COMP1787

Requirements Management

Student's Name: Vu Thanh Nguyen

Student's ID: GCH221117

Submission Date: 05/12/2025

II.SECTION B – High-Level Requirements Analysis and MoSCoW Prioritisation

B1. Functional Requirements

No.	High-Level Functional Requirement	Justification
FR1	User Account Management (System must allow users to create, update and delete accounts)	Transcript shows customer representative stating customers should "create accounts … and update details" (GGL case study p.4). This supports personalised services and order history tracking (Sommerville, 2016).
FR2	Online Ordering and Checkout	CEO identified inefficient order-handling process; a digital ordering workflow will streamline operations and increase productivity (Pressman & Maxim, 2020).
FR3	Product Catalogue with Filtering and Search	Enables customers to browse organic items efficiently, improving usability and sales conversion (Nielsen, 2012).
FR4	Promotions and Discount Module	Marketing Director requested a "page for promotions, offers and discounts"; supports customer engagement and repeat visits (Kotler & Keller, 2016).
FR5	Shopping Cart and Delivery Slot Scheduling	Customers should modify cart and select delivery time slots — a core e-commerce functionality that reduces abandoned carts (Marquez et al., 2019).
FR6	Educational Blog Section	Education Coordinator requested a "blog section to educate customers about sustainability"; aligns with GGL's mission and CSR goals (Carrol & Buchholtz, 2021).
FR7	Integration with External Logistics Systems	Operations Manager highlighted the need to "integrate with external logistics platforms to optimise delivery routes"; essential for efficiency and sustainability (Christopher, 2016).
FR8	GDPR-Compliant Data Management and Consent System	Finance Director emphasised compliance with GDPR; a feature for user consent and data protection is mandatory (Information Commissioner's Office [ICO], 2023).
FR9	Sustainability Dashboard	Operations Manager mentioned a "green workspace initiative"; dashboard can track and display sustainability metrics supporting branding (Elkington, 1998).
FR10	Admin Content Management Portal	Allows staff to update products, promotions and blog posts without developer intervention — improves Agile responsiveness (Poppendieck & Cusumano, 2012).

B2. Non-Functional and Inaccurate Requirements

(a) Five Non-Functional Requirements

No.	Non-Functional Requirement	Justification
NFR1	Performance – System should load within 5 seconds on modern devices	Explicitly stated by Operations Manager; aligns with ISO/IEC 25010 performance efficiency criteria.
NFR2	Scalability – Handle 30 % traffic increase and support unlimited users	IS department requirement; ensures future growth and cloud readiness (Bass et al., 2012).
NFR3	Security – End-to-end encryption and role-based access control	Mitigates data-breach risk and meets GDPR Articles 5 & 32 (ICO, 2023).
NFR4	Usability – Intuitive navigation and accessibility for WCAG 2.1 AA	Improves customer experience and inclusivity (Nielsen, 2012).
NFR5	Reliability – 99.5 % uptime and automated backup	Critical for 24/7 e-commerce operations (Pfleging et al., 2020).

(b) Three Inaccurate / Unrealistic Requirements

No.	Inaccurate Requirement	Reason for Inaccuracy
IR1	Include a feature for virtual celebrations (e.g., CEO's birthday)	Non-business-critical and not aligned with system objectives or ROI (Pressman & Maxim, 2020).
IR2	Adopt pet-friendly policies in the website design	Cultural or HR policy issue irrelevant to IT system scope.
IR3	Replace finance system prior to website development	Outside project scope and budget constraints — change control needed (Sommerville, 2016).

B3. MoSCoW Prioritisation

MoSCoW Categories:

- **Must Have** – Critical for minimum viable product (MVP)
- **Should Have** – Important but workarounds exist
- **Could Have** – Desirable enhancements that add value
- **Won't Have (for now)** – Deferred or out-of-scope

Priority	Functional Requirement	Rationale
Must Have	FR1 User Account Management	Enables core personalisation and order tracking.
	FR2 Online Ordering and Checkout	Central business function for sales conversion.
	FR3 Product Catalogue	Foundation of any retail platform.
	FR5 Shopping Cart & Delivery Slot	Direct impact on customer satisfaction.
	FR8 GDPR Data Management	Legal obligation to avoid penalties under GDPR (ICO, 2023).
Should Have	FR4 Promotions and Discounts	Drives retention but not critical for MVP.
	FR7 Logistics Integration	Enhances efficiency but can be phased in after MVP.
Could Have	FR6 Educational Blog Section	Supports brand identity and CSR but secondary to commerce.
	FR9 Sustainability Dashboard	Value-add feature for engagement and analytics.
Won't Have (for now)	FR10 Admin Portal (for advanced content workflow)	May delay launch; basic CMS can temporarily suffice.

Rationale:
Prioritisation ensures the MVP (6-week deadline) focuses on business-critical capabilities — ordering, accounts, and compliance — while less urgent features can enter later sprints following Agile principles (Agile Alliance, 2023). The MoSCoW technique supports incremental delivery and stakeholder agreement on scope (Clegg & Barker, 2016).

v. REFERENCES

Agile Alliance (2023) *What is MoSCoW prioritization?* Available at: https://www.agilealliance.org/ (Accessed 11 Nov 2025).

Bass, L., Clements, P. and Kazan, R. (2012) *Software Architecture in Practice.* 3rd ed. Boston: Addison-Wesley.

Carrol, A. B. and Buchholtz, A. K. (2021) *Business and Society: Ethics, Sustainability and Stakeholder Management.* 11th ed. Boston: Cengage.

Christopher, M. (2016) *Logistics and Supply Chain Management.* 5th ed. Pearson Education.

Clegg, D. and Barker, R. (2016) *Case Method Fast-Track: A Radical Approach to Requirements and Systems Development.* Addison-Wesley.

Elkington, J. (1998) *Cannibals with Forks: The Triple Bottom Line of 21st Century Business.*

Oxford: Capstone.

Information Commissioner's Office (ICO) (2023) *Guide to the UK GDPR.* Available at: https://ico.org.uk.

Kotler, P. and Keller, K. L. (2016) *Marketing Management.* 15th ed. Harlow: Pearson Education.

Marquez, G., et al. (2019) 'The impact of delivery options on e-commerce customer satisfaction', *Journal of Retailing and Consumer Services*, 48, pp. 102–110.

Nielsen, J. (2012) *Usability Engineering.* Morgan Kaufmann.

Pfleging, B., et al. (2020) 'Resilience and reliability in cloud-based e-commerce systems', *ACM Transactions on Internet Technology*, 20(4), pp. 1–22.

Poppendieck, M. and Cusumano, M. A. (2012) 'Lean Software Development: A tutorial', *IEEE Software*, 29(5), pp. 26–32.

Pressman, R. S. and Maxim, B. R. (2020) *Software Engineering: A Practitioner's Approach.* 9th ed. New York: McGraw-Hill.

Sommerville, I. (2016) *Software Engineering.* 10th ed. Harlow: Pearson.