



**Unit:**  
**Agile Development**

**Assignment title:**  
**The Gud A'Tuinn Emporium**

**20 credit version**

**Spring – Winter 2022**

**Important notes**

- Please refer to the *Assignment Presentation Requirements* for advice on how to set out your assignment. These can be found on the NCC Education website. Hover over 'About Us' on the main menu and then navigate to 'Policies and Procedures' then scroll to the 'Student Support' area.
- You **must** read the NCC Education document *Academic Misconduct Policy* and ensure that you acknowledge all the sources that you use in your work. These documents are available on the NCC Education website. Hover over 'About Us' on the main menu and then navigate to 'Policies and Procedures' then scroll to the 'Student Support' area.
- You **must** complete the *Statement and Confirmation of Own Work*. The form is available on the NCC Education website. Hover over 'About Us' on the main menu and then navigate to 'Policies and Procedures' then scroll to the 'Student Support' area.
- Please make a note of the recommended word count. You could lose marks if you write 10% more or less than this.
- You must submit a paper copy and digital copy (on disk or similarly acceptable medium). Media containing viruses, or media that cannot be run directly, will result in a fail grade being awarded for this assessment.
- All electronic media will be checked for plagiarism.

## Scenario

The impact of COVID-19 on businesses around the globe has been unavoidable due to ongoing factors beyond the control of business owners with one trend being to move to a digital commerce only model.

A small sized business based in Somerset, UK called '*The Gud A'Tuinn Emporium*' has made the difficult decision to close its doors and cease to exist as a 'brick and mortar' store. The store was established in 1991 with the mission to seek and purchase books, materials and merchandise related to the works of the late Jerry Ratchett.

While they had an excellent reputation attracting customers to visit the store from around the globe, the pandemic has made the owners aware of how reliant they were on physical custom. The business does currently use platforms such as Amazon marketplace and eBay to allow digital based sales to be taken, but the impact of fees made some sales seem worthless with such small margins of profit.

The owners have proposed to develop a new digital website that they can update with ease and setup B2C (Business to Consumer) sales with minimal loss of income to fees. The owners have researched and found that using WordPress to build / host the website and Shopify to setup an online store seems to be a reasonable solution.

The owners are keen to continue their business and adapt to customer demand. The owners have been developing custom 3D printed merchandise and sharing progress via social media. The business holds a unique position in having the sole license to reproduce merchandise related to the works of the late author.

The owners would like customers to be able to browse the current 3D models available and request a print with customisable sizes, colour or printed material. The owners do not want to delay the sale so the website should generate a quote from the customer's input. Once the quote is generated a unique sale ID is created and can be used to recover the order details allowing customers to return at a later date to complete an order if necessary.

Where any special request print orders are made, the quote cannot be generated automatically therefore this should be sent to the owners via email for a bespoke quote to be generated. Special orders are generated and processed by the owners away from the website to allow a bespoke experience.

Requirements:

- New website hosted on WordPress with Shopify Plugin (or suitable alternative).
- The customer must have the ability to set up an account where they can input personal information and payment information for orders.
- The customers need to be able to review orders, change account details and delete accounts as needed.
- The website should allow customers to purchase an item using a guest checkout using simply their email address. This is not an immediate need as the company

want to have as many customers sign up as possible for future targeted marketing campaigns.

- Customers should be able to browse a catalogue of current goods and place orders to be shipped worldwide.
- A web application that allows the users to generate an order for a 3D printed item.
- Where needed the web application should notify the owners of any bespoke order via an email which includes the customer email to allow direct ongoing content.
- The owners want the staff to be able to update the website with ease.
- At some point the owners would like to have a forum that also allows trades to take place. The owners want this to help continue building a healthy community of customers.

The owners have expressed that the website should be easy to use, ensure that any personal identifiable information is stored securely, work on all modern browsers (the owners are not concerned with compatibility with older browsers such as Internet Explorer). The owners do not want the website to cost too much to host but want the option to increase performance when sales are launched, and new items are announced.

#### **The Gud A'Tuinn Emporium Personnel:**

- **Peter Doyle – Joint Owner / Director**
- **Ann Doyle – Joint Owner / Director**
- **Dirk Vaux – Creative Director and Social Media Coordinator**
- **Rebecca Moulin – Intern Associate**

Given that the owners of the Gud A'Tuinn Emporium have identified that this project is not something they have the skills set to achieve and therefore have hired a local digital consultancy and software house called 'Digital Phoenix'.

Digital Phoenix have completed a number of digital transformation projects since they started business in 2011. They specialise in helping businesses transform making use of digital platforms such as ecommerce websites using WordPress, Shopify and WooCommerce. They encourage businesses to use AWS or Microsoft Azure for hosting. The staff are trained agile coaches and workshop facilitators who want to support business to practice agile where possible. You have been appointed to lead this transformation project for The Gud A'Tuinn Emporium.

## Task 1 (1,000 words)

As part of the pre-project phase, you have decided that DSDM is a suitable agile method to be used for this project. The business owners have never heard of DSDM or agile development prior to this project. You have been asked to provide some more detail to help them understand how this decision will impact the project.

- a) Outline the EIGHT (8) agile principles for DSDM, for each principle provide ONE (1) example of how it can be fulfilled.  
**(10 marks)**
- b) In addition, list TWO (2) Instrumental Success Factors (ISF) with a reason of why they should be met prior to beginning a project using the DSDM methodology.  
**(10 marks)**

## Task 2 (700 words with example risk log)

The project has moved forward into the feasibility / foundation phases. You are looking to complete the Feasibility Study and Business Study. Key elements such as project risk, time estimations are discussed before any major project work is undertaken. You set up Facilitated Workshops in order to move the project forward.

- a) Explain what a Facilitated Workshop is with details of how it might run along with a brief outline of the Facilitator and Scribe roles.  
**(10 marks)**
- b) A risk log can be used to record and manage risk within an agile project. Explain how a risk log helps to manage risk. Provide an example risk log relating to the scenario to aid your explanation **and** discuss how the use of the PAQ (Project Approach Questionnaire) might help reduce risk early in the project.  
**(10 marks)**

## Task 3 (750 words)

The workshops are going well, and the project requirements are being explored, recorded and developed into user stories. Estimation and planning are an important part of any agile project and there are a number of tools and techniques that can be used to ensure the project is planned correctly.

- Research the agile planning technique called 'Planning Poker'. Outline how this technique could be used in a workshop and suggest what roles should be involved in the process.
  - Justify why estimations would be better formed as a group rather than just individual perspective.
  - Identify what technique can be used to scale priority of requirements and how it is used in agile planning.
- (15 marks)**

## Task 4 (Activity Diagram Model and 300 words)

As the project moves towards the development of a functional model, you have called a workshop to discuss the more complex element of the new system, how customers will purchase a 3D model from the website.

Produce an Activity Diagram demonstrating your proposed flow of a new customer purchasing a 3D model without any bespoke requirements. You must provide notes of any assumptions made in the diagram **and** describe ONE (1) example of another UML diagram that could be used to help detail the new solution.

**(20 marks)**

## Task 5 (750 words)

The owners want to be involved as much as possible to help shape the system to ensure it suits their needs.

- a) The project is now looking to develop a series of prototypes. Explain THREE (3) prototyping perspectives making clear the purpose of each perspective.

**(10 marks)**

- b) Outline TWO (2) development strategies. For each strategy discuss the type of project for which they are most suitable **and** how it may impact the structure or focus of timeboxes.

**(5 marks)**

## Task 6

Using the Rolfe, G., Freshwater, D. and Jasper, M. (2001) model, critically review the learning that you have undertaken in order to complete this assignment.

Based upon your learning, your reflection should include a description; an analysis; and an action plan in order to bring about improvements in the future.

**(10 marks)**

## Submission requirements

A word-processed document of 4000 words must be submitted incorporating the full documentation of all tasks of the assignment above. Diagrams created using alternative software should be converted into a suitable image file format (e.g. JPEG) and inserted into the document as images. The document should be submitted both in paper form and digital form. Digital copies should be on an appropriate medium (CD, DVD, USB flash drive, etc.).

## Candidate checklist

Please use the following checklist to ensure that your work is ready for submission.

- Have you read the NCC Education document *Academic Misconduct Policy* and ensured that you have acknowledged all the sources that you have used in your work?
- Have you completed the *Statement and Confirmation of Own Work* form and attached it to your assignment? **You must do this.**
- Have you ensured that your work has not gone over or under the recommended word count by more than 10%?
- Have you ensured that your work does not contain viruses and can be run directly?