Unit:
Agile Development

Assignment title:
The Booty Box

June 2018

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. Click on 'Policies & Advice' on the main menu and then click on 'Student Support'.
- You must read the NCC Education documents *What is Academic Misconduct? Guidance for Candidates* and *Avoiding Plagiarism and Collusion: Guidance for Candidates* and ensure that you acknowledge all the sources that you use in your work. These documents are available on the NCC Education website. Click on 'Policies & Advice' on the main menu and then click on 'Student Support'.
- You **must** complete the *Statement and Confirmation of Own Work*. The form is available on the NCC Education website. Click on 'Policies & Advice' on the main menu and then click on 'Student Support'.
- 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.

Introduction

Great Gifts for Geeks (GGG) is a small business headquartered in the city of Glasgow, Scotland. Their business model focuses on sourcing creative work from students and professionals in the local industry, and then showcasing it in their three storefronts. Currently those storefronts are in Dundee, Glasgow and Aberdeen. They focus on small scale production and bespoke contracts, mainly aimed at fans of popular culture. Most of their clientele are looking for things like custom dice, fan art of comic characters, prototype board and video games, dolls of comic characters, and so on. They also sell many traditional geek items such as comics, games, and toys. They have been in business for three years now, and only in the last quarter turned a profit whilst still covering all costs. Projections for profitability trend upwards, and so the owner is looking to find ways to maximise revenue without investing heavily in expansion. There are considerable intellectual property implications in everything they sell, and so it's necessary to invest a lot of time and effort in ensuring the legality of everything they do. This makes opening a new storefront in a new market a very costly process.

Their customers include parents looking for cool things for their kids; kids particularly devoted to a particular pop culture franchise; and university students who are enthusiastic for games and comics. Their shops are small hubs of the enthusiast community, and they host games nights, comics nights, and movie nights. They emphasise a friendly, welcoming environment at these events and they often draw in lots of people that wouldn't normally find much use for the shops otherwise. Many of these go on to become regular customers because of favourable initial exposure to popular geek culture.

The current project they are working on are their Booty Boxes. These follow the model of a subscription system where customers sign up to receive a box containing a mixture of random, but hopefully welcomed items on a monthly basis. The plan is to take a small subset of the things they would otherwise sell in the shop, particularly things that have not yet been released, and sell them as a bundle that is available either as a delivery or for pickup in the local shop. Interest in this is high, but it requires the development of a strategy for the procurement, scheduling, and delivery of these boxes. Each of them will contain inventory that is particular to the city in which the storefront resides, although if someone subscribes to the box and pays the delivery charge it can be dispatched from the storefront of their choice. It is anticipated that a software solution of some kind is going to be needed here and it will have to be able to co-ordinate the activities of three stores, with the likelihood of more being added in the future.

The software they are looking to commission will need to tie into their existing inventory management (done locally in each store with a Microsoft Access database). It will need to track a customer list that may grow and expand on a monthly basis. Subscribers will be able to suspend or pause their subscription at any time, although there is a set date at which this must be done for each individual Booty Box. After payment is taken for a box, it's not possible to pause the subscription for that specific month. The system will provide a customer facing front-end for this, as well as for signup and for exploring the contents of previous Booty Boxes. Boxes that were sent out more than two months ago are displayed on the customer-facing portion of the software to show representative examples of what might be contained within.

The expectation is that most subscribers will either pick up the box from their local storefront, or will be in the local area and so staff can deliver them directly. For both of

those cases, it's necessary to track how it is to be made available to customers, when they are supposed to collect it, and whether they have. The system will provide regular reminders to the local storefront, and the customer, when a box has been left uncollected. For those paying a delivery charge, the box will be sent through a courier system and the customer and store will have a record of its tracking number for further enquiries. After delivery, subscribers will be asked to complete a survey rating each of the items they received and how much they think they are worth. The averaged values for this are then used internally to provide a view of how much a box cost to make (gathered from local inventory data) and how much its subscribers thought it was worth (gathered from surveys).

To ensure that the Booty Boxes are distinctly unique, the software proposed here will check the local inventory system to make sure its contents are not already being sold in the store or already allocated to a Booty Box. This requires the software to have a 'Booty Crate Construction' system that lets the store design box contents, schedule their delivery, and validate the uniqueness of its contents across the whole business.

GGG want this software to be easy to use, and since it will include a customer front-end as well as back-end inventory management it will need to be designed in a way that permits server storage of data as well as two versions of the front-end. They are keen to leverage the resources they have in the local communities, particularly at the universities in each, to help design how it should function. They have recruited numerous volunteers to be involved in the first early release of the software. Their focus at the moment is on producing a Minimally Viable Product (MVP) that incorporates all the key functionality. They appreciate this is likely to be a costly project, and as such they are looking to develop something where new capabilities can be easily added in the future through plug-in or bolt-in mechanisms.

Bored@Work (B@W) is a development consultancy based in Glasgow. They are a start-up company currently housed in the local university's business incubator. They have access to great wells of expertise, state of the art facilities, and a large pool of student volunteers for testing and prototyping purposes. GGG has decided to contract B@W on a "time and materials" basis for the development of their new software.

The key deliverables associated with this application are as follows:

- Permitting people to subscribe to receive a box on a one-time or monthly basis. For a monthly basis, a period of subscription is required.
- Allowing staff to design Booty Boxes and schedule them for availability.
- Allowing subscribers to pause or cancel their subscriptions.
- Allowing subscribers to view previous Booty Boxes from any of the three store fronts.
- Allowing staff to validate proposed Booty Box contents against store inventory
- Sending notifications to subscribers and storefronts when boxes have not been collected.
- Tracking delivery of Booty Boxes for customers and storefronts.
- Allowing subscribers to rate items they have received.
- Allowing storefront owners to identify the difference between cost to the store and perceived value to the subscriber.

Understanding that you are new to this area, the Thought Leader (CEO) for B@W has asked you to put together a plan for a user focused investigation into the topic. You are expected to explain how this problem statement can be turned into a more rigorous requirement specification. You are **NOT** required to write this specification document, only to come up with a plan for how it is to be developed. It is expected to be user focused and incorporate regular checks for approval with GGG management.

Given that you will be managing a new team, you can recruit your own team members. In particular, there will be a round of recruitment aimed at choosing the development team. As part of this recruitment, you will be expected to put together a set of four role specifications for the team you want to build. These role specifications should list key skillsets (no more than four per role), expected weight of contribution to the project (full time or part time, or task based contract), and previous qualifications and experience. When you have set out your person specifications, you should assign the hypothetical candidates to the sprints and timeboxes associated with your development methodology.

You have available a pool of testers and clients as part of the *B@W* staff and regular clients, and you will be expected to make reference to these when it comes to setting up your project structure. As with your staff, you can define the person you want for each phase and they will be recruited as needed. However, within *GGG*, you will need to collaborate with a named person in the company structure.

Great Gifts for Geeks Personnel:
- **CEO** (Zoe Kennington) – She is the driving force behind the project and the budget holder. She has time put aside in her busy schedule to be available for this project, but travels a lot for work, seeking out new designers, producers and trends. She is happy to make a couple of the staff available for the project on a part-time basis, and empower them to make decisions.
- **Accounts Manager** (Bryn Davies) – He has been with the company for 9 months and handles all the accounts and payroll.
- **Sales Manager** (Ewa Bakowski) – Ewa has been with GGG since it began. Based at the Glasgow branch, she is an experienced retail manager and understands all aspects of the bricks and mortar business.
- **Senior Sales** (Brian Jones) – Brian has been working in the Aberdeen branch for 3 years. He is a confirmed geek who reads comic books and plays video games in his non-working hours.
- **Senior Sales** (Lewis Campbell) – Lewis has been working full time at the Glasgow branch since it opened. He has a thorough knowledge of the business and used to work as an offshore engineer before making the switch to retail.
- **Senior Sales** (Tracey Cameron) – Tracey has been working full time at the Edinburgh branch for the past year. She has a lot of work experience in independent retail stores.
- **Sales Assistant (**Mark Milligan) – Mark has been working as weekend sales staff at the Glasgow branch for the past 6 months. He is a full time Computing student at Glasgow University.

Tasks

Task 1 – 25 Marks

The CEO of GGG understands that you are new to both app design and software development within this business context. As such, she would like you to critically discuss your chosen development methodology and explain why it is appropriate for a user-centred project like this application. Your report should outline the EIGHT (8) principles of DSDM Atern **and** evaluate how these principles will be applied to the project.

This task requires 500 words.

Task 2 – 12 Marks

Create the person specifications for the FOUR (4) hypothetical people you will look to recruit to the project. For each of these people, you should define:

- Skills **(1 mark)**
- Experience **(1 mark)**
- Weight of contribution **(1 mark).**

This task requires 300 words.

Task 3 – 13 Marks

You have been asked to explain the importance of the Business Visionary role in the Solution Development team and have been asked to identify a suitable individual to perform the *Business Visionary* role in the Solution Development Team. You have been given a list of FOUR employees to choose from for this role:

- Zoe Kennington
- Ewa Bakowski
- Brian Jones
- Mark Milligan

Provide a response which:
- Explains the role and importance of the Business Visionary. **(5 marks)**
- Identifies a suitable candidate for the Business Visionary role from the four people listed above. **(2 marks)**
- For each of the three people who were not selected, provides TWO (2) reasons why they would not be suitable for the role. (**6 marks)**

This task requires 400 words.

Task 4 – 25 Marks

Produce an annotated diagram that shows the iterative involvement of: (1) each member of the team; (2) the tasks with which they will be tasked; and (3) how the software will be prototyped. The diagram should also show how users are to be incorporated into the process and which members of Social Interaction will be involved. Do this with relation to the Identify → Plan → Evolve → Review iterative development cycle.

Task 5 – 25 Marks

Provide a plan for the project, with the expectation this will be presented to the senior management team of Great Gifts for Geeks You should provide information on the following key elements:

- Timeboxes **(5 marks)**
- Estimates **(5 marks)**
- Expected sprints **(5 marks)**
- Anticipated deliverables **(5 marks)**

You should also provide a completed Project Approach Questionnaire **(5 marks)** that addresses each of the key elements and provides your view as to where the criteria have been met.

The word limit for the entire coursework is 2,000 words.

Submission requirements

A word-processed document 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 documents *What is Academic Misconduct? Guidance for Candidates* and *Avoiding Plagiarism and Collusion: Guidance for Candidates* 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?	❑