

ITEC301 Deliverable 1

Project Proposal

Student Name:	Johann Bekker
Student Number:	YJPCWYF29
Project Title:	E-commerce website for The Biltong Pantry
Submission Date:	21/02/2020

Contents

1.1 INTRODUCTION	3
1.2 NEEDS/PROBLEMS	4
1.3 GOALS/OBJECTIVES	5
1.4 PROCEDURES/SCOPE OF WORK	6
1.5 TIMETABLE	7
Overview of the Gantt chart	9
<i>Deliverable 1</i>	9
<i>Deliverable 2</i>	10
<i>Deliverable 3</i>	11
1.6 BUDGET	12
How the budget will be managed	13
1.7 KEY PERSONNEL	13
1.8 CONCLUSION	14
1.9 SIGN-OFF	14
1.10 REFERENCE LIST	15

1.1 Introduction

The Biltong Pantry is a business that was started by Susan Van Der Merwe in 2015. The Biltong Pantry sells a variety of meat products during weekends, at a few markets. These markets include the Stellenbosch Slow Market, Oranjezicht City Farm Market and the Blaauwklippen Family Market.

Currently, The Biltong Pantry makes use of a paper-based system to record their daily operations, sales, orders and prices. This system is very inefficient and is prone to errors and valuable information being lost. Furthermore, if the data is not properly recorded and written down, this information might be unusable. This can cause delays, missed business opportunities and loss of revenue.

The Biltong Pantry wants to convert their current paper-based system to an electronic format. More specifically, Susan Van Der Merwe wants to convert The Biltong Pantry to a fully functional e-commerce business that delivers meat products directly to clients. Susan Van Der Merwe hopes that switching to an e-commerce business will give her competitive advantage by reducing operational costs, product costs and reaching a larger audience.

The Biltong Pantry's growth and potential is limited due to the fact that it only sells products at weekend markets: the Stellenbosch Slow Market, Oranjezicht City Farm Market and the Blaauwklippen Family Market. By switching to a database driven e-commerce business, The Biltong Pantry will be able to sell every day of the week and at any time. Therefore, the purpose of this project is to develop a useable e-commerce website for The Biltong Pantry.

The e-commerce website must have several features that must support The Biltong Pantry's growth and operations. This website must include a feature that will allow Susan Van Der Merwe or an administrator to update prices and add new products to the website through the database. Furthermore, potential customers must be able to access this new e-commerce website by using their smartphones and/or desktop computers. On the e-commerce website, potential customers must be able to view The Biltong Pantry's products, prices and specials. Also, potential customers must be able to submit their details on the website and create accounts. Using their accounts on the e-commerce website, customers must be able to add items to their carts and order meat products from The Biltong Pantry. The payment method for these products will be pay on delivery. Also, to increase product awareness, the website must have a share function which will allow users to share products on social media.

1.2 Needs/Problems

- The Biltong Pantry does not have a website/online presence. The Biltong Pantry never had a website/online presence. In 2016, Susan Van Der Merwe hired a developer she found on Gumtree to develop a website for The Biltong Pantry. However, the developer failed to produce a satisfactory result and Susan was not able to use the website. Due to The Biltong Pantry not having an online presence, the business has not been able to grow its customer base and reach a larger audience.
- The Biltong Pantry is currently using an inefficient paper-based system to complete daily operations. The business has been using the paper-based system since its inception. This problem has never been addressed. The owner of The Biltong Pantry, Susan Van Der Merwe, does not know how to implement and use an electronic system. The paper-based system can cause data irregularities which results in delays. Furthermore, the paper-based system makes it difficult to record, store and analyse valuable customer information and buying patterns.
- The Biltong Pantry does the bulk of its business during weekends. Thus, The Biltong Pantry relies mainly on its sales at weekend markets. These markets include the Stellenbosch Slow Market, Oranjezicht City Farm Market and the Blaauwklippen Family Market. The Biltong Pantry never had a fixed location. Susan Van Der Merwe wanted to open a physical store, however it requires a large amount of capital to run and manage. Thus, she decided to not open a store and rather focus on selling at weekend markets. Therefore, The Biltong Pantry's clients can only buy The Biltong Pantry products during the weekends.
- The Biltong Pantry only sells from a few locations. The Biltong Pantry started by only selling at the Stellenbosch Slow Market and currently sells from three markets/locations. However, The Biltong Pantry's growth is limited due to the few locations it can sell from. Thus, clients can only buy The Biltong Pantry's products if they are near one of these few locations.
- Meat products are relatively expensive and The Biltong Pantry hopes to lower the costs of its products. Several external factors have a direct impact on the cost of producing meat products. Some of these factors include: load shedding, rising petrol prices, droughts and fees at markets. These external factors cause The Biltong Pantry to increase its prices to the consumer. Susan Van Der Merwe is constantly trying to reduce costs by buying supplies in bulk. Thus, The Biltong Pantry needs to decrease operational costs.
- The Biltong Pantry wants to deliver products directly to customers. Susan Van Der Merwe wanted to implement a delivery system since 2018 – she realised that she needs to grow her customer base. The business has never implemented such a system. Thus, customers and the target audience are forced to physically drive to one of the locations/markets where The Biltong Pantry is selling.
- The Biltong Pantry does not have the details of its clients. Due to the fact that The Biltong Pantry is using a paper-based system and only sells at weekend markets, the business does not record the details of customers. As a result, the business cannot inform customers about specials and other important information. Susan Van Der Merwe tried to record customer details at the markets, however this is a time-consuming process. Not to mention that some clients' handwriting is unclear and unusable.
- Sometimes the employees do show up at the market stalls and the owner of The Biltong Pantry is then forced to drive to the various locations and conduct business herself. Implementing an e-commerce website will allow the owner of The Biltong Pantry to not be fully dependent on sales staff at the markets. The owner might be able to reduce employees and save money on employee wages.

1.3 Goals/Objectives

- **Goal/objective 1:** Develop a useable e-commerce website for The Biltong Pantry. The database should be database driven. Achieving this goal will allow the business to grow its customer base and reach a larger audience. Not to mention that having an online presence will improve brand awareness of The Biltong Pantry.
- **Goal/objective 2:** Convert the current paper-based system to an electronic database format. The electronic format will allow The Biltong Pantry to analyse and store valuable customer information. This can help the owner with determining business growth and planning.
- **Goal/objective 3:** Customers must be able to access and order from the e-commerce website on any and every day of the week. This will allow the business to increase sales and revenue. As previously stated, currently the business can only sell meat products during weekends, at weekend markets.
- **Goal/objective 4:** Users must be able to use the e-commerce website on both smartphones and desktop computers. This will increase the potential customer base and potential sales.
- **Goal/objective 5:** Potential customers must be able to create accounts on the e-commerce website, view prices and order meat products. This will give The Biltong Pantry the opportunity to reach a larger audience and increase revenue.
- **Goal/objective 6:** Each user will only allowed to have one account on the e-commerce website. The potential customer must log in to his/her account to order products. By limiting each user with only one account will help to prevent confusion.
- **Goal/objective 7:** Potential clients must be able to submit their details on the e-commerce website. If potential clients do not want to create an account they can use this feature if they have any queries regarding The Biltong Pantry's meat products. This will also allow the business to keep the customers up to date on the latest specials and other important information.
- **Goal/objective 8:** Susan Van Der Merwe or an administrator must be able to update prices on the e-commerce website through the database. This will simplify the process of updating prices.
- **Goal/objective 9:** The e-commerce website must include a share function that will allow customers to share products on social media. The share feature can increase traffic to the website and sales. This feature can also increase brand and product awareness.
- **Goal/objective 10:** The e-commerce website must also keep the customers informed about their delivery dates and times. Keeping the customers informed about their orders will help to reduce confusion and lead to a better customer experience.
- **Goal/objective 11:** The e-commerce website must be user friendly and provide a great user experience. A user friendly website will reduce user confusion and improve user perception of the business' brand.
- **Goal/objective 12:** The website's design must be professional and have a suitable colour scheme. As mentioned previously, the owner of The Biltong Pantry had a developer develop a website for her business. One of the issues this website had was the terrible colour scheme. A professional website will positively influence the public's perception of The Biltong Pantry's brand.
- **Goal/objective 13:** The project must be completed within the pre-determined budget and schedule. This will help improve the reputation of the development team and the project manager. Completing the project within budget and schedule will also reduce costs and improve relations with the client.

1.4 Procedures/Scope of Work

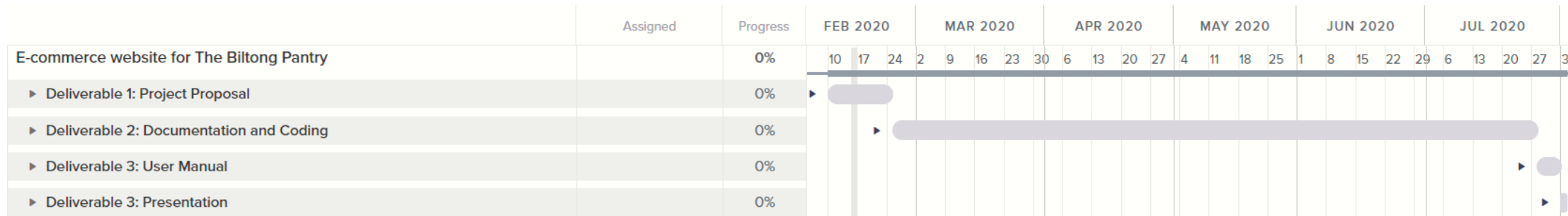
- A meeting needs to be held with the client to discuss the business and its needs/problems.
- Regular meetings need to be held with the project sponsor/client. This is to keep the project sponsor/client up to date on progress.
- The entire system needs to be planned and the schedule must be created. The planning process is mainly done during deliverable 1 which needs to be completed by 24/02/2020.
- All system requirements need to be identified, including the goals and objectives of the project.
- The budget and all costs must be calculated.
- Key personnel and team members must be identified.
- The e-commerce website needs to be designed. This can be done by developing GUI prototypes. Prototyping and designing is done during deliverable 2 which needs to be completed by 27/07/2020.
- Before a deliverable can be considered complete, each deliverable must be signed off by the client.
- The e-commerce website needs to be developed using the following languages: SQL, HTML + CSS, PHP and JavaScript. The coding and developing process is performed during deliverable 2.
- The e-commerce website needs to be tested for errors before it can be deployed. The testing process is included in deliverable 2.
- The user manual needs to be created and the e-commerce website needs to be presented. This is part of deliverable 3 which needs to be completed by 03/08/2020.
- Acceptance testing needs to be done to ensure that the e-commerce website complies with The Biltong Pantry's business requirements. The owner of The Biltong Pantry needs to evaluate the system to determine if it will suit her business' needs.
- Train the staff members and the owner how to use the new system. These users will be trained over the course of a few days. The training process can be constant as the users can contact the development team if they have any queries regarding the e-commerce website.
- Maintain the e-commerce website after it is deployed. Maintaining the e-commerce website will be a constant process. The e-commerce website will be maintained through regular updates.

1.5 Timetable

	Description of Work	Start and End Dates
Deliverable 1: Project Proposal	<ul style="list-style-type: none">• Meet with client and learn about the business' background.• Identify and document all of the business needs and problems.• Determine all of the project goals and objectives.• Identify the basic requirements.• Determine and document the project's procedures/Scope of Work.• Develop a timetable/schedule for the work that needs to be done.• Calculate and determine an appropriate budget for the project.• Identify key personnel and suitable team members for the project.• Meet with the client to get project confirmation and deliverable sign-off.	10/02/2020 – 24/02/2020
Deliverable 2: Documentation and Coding	<ul style="list-style-type: none">• Write an introduction for the deliverable and describe what it entails.• Design two Graphical User Interface (GUI) prototypes for the e-commerce website.• Meet with the client and let him/her choose one of these prototypes/designs.• Develop Class Responsibility Collaborator (CRC) cards.• Draw an Enhanced Entity Relationship Diagram (EERD).• Draw a Context Diagram.• Draw a Use Case Diagram.• Complete the database design.• Code /develop the website using: PHP, HTML, CSS, JavaScript and MySQL.• Take screenshots of the e-commerce website's code.• Meet with the client to get deliverable sign-off.	25/02/2020 – 27/07/2020

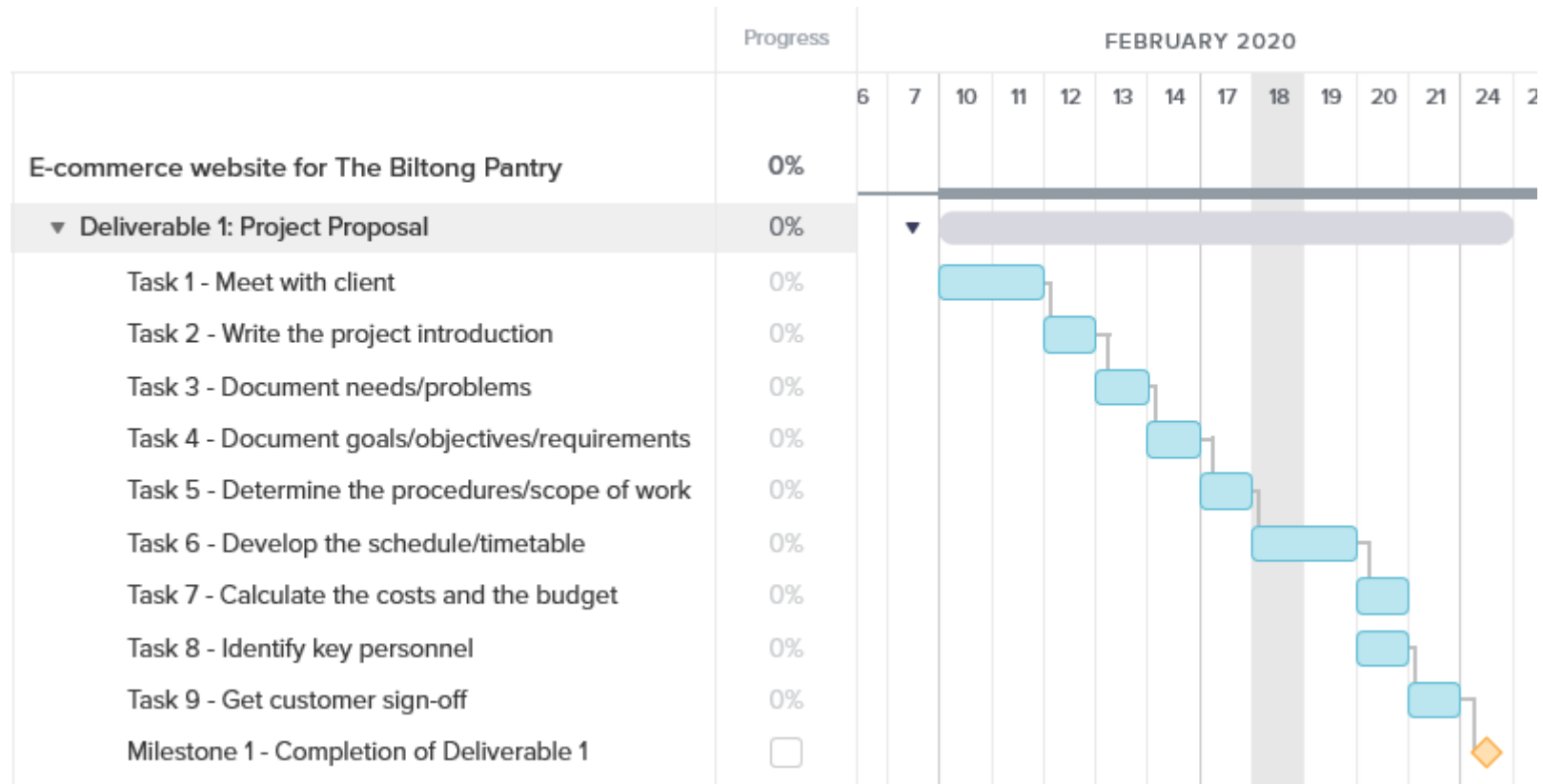
Deliverable 3: Presentation and User Manual	<p style="text-align: center;"><u>Write the User Manual:</u></p> <ul style="list-style-type: none"> • Write an introduction for the user manual. • Describe how to access the e-commerce website – for both users and the admin. • Describe how to add, remove and update products on the website. • Explain the website features and operations. • Explain the shipping options and deliveries. • Explain the actions involved with receiving and executing orders received from the e-commerce website. • Explain the payment options available. • Describe how website traffic and other statistical information can be analysed and viewed. • Write a section on how to set up the website. <p style="text-align: center;"><u>Present the project:</u></p> <ul style="list-style-type: none"> • Explain the client, the business and its background. • Explain the problems/needs of the business. • Demonstrate the website and all of its features and functionality. • Explain any difficulties encountered and how they were solved. • Explain what could have been improved or done better. 	28/07/2020 – 03/08/2020
--	--	-------------------------

Overview of the Gantt chart:



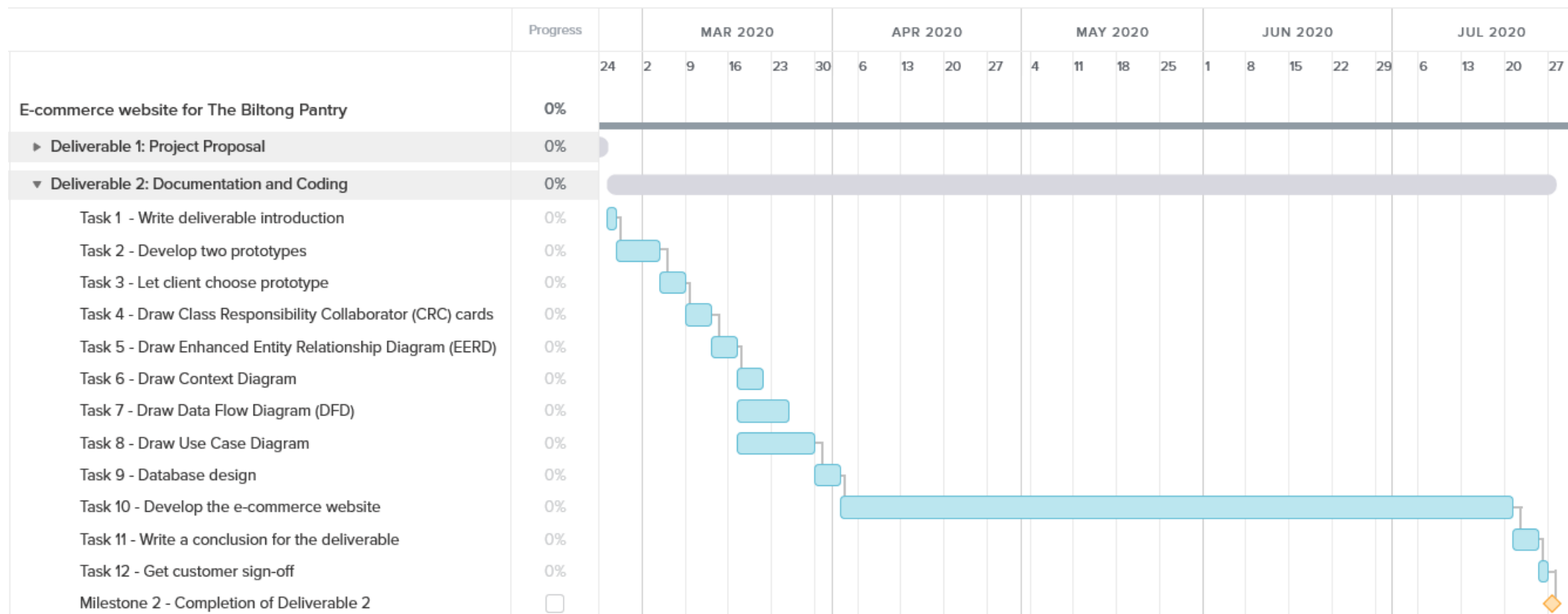
Source: (Gantt.com, n.d.)

Deliverable 1:



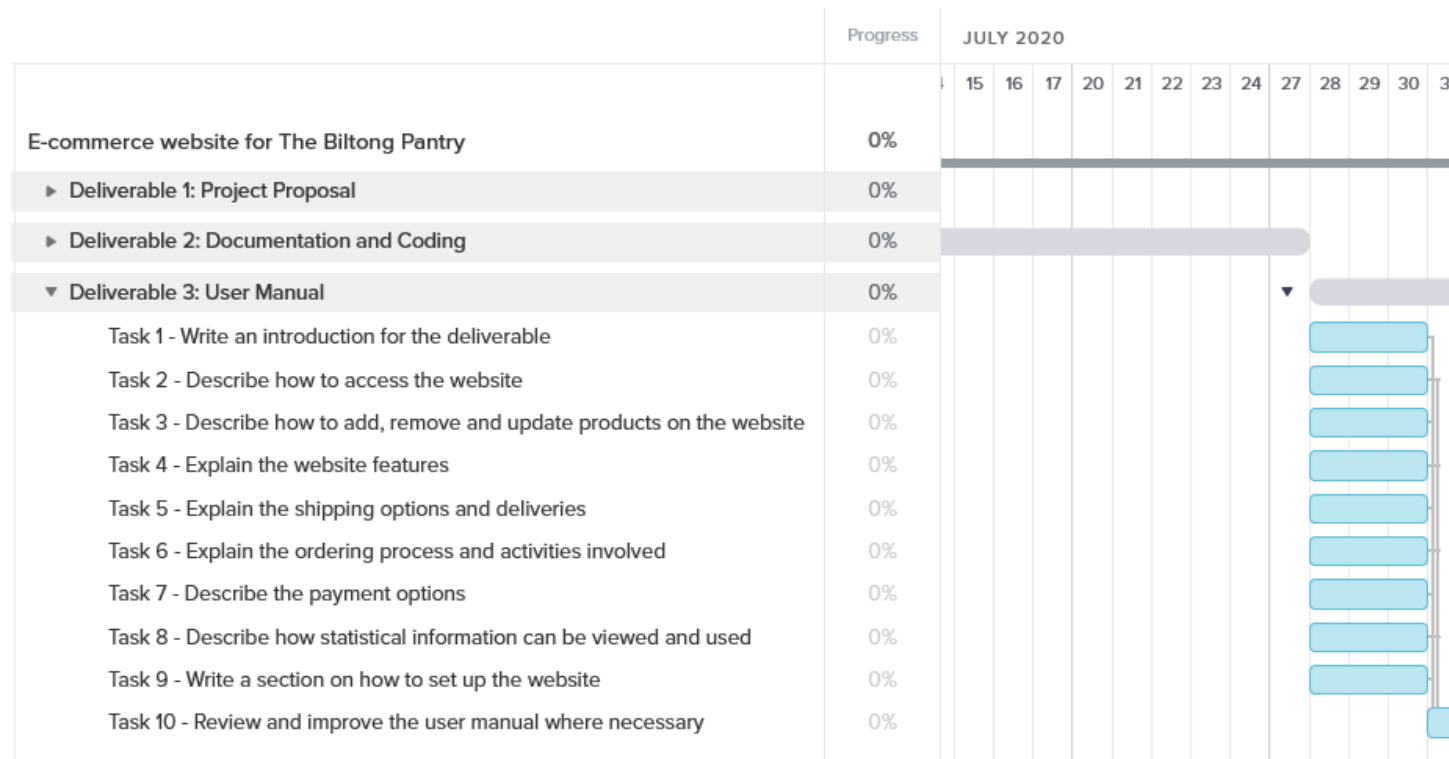
Source: (Gantt.com, n.d.)

Deliverable 2:

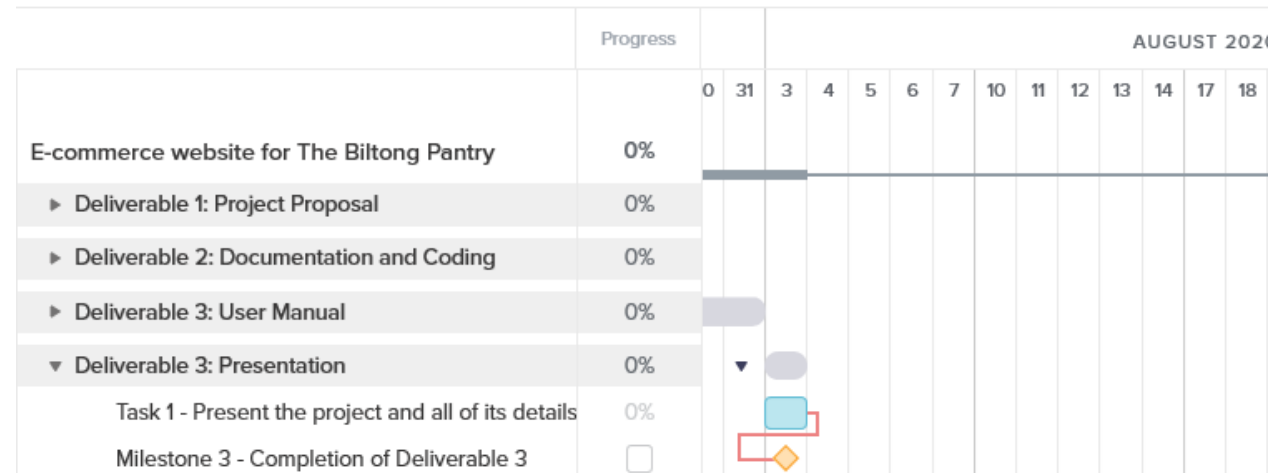


Source: (Gantt.com, n.d.)

Deliverable 3:



Source: (Gantt.com, n.d.)



1.6 Budget

	Description of Work	Cost (R)
Deliverable 1	<ul style="list-style-type: none"> Meet with client and learn about the business' background. 	R500
	<ul style="list-style-type: none"> Identify and document all of the business needs and problems. 	R500
	<ul style="list-style-type: none"> Determine all of the project goals and objectives. 	R600
	<ul style="list-style-type: none"> Identify the basic requirements. 	R400
	<ul style="list-style-type: none"> Determine and document the project's procedures/Scope of Work. 	R800
	<ul style="list-style-type: none"> Develop a timetable/schedule for the work that needs to be done. 	R650
	<ul style="list-style-type: none"> Calculate and determine an appropriate budget for the project. 	R400
	<ul style="list-style-type: none"> Identify key personnel and suitable team members for the project. 	R100
	<ul style="list-style-type: none"> Meet with the client to get project confirmation and deliverable sign-off. 	R400
Deliverable 2	<ul style="list-style-type: none"> Write an introduction for the deliverable and describe what it entails. 	R100
	<ul style="list-style-type: none"> Design two Graphical User Interface (GUI) prototypes for the e-commerce website. 	R1000
	<ul style="list-style-type: none"> Meet with the client and let him/her choose one of these prototypes/designs. 	R300
	<ul style="list-style-type: none"> Develop Class Responsibility Collaborator (CRC) cards. 	R350
	<ul style="list-style-type: none"> Draw an Enhanced Entity Relationship Diagram (EERD). 	R350
	<ul style="list-style-type: none"> Draw a Context Diagram. 	R350
	<ul style="list-style-type: none"> Draw Data Flow Diagram. 	R600
	<ul style="list-style-type: none"> Draw a Use Case Diagram. 	R800
	<ul style="list-style-type: none"> Complete the database design. 	R400
	<ul style="list-style-type: none"> Code/develop the website using: PHP, HTML, CSS, JavaScript and MySQL. (Testing included). 	R20000
	<ul style="list-style-type: none"> Write a conclusion for the deliverable 	R100
	<ul style="list-style-type: none"> Meet with the client to get deliverable sign-off. 	R400
Deliverable 3	<ul style="list-style-type: none"> Write an introduction for the user manual. 	R100
	<ul style="list-style-type: none"> Describe how to access the e-commerce website – for both users and the admin. 	R100
	<ul style="list-style-type: none"> Describe how to add, remove and update products on the website. 	R100
	<ul style="list-style-type: none"> Explain the website features and operations. 	R100
	<ul style="list-style-type: none"> Explain the shipping options and deliveries. 	R100
	<ul style="list-style-type: none"> Explain the actions involved with receiving and executing orders received from the e-commerce website. 	R100
	<ul style="list-style-type: none"> Explain the payment options available. 	R50
	<ul style="list-style-type: none"> Describe how website traffic and other statistical information can be analysed and viewed. 	R50
	<ul style="list-style-type: none"> Write a section on how to set up the website. 	R100
	<ul style="list-style-type: none"> Project presentation. 	R100
Contingency reserve		R5000
Total costs/budget		R35000.00

How the budget will be managed:

- All requirements and documents surrounding the project will be recorded and signed-off by the client before starting the development process (Alexander, 2017). This will ensure that there is no scope creep and hidden costs that might cause the budget to be overrun (Alexander, 2017).
- A contingency reserve of R5000 will be included in the budget (Alexander, 2017). The contingency reserve is a cash buffer that is set aside to cover any hidden costs that might occur that was not budgeted for (Alexander, 2017).
- Every two weeks, the total hours worked on the project and costs will be calculated (Alexander, 2017). This will be compared to the projected cost to ensure that the costs do not exceed the budget (Alexander, 2017). Other key performance indicators will also be used to ensure that the project is up to standard (Alexander, 2017).
- If some tasks are taking longer than expected or when unexpected issues arise, the scope of the project might need to be changed (Bunner, 2017). This is to ensure that the project does not exceed the budget (Bunner, 2017).
- The schedule will be closely followed by using the Gantt chart (Bunner, 2017). This is to ensure that the project is completed on time and within budget (Bunner, 2017).

1.7 Key Personnel

Stakeholders	Name [and Company]	Contact Details
Client	Susan Van Der Merwe [The Biltong Pantry]	082 558 6322
Sponsor	Susan Van Der Merwe [The Biltong Pantry]	082 558 6322
Project manager	Johann Bekker [Software Unlimited]	072 092 4916
Team	Dennis Liebenberg, Louis La Grange, Jean Le Roux, Frederick Lochner	

1.8 Conclusion

The aim of this project is to develop and implement an e-commerce website for The Biltong Pantry. The project will be divided into three main phases called deliverables. Each of these deliverables need to be completed in order and within the stipulated completion dates. The e-commerce website to be developed must provide The Biltong Panty with all the capabilities needed to grow its customer base, update product details, increase revenue, improve brand awareness and analyse customer information. The Agile Software Development Lifecycle (SDLC) will be used to develop the e-commerce website and achieve all stated objectives on schedule and within budget.

1.9 Sign-off



Susan Van Der Merwe, Project Client



Johann Bekker, Project Manager

Date: 18/02/2020

Date: 17/02/2020

1.10 Reference list

1. Alexander, M. (2017). *Project management: 5 tips for managing your project budget*. [online] CIO. Available at: <https://www.cio.com/article/2406862/project-management-project-management-4-ways-to-manage-your-budget.html> [Accessed 15 Feb. 2020].
2. Apm.org.uk. (n.d.). *Agile project management*. [online] Available at: <https://www.apm.org.uk/resources/find-a-resource/agile-project-management/> [Accessed 14 Feb. 2020].
3. Bunner, A. (2017). *How to Manage Project Budgets: Four Tips - Clarizen*. [online] Clarizen. Available at: <https://www.clarizen.com/manage-project-budgets-four-tips/> [Accessed 15 Feb. 2020].
4. Burek, P. (2008). *Creating clear project requirements*. [online] Pmi.org. Available at: <https://www.pmi.org/learning/library/clear-project-requirements-joint-application-design-6928> [Accessed 15 Feb. 2020].
5. Buttrick, R. (2009). *Project Workout*. 4th ed. Pearson Education UK, p.138-144.
6. Dcosta, A. (n.d.). *How to Write a Scope of Work - A Practical Guide with Example*. [online] Brighthubpm.com. Available at: <https://www.brightbhubpm.com/project-planning/106059-tips-and-strategies-for-writing-a-scope-of-work-document/> [Accessed 14 Feb. 2020].
7. Ece.rutgers.edu. (n.d.). *Software Engineering Project Proposal*. [online] Available at: <https://www.ece.rutgers.edu/~marsic/Teaching/SE/proposal.html> [Accessed 15 Feb. 2020].
8. Gantt.com. (n.d.). *What is a Gantt Chart? Gantt Chart Software, Information, and History*. [online] Available at: <https://www.gantt.com/> [Accessed 15 Feb. 2020].
9. MacKay, J. (2018). *9 Steps to Write a Scope of Work (SOW) for Any Project and Industry | Planio*. [online] Planio. Available at: <https://plan.io/blog/scope-of-work/> [Accessed 15 Feb. 2020].
10. Mathis, K. (n.d.). *Five Goals of Every Project*. [online] Project Smart. Available at: <https://www.projectsmart.co.uk/five-goals-of-every-project.php> [Accessed 15 Feb. 2020].
11. Milosevic, D. (2003). *Project Management ToolBox: Tools and Techniques for the Practicing Project Manager*. John Wiley & Sons, pp.176-178.
12. ProjectManager.com. (n.d.). *How to Create a Project Proposal - ProjectManager.com*. [online] Available at: <https://www.projectmanager.com/academy/how-to-make-a-project-proposal> [Accessed 15 Feb. 2020].
13. Scheduling guide for program managers. (n.d.). Diane Publishing, pp.19-32.
14. Short, J. (2018). *How Clients Can Help With Custom Software Development*. [online] WebRevelation. Available at: <https://www.webrevelation.com/blog/how-clients-can-help-with-custom-software-development> [Accessed 15 Feb. 2020].
15. Vitez, O. (2017). *Project Management Budgeting Tools*. [online] Bizfluent. Available at: <https://bizfluent.com/list-6353471-project-management-budgeting-tools.html> [Accessed 15 Feb. 2020].