development. The delivery of business value within predetermined time and financial limits, flexibility, and teamwork are all stressed by DSDM. Being among the first agile approaches, it has changed throughout time to fit with contemporary software development techniques. Fundamentally, DSDM encourages regular delivery of observable, superior goods or software updates while guaranteeing that important stakeholders continue to be actively involved all the way through the development process. This engagement guarantees that the finished product satisfies the goals and needs of the business. (agilebusiness, 2024)

A diagram of a business model

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Figure 2. DSDM processing

1.6. Developer Team and Stakeholder

1.6.1. Green Groceries Personnel

- CEO and Founder is the visionary also its main decision-maker

- Financial Controller who enthusiastic about the project and inclined to aim high and tendency to strive for perfection

- Operations Manager: An accomplished individual with prior expertise in Agile software development. accountable for the distribution and logistics teams and allocating resources to the project.

- Chief Accountant: May make decisions at meetings on behalf of the Financial Controller and serve as their representative. knowledgeable about all the company's areas

- Logistics Manager: Unable to commit in person, but ready to give authority to a team member from the logistics division to act making decision on their behalf

- Marketing Manager: Currently working on the project, with certifications in Agile Project Management and Workshop Facilitation.

1.6.2. Developer Team

- Millie is an accomplished programmer with a strong background in web development and strong interpersonal abilities.

- Peter is a very skilled web developer who occasionally gets into arguments with clients.

- Anita is a programmer who possesses exceptional web creation talents.

- Cheryl is an accomplished team leader with extensive experience in Agile development projects and web development.

- Pat: Throughout the project, Pat will be available part-time and will possess a solid grasp of web development and testing.

1.7. Agile

The Agile methodology is a project management style that prioritizes ongoing communication and improvement while segmenting the work into manageable chunks. Teams work in cycles of planning, carrying out, and reviewing. Agile is an iterative project management methodology for software development that emphasizes frequent releases and taking user feedback into account at each iteration. With Agile, software teams that use agile project management techniques may build products more quickly, collaborate more widely, and improve their capacity to adapt to changing market conditions. (atlassian.com, 2024)

**Benefits of Agile:**

- Flexibility and Adaptability: Agile approaches let teams react swiftly to modifications in specifications, state of the market, or input from clients. This adaptability enables improved stakeholder requirements alignment and quicker value delivery.

- Agile promotes a culture of continuous improvement, in which teams examine their procedures and methods on a frequent basis to find opportunities for improvement. This emphasis on adaptability and learning promotes creativity and boosts team productivity as a whole.

- Customer Satisfaction: Agile approaches guarantee that the finished product meets or surpasses customer expectations by incorporating customers or stakeholders throughout the development process and delivering functional software gradually. This makes the client pleasure higher.

- Early and Predictable release: Iterative development and the frequent release of functional software are prioritized by agile frameworks like Scrum. Teams can release meaningful features more frequently and earlier with this strategy, which shortens time to market and increases project delivery predictability.

- Enhanced Teamwork and Communication: Agile approaches encourage teamwork by facilitating regular exchanges and feedback loops between stakeholders, clients, and team members. This increased communication strengthens collaboration and creates a common understanding of the project's objectives.

**Drawback of Agile:**

- Complexity in Big Projects: Agile approaches work well for small- to medium-sized projects, but they can have problems with more complicated, larger-scale initiatives. Agile processes can become more difficult as they are scaled across several teams or departments, necessitating careful coordination.

- Danger of Scope Creep: Because Agile places a strong focus on adapting to change and taking into account changing needs, scope creep—the expansion of a project's scope beyond its originally established parameters—can occasionally occur. Inadequate prioritizing and management may have an effect on project budgets and schedules.

- Dependency on Team cooperation: Self-organizing teams and cooperation are key components of agile approaches. Agile methods can be less successful and project development might be hampered if team members lack the required knowledge, expertise, or drive.

- Difficulties with Documentation: Agile approaches give functioning software priority over extensive documentation. Although this method encourages adaptability and promptness, it may not work well in situations where there are stringent legal or regulatory requirements that need a lot of paperwork.

- The adoption of agile practices necessitates a mental change and might include an initial learning curve for team members and stakeholders who are not familiar with the concepts and principles of agile. Productivity and efficiency may be impacted during this early time of adjustment until everyone gets used to the new working style.

**Dynamic Systems Development Method (DSDM):** In this project, we will use the DSDM framework of Agile to develop. There are a lot of frameworks of Agile such as Kanban, Scrum, and Lean, but we just choose the DSDM to use. The DSDM framework has similarities with those agile methodologies. However, DSDM is the process of completing projects according to schedule, budget, and client specifications. It highlights the significance of regular delivery of functional software, incremental and iterative development, and active user interaction. DSDM differs from both Kanban and Lean frameworks in that the former only focuses on visualizing work and reducing work-in-progress, while the Lean to maximize value delivery, maximize efficiency, and minimize waste. It places a strong emphasis on providing consumers with value while reducing operations that do not offer value. In addition, DSDM definition of distinct roles such as Solution Developer, Project Manager, Business Sponsor, and Executive Sponsor is provided by DSDM. These positions are in charge of several project-related tasks, such as development, prioritizing, and stakeholder management. However, Kanban promotes teamwork and self-organization rather than defining roles specifically. Any work may be completed by anybody, and the main goals are to maximize flow and balance capacity and demand. Furthermore, Lean places a strong emphasis on empowerment, leadership, and ongoing development at all organizational levels while avoiding the prescription of particular roles. Besides, DSDM includes a functional model iteration, feasibility study, business study, design and build iteration, and implementation, DSDM encompasses the whole project lifecycle, but Kanban just places a strong emphasis on incremental delivery and iterative development throughout the project, but it does not mandate a particular project lifecycle. Instead, it stresses continuous delivery and improvement. On a Kanban board, work items go through several phases, and the team constantly pulls in additional work as capacity permits. (agilebusiness, 2024)

2. High level requirements analysis

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| **Requirements ID:** | **Requirement Description** | **Stakeholder** | **FR/NFR** | **Reason** |
| R-2 | Maintain at least 20 office plants as part of the company's commitment to a green and healthy workspace. | Staff | NFR | This is a nonfunctional requirement (NFR) that is not tied to business objectives or the purpose of the online platform. Instead, it pertains to office management and the culture within the organization. |
| R-4 | Organize a virtual celebration on the website for the CEO's birthday to showcase the company's fun and friendly culture. | Staff | NR | Its utilization is not outlined in the online platform's objectives or business goals. Young businesses should concentrate on their goals, particularly in short-term projects. For short-term projects, emphasis should be placed on project objectives, while these additional pages can be developed in subsequent phases. It should center around sharing organizational culture instead of the celebrating the CEO's birthday |
| R-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. | Director | NFR | It considered technical aspects about the contemporary protocols like HTTPS ensure secure data transfer, while modern development frameworks offer encryption support for sensitive information, such as bcrypt, RSA (Rivest–Shamir–Adleman), SHA (Secure Hash Algorithm) |
| R-7 | As a Customer I want a choice of delivery slots so that I can arrange my diary appropriately. | User | NFR | This is not included in the main goal of the project. It concerns to the third party for delivery |
| R-9 | The company should adopt pet-friendly policies to create a positive and inclusive work environment. | Staff | NFR | It does not align with the business objective or the project's purpose |
| R-10 | The system must be designed to handle a 30% increase in traffic during peak periods without degradation in performance. | Staff | NFR | This concerns the performance design of the project. It does not relate to the aim of the project |
| R-16 | Maintain consistent branding elements and design across the website to reinforce their brand identity. | Staff | NFR | It concerns the UI/UX design. It does not relate to the requirement or the aims of the project. The band may be identity and develop through time |
| R-17 | The development team should participate in a team-building event every quarter to foster collaboration and a positive work environment. | COO | NFR | It concerns project management and the way to improve and advance the company's personnel quality. It does not relate to the goal of the project |

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| **Requirements ID:** | **Requirement Description** | **Stakeholder** | **FR/NFR** | **Reason** |
| R-1 | As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system. | Staff | FR | It enjoys significant popularity among certain e-commerce applications because everyone has a phone number today, it proves to be a valuable feature for many users. With this features that help the business expanding market to reach a lot of customers and increasing accessibility to a wider range of products |
| R-6 | As a customer register an account. | User | FR | This is a popular feature that all of the e-commerce websites must have. This function can help the user create their profile, support ordering, payment, delivery, and finance management. Besides that, the company can gather the potential customer’s information |
| R-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. | User | FR | This is also a popular feature of e-commerce websites. It’s useful for user manage their cart and they can add the list product that they like and may buy later |
| R-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. | User | FR | This feature is a good feature for users because they can choose the diversity delivery address. They can buy for gift to send someone |
| R-12 | As a Customer I want to be able to change my account details so that my most up to date details are recorded. | User | FR | This relates to the security and privacy information of the user. They can update their information frequently to avoid losing the information and this feature can help them to protect their information |
| R-14 | As a customer, I want to choose whether or not I am sent marketing information to avoid receiving excessive junk mail. | User | FR | This helps the business to know the feedback from user to the product of the company and from that can improve and make more effective market |
| R-15 | All user data, including personal information and payment details, must be encrypted to ensure the highest level of security. | User | NFR | It also concerns security with all the accounts encrypted. This can help the company to protect their customer’s information |
| R-18 | 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 | Draw in additional clientele.  Fulfill the needs of existing customers.  Boost sales metrics.  Enhance competitiveness.  Optimize inventory management by freeing up stock |
| R-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. | Accountant | FR | It relates to the law and tax.  Comply with information laws to avoid hitting with a hefty fine |
| R-20 | As the Operations Director, I want to accept all forms of payment to capture the largest market possible. | Operation Director | FR | With numerous forms of payment can help the company to reach foreign customers and expand and make more accessible the market. Besides, this can make the customer and stakeholder get more trust in financial |

3. MoSCoW/Timebox rules

Team member: Millie, Peter, Anita, Cheryl, Pat includes (4 full-time dev and 1 part-time dev)

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| **Stt** | **Requirement ID** | **Requirement Content** | **Break tasks** | **Estimation (man.hour)** |
| 1 | R-1 | As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system. | 1. Create database (30 man.hours)  2. Create the order handle information form for inputting all info from purchase through telephone (100 man.hours)  3. Create API for submission (100 man.hours)  4. Create route and method for data processing. (50 man.hours)  5. Test the process telephone purchases online feature (10 man.hour) | 290 |
| 2 | R-6 | As a customer register an account. | 1. Create the register form interface (70 man.hour)  2. Create API for submission (50 man.hour)  3. Create route and method for data processing (20 man.hour)  4. Test the register feature (10 man.hour) | 130 |
| 3 | R-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. | 1. Create the cart interface layout (60 man.hour)  2. Create API for submission (100)  3. Create route and method for data processing (40)  4. Test the modify cart feature (10 man.hour) | 210 |
| 4 | R-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. | 1. Create the form fill address interface layout (30 man.hour)  2. Create API for submission (40 man.hour)  3. Create route and method for data processing (30 man.hour)  4. Test the add address to receive bags feature (10 man.hour) | 110 |
| 5 | R-12 | As a Customer I want to be able to change my account details so that my most up to date details are recorded. | 1. Create the profile interface layout (90 man.hour)  2. Create API for submission (90 man.hour)  3. Create route and method for data processing (30 man.hour)  4. Test the change account detail feature (10 man.hour) | 220 |
| 6 | R-14 | As a customer, I want to choose whether or not I am sent marketing information to avoid receiving excessive junk mail. | 1. Create the interface layout for user to choose whether they can send marketing information (50 man.hour)  2. Create API for submission (40 man.hour)  3. Create route and method for data processing (40 man.hour)  4. Test the choose whether they send marketing information feature (10 man.hour) | 140 |
| 7 | R-15 | All user data, including personal information and payment details, must be encrypted to ensure the highest level of security. | 1. Create the function to encrypt all of the account’s information (110 man.hour)  2. Create API to get all of the account’s information (130 man.hour)  3. Perform encrypt and save to database (50 man.hour)  4. Test the encrypt information feature (10 man.hour) | 300 |
| 8 | R-18 | As the Marketing Director I would like an offers or discount page so that we can inform our customers of the aforementioned. | 1. Create the an offers or discount page (40 man.hour)  2. Create API for submission (50 man.hour)  3. Create route and method for data processing (30 man.hour)  4. Test the offers and discount feature (10 man.hour) | 130 |
| 9 | R-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. | 1. View and gather the document about the VAT in E-commerce website legal (140 man.hour)  2. Create the features of the website follow the legal (120 man.hour)    3. Check the VAT legal in feature (10 man.hour) | 270 |
| 10 | R-20 | As the Operations Director, I want to accept all forms of payment to capture the largest market possible. | 1. Create the payment form interface layout (90 man.hour)  2. Create API for performing payment (140 man.hour)  3. Create route and method for data processing (50 man.hour)  4. Test the payment feature (10 man.hour) | 290 |
| Summary |  |  | Total effort | 2090 |

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| **Stt** | **Requirement ID** | **Requirement Content** | **MoSCoW** | **Reason for prioritization** | **Effort** | **Summary (man.hour)** | **Scale** |
| 1 | R-1 | As an Order Handling Clerk, I want to use the website to process telephone purchases, replacing the paper-based system. | MUST |  | 290 | 1150 | 55% |
| 2 | R-15 | All user data, including personal information and payment details, must be encrypted to ensure the highest level of security. | MUST |  | 300 |
| 3 | R-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. | MUST |  | 270 |
| 4 | R-20 | As the Operations Director, I want to accept all forms of payment to capture the largest market possible. | MUST |  | 290 |
| 5 | R-6 | As a customer register an account. | SHOULD |  | 130 | 560 | 27% |
| 6 | R-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. | SHOULD |  | 210 |
| 7 | R-12 | As a Customer I want to be able to change my account details so that my most up to date details are recorded. | SHOULD |  | 220 |
| 8 | R-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. | COULD |  | 110 | 380 | 18% |
| 9 | R-14 | As a customer, I want to choose whether or not I am sent marketing information to avoid receiving excessive junk mail. | COULD |  | 140 |
| 10 | R-18 | As the Marketing Director I would like an offers or discount page so that we can inform our customers of the aforementioned. | COULD |  | 130 |
| Total | | | | | | 2090 | 100% |