



Minima
B A S I C S

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1

Executive Summary

1. Executive Summary

Minima Basics is an ecommerce company that was founded in 2019 by Joanne Ly, a Concordia University alumnus who majored in marketing. She started the company with the goal of helping others feel organized, focused, and inspired, in office environments by selling desk organizers and many other aesthetic stationeries. As the company grew, some inefficiencies in Minima Basics' information systems arose that were previously insignificant as a smaller business; however, as the client base grew, these inefficiencies became more prominent.

As members of Team 4's consulting team, we were tasked with analyzing Minima Basics' information systems. The subsystems included are: (1) Generate Sale, (2) Process Payment, and (3) Fulfill Order. This report details the analysis we conducted including the fact-finding techniques and methodologies used, the data flow diagrams created, and the PIECES analysis conducted to help identify and solve our client's problems.

A key element of our analysis included identifying the system's user requirements. These requirements are divided into two categories: non-functional requirements and function requirements. The system's non-functional requirements include usability from the front end and back end, security, performance, and maintainability. Its functional requirements include being third-party integration friendly, and mobile friendly as well as provide relevant, accurate and real-time data. Our analysis aims to optimize Minima Basics' information system in order to meet these user requirements.

The analysis indicated that there were certain business processes that proved inefficient and led to the insufficient handling of information about product inventories. Thus, this report also details our proposals for changes and improvements to Minima Basics' information systems in order to solve the problems identified in the PIECES analysis. In summary, these recommendations include:

1. Standardize process for inventory tracking
2. Create budget to track financials

By implementing these recommendations, Minima Basics will have better optimized three of their subsystems. The company will be able to more efficiently track inventory levels and update their online catalogue accordingly. This will effectively eliminate the need to manually email and notify customers about product availability since this information will automatically be available online. Another benefit stems from Minima Basics currently not having a spending budget; by implementing a budget, they will have the opportunity to manage their spending better. In addition, by using a weekly or monthly budget, Minima Basics will be able to better track everything such as in the inputs and outputs to the business.

2

Client Background

2. Client Background

Minima Basics¹ was founded in 2019 by Joanne Ly, a Concordia University alumnus who majored in marketing. It is an ecommerce business that sells desk organizers and various other stationery and can be found on <https://MinimaBasics.ca>. The reason behind the creation of this company is because the founder wanted to help women stay on track and motivated through organizing with intention. She started this business because she was sick of feeling trapped by clutter and distractions that surrounded her in her workspace; after a few conversations with her friends, she realized that she wasn't the only one feeling this way. The idea behind Minima Basics was to create simple, modern, aesthetically pleasing home-office goods. The motivation of the company is to help individuals feel organized, focused, and inspired when it comes to sitting in front of a desk or in a home office.

Minima Basics currently only employs one person--that is the founder and owner, Joanne Ly; thus, she was our main and only contact throughout the course of the project. As a one-woman team, she takes responsibility for everything from ordering supplies from suppliers to contacting her customers if the product is out of stock. Since the founding of Minima Basics in 2019, Joanne has enjoyed helping others by providing them the means to feel focused and inspired, two ideals she greatly values in a workplace.

¹ Refer to Appendix A for Thank You Letter, Final Thank You Letter, & Client Contact Information



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3

Team Management

3. Team Management

Team management was an integral factor to Team 4's success in this project. With it, we were able to perform in cohesion and effectively complete all the required deliverables for this project. The more collaboration among the team members, the more success we were able to achieve. Our methods in team management started immediately after our team was formed. This section expands into our team's contract, team dynamics, team meetings management, time management, and other speculations.

Team Formation

Team formation is typically the most decisive step in a project as it determines the tone for the rest of the project. For a large project such as this, it was imperative to look for members with similar time availability and complimentary skills. Our team was formed from a survey - created by our professors - that was taken at the beginning of the semester. We were all matched due to a similar schedule. Even though all six members were strangers to each other, we all showed motivation to commit to a hard-working and cohesive team in order to deliver a detailed project report for our client.

Team Contract

To set a foundation for expectations and anticipated behavior, we all drafted and revised our team contract. The contract² sets standards for our responsibilities, attendance, meeting structure, and consequences in case of poor performance or poor

² Refer to Appendix B for Team 4 Contract

behavior. The team tacitly agreed on one member to be the team leader due to his more extroverted personality. The team leader did not micromanage the team but instead emphasized collaboration and autonomy. Every team member was considered a project manager with their own knowledge and experience. The contract also established a formal structure that we all followed throughout the semester. However, the most important rule was for everybody to enjoy their time working together while being curious and learning valuable knowledge and lessons.

Team Dynamics

There were no major issues within our team. All members were encouraged to share their opinion, questions, comments, or concerns without any judgement. Everybody was willing to compromise when needed and was ready to provide reasonable justification for any aversions to the contract (e.g., if someone will be late for a meeting due to an exam from another class).

Each team member was expected to contribute to weekly tasks. Sometimes we all had similar answers to a given task. In this event, we would vote as a team for the member whose contribution fit the scope of the task most accurately; the work with the most votes became the team's work. Occasionally, we would all have different approaches to a given task. In such a case, we would have a team discussion and compile the best part of all approaches to form a comprehensive work.

Team Meetings

As stated in our contract, we held our weekly meetings on Friday morning, from 10:00 AM to 11:30 AM. The meetings were all held online on Google Meets. Every session,

the team leader would set up an agenda for the topics to discuss during the meeting. Another member was responsible for being the scribe; she would take detailed notes of the discussion, including the tasks completed and to be completed. All these notes were then stored on our Google Drive folder, under a folder called “Meeting Minutes”³. Furthermore, even though we have agreed to meet weekly each Friday, if the team needed another meeting to have further discussion, we would schedule an extra meeting during the week according to everybody’s schedule.

Team Challenges & Solutions

As stated before, there were no major issues and conflict between members. The only challenge we faced was that some members were quieter than others. This would lead to some meetings where the team leader would be the only one talking and the members would only respond when spoken to. However, to tackle this problem, the team leader would encourage team members to talk by addressing them directly during the meetings. Also, from time to time, the team leader would talk about casual topics or share his experience of something. This would cause team members to react and to share their own experience. Ultimately, creating a non-formal conversation where everybody would participate. Knowing that we might see each other in future classes such as BTM 495 or BTM 496, we can confidently say that we would be comfortable working with each other.

³ Refer to Appendix C for Meeting Minutes

Team Organization and Tools ⁴

A key reason to our team's success and organization was the use of a deliverable tracking tool made by the team leader. This tool was a Google Sheet where it tracked the status of the project deliverables. Similar to a dashboard, this Google Sheet had the most up to date information (e.g., agreed deadlines, % of tasks to be done, etc.). Each team member could put an input to let the team know about anything regarding the progression of the project. This further helped the team to stay on track for all deadlines.

Another key contributor to the high quality of our project is the use of the shared folders within Google Drive. Every document that we produced, even draft versions of deliverables, were stored in it. This allowed each member to have quick access to any files. Furthermore, as we were all working remotely, these shared folders gave everybody a sense of organization. Finally, our team used Facebook Messenger as our main form of communication.

⁴ Refer to Appendix D for Deliverables Tracking, Shared Google Drive, and Facebook Messenger Chat

4

System Investigation

4. System Investigation

System Description

A system is a collection of several components that are organized together to achieve a common goal. They usually have three basic properties; these are (1) having a purpose, (2) having a cohesive bond between the components, and (3) operating routinely. A system can be used to collect, store, and retrieve data, and produce information. It can also be divided into smaller parts called subsystems.

Systems can be classified into three categories:

1. Abstract/conceptual or physical
2. Natural or artificial
3. Closed (only interacts within the environment) or open (+ feedback and control)

Since some terminology can be complex, a glossary of terms⁵ was prepared by Dr. M. Buyukkurt and Dr. S. Ahuja for additional context and information. Furthermore, any initial information that is related to the scope of the project can be found in the project proposal⁶

⁵ Refer to Appendix E for Glossary of Terms

⁶ Refer to Appendix F for Project Proposal

System Components

System - The system is a summarized explanation of Minima Basics' main function of operation expressed in the Context Level data flow diagram. It showcases the flow of data into a single process.

Subsystems - A system consists of many subsystems that interact with each other to accomplish a goal. Every subsystem has its own entities. Here are some subsystems that were discussed during the first meeting with Minima Basics:

- Generate Sale
- Process Payment
- Fulfill Order
- Market Product
- Develop Public Relation

Boundary - Boundaries separate the system from the environment. It illustrates what is included in the system and what is excluded from the system. For example, in our project the boundaries are limited to the three subsystems Generate Sale, Process Payment, and Fulfill Order and excludes other subsystems, such as manufacturing and development.

Entity - An entity is the smallest unit of a system; it is basically a process that cannot be divided and represents one and only task. For instance, in our project an example of an entity would be in Subsystem 2 – Process Payment, the process called “Verify payment method”, entails that the system has received the payment information from the customer, and it is now verifying if the information is correct or not.

Input - An input is a flow of data from the environment to the system. For example, when a customer visits Minima Basics' website to buy a product, the system asks the client to create an account or register as a guest. In response, the customers send their details (such as their name, address, email, etc.) to the system as an input.

Output - An output is a flow of data from the system to the environment. For instance, when a new customer is sending their information to the system, it goes through a process called "Check Customer Status"; the data of the customer coming out of it (which is an output) goes into a datastore.

Interface - An interface is the data flow between subsystems. This communication is a back-and-forth interaction from one process of one subsystem to another process of another subsystem. In this project, in the Process Payment subsystem, when a customer has finished paying for their order, the information is recorded into a receipt marked as paid. This information is then stored into its respective database. The same information is then used to start the fulfill order subsystem. This example shows us the impact of the information used by two different subsystems.

Buffer - Buffers are extra resources at the interfaces used to reduce the dependence between subsystems. Basically, it is data stored within the system that is not needed immediately by the following process. In our case, the datastore "Invoices" in subsystem 1 and subsystem 2, allows us to store the invoice details and reuse them in the second subsystem to start the payment process.

Feedback - Feedback is an optional or voluntary input from external entities. It can be either positive or negative. For example, in the “Generate Sale” subsystem, a customer (external entity) can choose whether to put in a promotion code or not.

Control - Controls are internal mechanisms the system uses to respond to feedback so that it can maintain itself. In our analysis, we did not find any examples of a control in the system, but an example of a control could be trying to get in contact with a customer that wasn’t happy with his/her purchase and try to understand why.

Constraints - Constraints are the limited resources of the system. During our project, we realized that the owner does not have any budget and does not track her inventory. This can complicate things as funds are not allocated properly and additional costs are incurred. Another constraint was the human capital where at Minima Basics, there is one employee who is also the owner. During large volume orders, this constraint could limit the performance and speed to fulfilling customer orders.

Scope - The scope of our project consists of analyzing the following three subsystems of Minima Basics:

- Subsystem 1: Generate Sale
- Subsystem 2: Process Payment
- Subsystem 3: Fulfill Order

We have excluded all other subsystems previously discussed/mentioned to reduce the complexity and to focus on problems related to these subsystems.

5

Fact-Finding Techniques

5. Fact-Finding Techniques

Fact finding techniques consist of collecting data or information by using various techniques such as sampling, questionnaires, interviews, observations, and other tools and methods. When developing a new system or implementing changes to a current system, a system analyst may have a hard time discovering problems and may face constraints. This is when fact finding techniques are very useful as they make it easier for system analysts not only to figure out what are the problems that they are facing but also what are the opportunities and requirements for the project.

In our case, the use of those techniques helped us gather the best possible amount of information needed for us to diagnose the current system and clearly identify issues and opportunities. The following section highlights and justifies the fact-finding techniques we used throughout the semester such as interviews, document collection, user journey, and observation.

Interviews

During the term, we had multiple meetings with the client; they were conducted virtually on Google Meets to maintain the safety of the team members and the client during the Covid-19 pandemic. For accuracy purposes and to ensure that all information was captured, each interview was recorded with permission from the client. Before and after each interview, group meetings were held to brainstorm, develop questions, and to discuss how to use the recorded information.

The meetings were held with Joanne Ly, the owner of the Minima Basics. For all interviews, the team leader prepared PowerPoint presentations⁷ that were given to the interviewee in advance. This gave the interviewee time to prepare a detailed answer to our questions. During the interview, the team took notes and saved these documents in a shared Google Docs folder called “Interview Minutes”⁸.

We started the first interview by introducing ourselves to the client and trying to establish a positive relationship. We inquired what, if any, expectations she had for the consultation project. We then proceeded to explain our own expectations and tried to gather all the information necessary about the background story of the business. We also provided a brief explanation of technical terms to the client to help her better understand the scope of the project. Our focus was mostly on gathering information on the business, such as its system, processes, and the way tasks were done in order to create a narrative and a data flow diagram.

For the second interview, we shifted our focus on detailed questions regarding each of the subsystems. We asked the most relevant questions as possible as our goal was to capture the most information for each subsystem. Throughout the questions, answers, and discussions, we would also note symptoms and problems if the owner mentioned anything about it.

⁷ Refer to Appendix G for Client Interview Power Point Presentations

⁸ Refer to Appendix H for Interview Minutes

On the third interview, we prepared a final draft version of the DFD. The goal of this interview was to have a review with the owner and ask follow up questions. It is noted that during the third interview, we briefly went through some DFD concepts in the beginning. During this interview, we had prepared many follow up questions to tackle some confusions. Most of the questions were well addressed and we were able to reflect any relevant changes into our DFD. Again, from the discussions in between each question and answer, we were able to capture user requirements, symptoms, and problems.

We also used the interviews as a way of getting feedback from our client about the project. After each interview, we would have sessions where we would analyze and compile all the data collected.

It must be noted that we have only interviewed one person as Minima Basics consists only of one employee, which is also the owner.

Collected Documents ⁹

Through the progression of this project, we were able to collect a few important documents of Minima Basics' system. Our client's system's foundation is within Shopify and her website. The collected documents were mostly the processes within the third subsystem: Fulfill Order. While reviewing the collected documents, we developed a better idea of what is happening once a customer has paid for their order. We were able to

⁹ Refer to Appendix I for Collected Documents

determine that the client is using a simple and efficient system when dealing with data management.

User Journey ¹⁰

Another fact-finding technique that we used was user journey, which consisted of roleplaying as a customer and going through the Minima Basics website to find out if there any inefficiencies, symptoms, or issues throughout the typical customer journey. This roleplay also helped us understand the interactions between the system and the customer.

This journey involved exploring Minima Basics' website. We ran into several problems; for instance, when browsing the product catalogue, a customer could add an unavailable product to their cart. There was no information about the product's availability. The user journey not only helped us identify new problems but also helped us understand some functions of the website that were not clear like the company's points system, the affiliate program, and how the promotion codes were applied. Other than that, there were no major problems within the customer's journey.

Observation

Finally, the team performed an observation of Minima Basics' backend of the system. Having a live view of the system really helped to enrich the team's understanding of the business' system. The goal of the observation was to see on hand the step by step

¹⁰ Refer to Appendix J for User Journey

processes that the owner partakes in to fulfill a customer's order just after they have finished paying for their order. We were able to take meaningful notes and ask relevant questions to the owner to identify potential symptoms and problems.

6

Models of the Current System

6. Models of the Current System

Current Subsystems

Subsystem 1: Generate Sale ¹¹

As an e-commerce store, Minima Basics' main subsystem is to generate sales through its website. The website contains a catalogue of products. The journey begins with the customer browsing the website and selecting products to be added to the shopping cart. The website updates the shopping cart to reflect any changes made by the customers. Once the customer is ready to checkout, Minima Basics checks if he/she is an existing customer or a new customer. The customer has three options: (1) to sign into their account if they have an account already, (2) to sign up for a new account or (3) to enter name, email, address, and phone number and be set as a guest. If the customer chooses option #2, the website will store the information in its customer database. If the customer decides to be recognized as a guest, Minima Basics will temporarily store the information into its guest's database for shipping purposes.

Once relevant customer information has been entered, Minima Basics will calculate the price of the shopping cart. The system pulls out information from its products' prices database. At this moment, the customer has the opportunity to enter a promotion code if they have one. The promotion code will be applied according to the price. If the customer is a returning customer, they also have the chance to use their

¹¹ Refer Appendix K for Subsystem 1: Generate Sale

accumulated points to get a discount on their purchase. Minima Basics has a database for both promotion codes and points.

Once the price has been calculated, Minima Basics then asks the customer for their shipping preference. Immediately after the shipping method has been selected, a purchase order is generated and then stored in its respective database. After the purchase order, Minima Basics will then create an invoice that will be sent to the customer and stored in its respective database.

Subsystem 2: Process Payment ¹²

In the process payment subsystem, the customer is taken through the steps to pay for their order. To start with, the system picks the information needed from the invoice database. Then it asks the customer to enter their payment method. Once the payment information has been entered, Minima Basics verifies if the card entered is valid. The payment information is sent to their financial institution to be verified. If the payment information is rejected, then Minima Basics will request the customer to enter a valid card again. The new card is then verified and if the payment information is accepted, then the system dispatches the payment. Immediately after executing the payment, a receipt is generated. This receipt is sent to the customer and stored in its respective database. If the customer was not recognized as a guest, then Minima Basics will calculate the total

¹² Refer to Appendix K for Subsystem 2: Process Payment

points earned from the customers' purchase. The point tally is then stored into its respective database.

Subsystem 3: Fulfill Order ¹³

Finally, after paying for the order, the next steps are all the processes taken in place to fulfill the order of a customer. The journey continues on with Minima Basics notifying the owner of an order with information from the receipts database. After being notified of a new order, the owner proceeds to check the product availability from her warehouse, where all the products are stored. If the product is unavailable, she updates the catalogue to reflect the stock level on the website and then she personally notifies the customer via email about the unavailable products and that their ordered product is expected to be delayed in terms of shipping. If the ordered products are available, then she picks and packs the order. A packing slip is printed immediately after the order is packed. This packing slip is stored in its respective database for future reference. Afterwards, the owner creates a shipping label. All the information related to the shipping label is taken from the third-party courier/postal service and stored in its respective database. Once the shipping label is created, the owner proceeds to print a "thank-you" note. Finally, the completed order is then shipped to the third-party courier/postal service for the last mile delivery. The customer receives a tracking number for their order as well.

¹³ Refer to Appendix K for Subsystem 3: Fulfill order

Furthermore, when the products are unavailable, the owner will order new batches of inventory of those unavailable products from her suppliers. Once the products are received from her suppliers, she stores them into her warehouse.

Use Case Narrative

Subsystem 1: Generate Sale ¹⁴

The customer goes to the Minima Basics website. They can log in immediately if they have an account. The website's customer database checks if the credentials are correct. After that the customers browse the online catalogue and add the products they want in the shopping cart. The customer's cart database will be updated if modifications are made by the customer. Once the customer is ready to check out, they are asked by the website to put their email, address, and phone number. Afterwards, if the customer has a promotion code, they can enter it . The promotion code database will check if the promotion code is valid. The customer is then brought into the shipping method selection. After the shipping preference has been chosen, the customer can go to the next step, which is to checkout.

Subsystem 2: Process Payment ¹⁵

Once the customer is ready to pay, the invoice database triggers the payment method and the customer is asked to select their preferred payment method. The

¹⁴ Refer to Appendix L for Use Case Subsystem 1: Generate Sale

¹⁵ Refer to Appendix L for Use Case Subsystem 2: Process Payment

customer then enters their payment details. Immediately after, their financial institution verifies the payment details entered by the customer. If the payment details are not valid Minima Basics will ask the customer to re-enter new payment details. However, if the payment details are valid, the payment is immediately processed, and the customer receives a receipt. The same receipt is also stored in its respective database. Finally, if the customer logged into their account to make their purchase, they will receive an amount of reward points. The reward point database will be automatically updated at the end of the transaction.

Subsystem 3: Fulfill Order¹⁶

After the customer has paid for the order, Minima Basics notifies its owner about a successful transaction. The owner proceeds to check the product availability of the ordered products in her warehouse. If the product is unavailable, she updates the catalogue and notifies the customer. If the ordered products are available, then she picks and packs them. After packing the product, the owner prints a shipping label which she gets from her third-party courier/postal service. Immediately after, she prints a “thank you” note and finalizes the package. Once everything is complete, she ships the order to her third-party courier/postal service for the last mile delivery. The customer will have already received a tracking number for their order.

¹⁶ Refer to Appendix L for Use Case for subsystem 3: Fulfill Order

7

Problem Analysis

7. Problem Analysis

PIECES Framework ¹⁷

The PIECES analysis is a framework that investigates problems in an information system. It gathers a vast amount of information and classifies it as a problem, opportunity, or directive. This classification is split into six categories that follow a sequence and are used to analyze a system's design and processes. Each of these components holds the same weight when measuring the impact of a certain problem. In general, problems are mapped to one or more of the PIECES categories. The acronym of PIECES is based on the following six categories: **P**erformance, **I**nformation, **E**conomic, **C**ontrol, **E**fficiency, and **S**ervice.

The PIECES framework is a useful tool for a business/system analyst to understand the current problems that a company faces in their system. Analysts begin the process by examining the system and identifying the problems/symptoms that are occurring via fact finding techniques (e.g., interviews, observations, collected documents, etc.) After, they classify it in the relevant PIECES categories (e.g., Performance, Information, Economic, Control, Efficiency, and Service) that are affected. Then, the next step is to identify the underlying issues that lead to the problems, opportunities, or directives. By completing these steps, analysts achieve a critical understanding of the system which allows them to generate new ideas to improve the system. These proposed

¹⁷ Refer to Appendix M for PIECES Table 1

changes will be made and they will improve the overall quality of the system. In relation to our project, we have applied the PIECES analysis accordingly to determine real causes behind the issues the company has been facing. The results will greatly help the team in recommending an answer that will help Minima Basics resolve its issues.

PIECES Categories

Performance: This category represents the overall performance of the system by indicating if it is running properly or not. It is measured by throughput and response times.

Information: The information category refers to the need to improve or correct the data by making it relevant to users.

Economic: The economic category refers to the effectiveness of the system in terms of costs and profits.

Control: This category represents the degree of security and supervision required to run the system.

Efficiency: The efficiency category refers to the system capacity to produce outputs with minimum waste in materials, supplies, labor, and time.

Service: This category represents the functionality and usefulness of the system to the end-users.

General Problems Identified

Minima Basics' current system has issues that do not affect the DFD. These issues are minimal problems because they do not affect the deliverables of the system. In other words, the system can still function without fixing these issues. Despite that, we will analyze these issues with the PIECES framework because there is improvement to be made that can potentially enhance the quality of the system.

The first general problem of Minima Basics is that there is no budget for spending. The PIECES categories affected by this problem are information and economics. Minima Basics does not keep track of their budget. Without a budget, the business can have more difficulty reaching their financial goal, easily overspend, and have less financial control.

The second general problem is that Minima Basics occasionally receives damaged products from its suppliers. The PIECES categories that are affected by this issue are economic, control, and service. This issue reduces profit because it costs Minima Basics to replace the damaged supplies. It seems that there is no quality control from the supplier's side since they have some faulty products. If this problem is not addressed, Minima Basics will potentially incur a large sum of expense to replace damaged products.

The third general problem is that Minima Basics has trouble finding new products. This problem is related to the economics category since it affects both costs and profits. With this in mind, Minima Basics can lose the potential to capture some returning customers who wish to purchase Minima Basics' newest product. Furthermore, new markets can be explored or even the current market can be improved. When looking at

the cost perspective, Minima Basics will need to be careful. Costs are unknown or could potentially be high due to not knowing the kind of products.

Initial Symptoms and Underlying Problems

By analyzing the initial symptoms/problems of Minima Basics system, we have been able to identify 6 underlying problems labeled from A to F.

- A** – Inadequate response time
- B** – Lack of relevant information
- C** – Data not captured in time to be useful
- D** – Finances are unknown
- E** – Effort required for task is excessive
- F** – Not a standardized process

These underlying problems are amongst the symptoms and problems. In other words, in Minima Basics' system, many of the symptoms and problems share at least one or more underlying problems. To put an end to these problems from occurring, we must solve them and once solved, the system will greatly improve. We will look at each symptom individually and analyse the underlying problems and pieces categories that affect it.

Symptoms Identified

The first initial symptom of Minima Basics is that out-of-stock products are still listed as “available” on the website and they can be bought by the customer.

The narrative goes as following:

“Products that are out of stock appear as ‘available products’ on the website. These products can be added to the shopping cart and follow the normal processes as if it was a product in stock.”

The underlying problems that affect this symptom are A, B and C. The PIECES categories that affect this problem are performance and information. Underlying problem A is reflected in the performance category because there is a delay in providing products to customers due to the wasted time. Once products are already sold out, Minima Basics will need to order a new batch from their suppliers. Ultimately, this will postpone the delivery date of the customers. Information category is affected by underlying problems B and C. Out-of-stock products are still displayed on the website which is irrelevant to the business because it is misleading and inaccurate. Also, the out of stock product can be added into the shopping cart, it can be processed normally even though Minima Basics has run out of stock.

The second symptom of Minima Basics is the owner must manually update the catalogue to reflect up-to-date stock information on the website. This symptom is a follow up from symptom #1.

The narrative goes as the following:

“The information about out-of-stock products is not reflected on the website until the owner manually updates the catalogue in the backend of the system. Once updated, the out-of-stock product is updated to ‘pre-order’ on the website.”

The underlying problems that affect this symptom are A, C and E. The PIECES categories that are affected by this symptom are performance and efficiency. Underlying problem A is reflected in the performance category because having to manually update the catalogue will increase the response time of the system. The performance of the system to deliver output will be slower because the time taken will be longer. Underlying problems C and E are related to the efficiency category. This process demonstrates that the captured data is inefficient because it is redundantly processed. It serves no purpose in our system because the owner ends up having to manually update the catalogue to deliver an output. Plus, having to update the catalogue by hand requires excessive work. The task becomes inefficient due to the required effort being time consuming and ineffective. In a high inventory turnover scenario, it can have a drastic and damaging domino effect towards the business. Essentially, customers can continuously buy supposedly out of stock products due to the site not reflecting the correct information. This will cause multiple delays in the expected delivery date for the customers' orders. Ultimately, it affects the customer satisfaction as the customers will be told that their products will be delayed.

The third symptom, also the final domino of the previous two symptoms, is the owner must manually notify customers through email if they have purchased a sold-out product.

The narrative goes as the following:

“Customers who have bought products that were out of stock but not marked as ‘pre-order’ (e.g., the owner has not yet updated the website) will be notified by the owner via email saying that they bought an out-of-stock product and will expect a delay on their delivery date.”

The underlying problems affected in this symptom are A, C and E. The PIECES categories impacted are performance, information, and efficiency. Underlying problem A is reflected in the performance category. Having to manually email customers slows down the performance of the system because it takes longer to finish the process. For problem C, the information category is impacted by it because the captured data serves no purpose. The process can only be completed after the owner finishes sending out email manually. Lastly, problem E impacts the efficiency category. Having to manually email customers increases the length of time of the process. Also, it requires excessive work which is time consuming and inefficient.

The fourth symptom of Minima Basics is that items stock out regularly. The underlying causes of this problem are B and C. The categories of the PIECES analysis that are affected are information and economics. Underlying problem B is impacted by information because Minima Basics stock out faster than they can order new supplies. As we saw in symptom 1, the website will display the available products even though the business is out of stock. Information captured will be irrelevant because it is inaccurate, and the process cannot deliver outputs until the item has been reordered. Economics category is affected by Minima Basics inventory being exhausted often. By having stock

outs during high demand periods, the business will lose potential sales. Ultimately, incurring a high amount of cost due to the need to order new batches of product without a demand. This affects underlying problem C due to missing the chance to capture data to be useful.

The fifth problem of Minima Basics is that inventory is not tracked. The underlying problems that come from it are B, D and F. The PIECES categories that are affected are information and economics. Underlying problem B affects the information category because there is no inventory control. There is no relevant information to track because the owner does not track any data about inventory. This can lead to multiple problems such as surplus or shortage of products, stockout, shipping errors etc. Underlying problems D and F deal with the economic category. With poor inventory control, it is almost impossible to track costs. Failure to track these costs can lead Minima Basics to have inefficiencies in decision making, higher chance of cash flow error, issues with suppliers etc. Also, having a non-standardized process diminishes the overall quality of the system because there is no guideline to follow. This unorthodox approach of Minima Basics towards inventory can lead to higher costs because the system fails to implement a standardized process employed by many companies which led to error rate being higher.

The sixth problem of Minima Basics is that free products are not tracked. The underlying problems that come from it are B, D and F. The PIECES categories that are affected are information and economics. Similarly, to symptom 5, Underlying problem B affects the information category because there is no tracking. One of Minima Basics' strategies to promote their products is to create giveaways. This strategy is used to increase brand awareness and attract potential customers to the business. While the

approach is good, they fail to collect data for the movement of the inventory. Since there is no information collected, the owner loses an opportunity to use this data to verify the effectiveness of the strategy and to carefully track the business' inventory. Underlying problems D and F deal with the economic category. By not tracking the costs of the free products, costs are unknown. There is no way of knowing if our strategy is worth the investment. The process is also non-standardized because most firms who do a market strategy use analytics to verify their success. Since there are no metrics, our costs may be fluctuating a lot without us knowing because there is no standardized process to tell us.

Lastly, the final problem of Minima Basics is that guest details are only stored for conservation and shipping purposes. The underlying problems for this symptom are B and C. PIECES categories affected by it are performance and information. Underlying problem B affects the performance category because the data is redundantly stored in the system. Guest details are irrelevant to the system because it does not generate any outputs. It is only here for conservation and shipping purposes. This led to storing unnecessary details in the memory of the system. Since the memory could potentially be overloaded, the performance of the system to deliver output will take longer because it must verify inputs that only clog the memory. Underlying problem C affects the information category. The stored data will never be processed into anything that could be meaningful because it is only conserved.

System Owner's Directives

The current system of Minima Basics has many underlying problems that affect processes and data stores. Minima Basics would like to improve their system in the inventory portion of the business, and they would also like to reduce the manual work. These two implementations would greatly improve the quality of the system, resolve many symptoms that were identified, and it will assess the needs of clients and suppliers. For the inventory problem, Minima Basics would like to implement an inventory process that always keeps track of the stock. This will give them up-to-date and accurate information about the current inventory stocks, and it will also help them with the reordering point. This process is crucial for effective inventory management because they will be able save costs and prevent stockout. As for the manual labor used in the system, Minima Basics would like to implement a software. The software could be a program that will automatically make any updates. This will eliminate the use of manual labor and it will improve the user experiences because they will be able to view when the product is unavailable and have an updated catalogue.

8

User Requirements Analysis

8. User Requirements Analysis

In a system analysis project, user requirements are a key element in precisely identifying the system requirements. User requirements must satisfy the user's wishes of what the system must do within specific constraints of the users. If user requirements are not identified correctly, it may hinder the proposed system due to possibly adding complexity rather than adding to solve or enhance the current system problems. A few requirement discovery techniques, such as user journeys and interviews, were used to find functional (what the system should do) and non-functional (qualities and characteristics the system should have) requirements for Minima Basics' information system. As a single person company, the importance of ease of use and understanding, accuracy, and reliability are the most important requirements for the system.

Non-Functional Requirements

Minima Basics' non-functional requirements are the following: usability for the back end and front end, security, performance, and maintainability.

Usability

As an e-commerce, by default, one of the key aspects of the current system where Minima Basics is always open to improvement is its usability. From the first moment where the customer goes into Minima Basics' website to receiving their product, the journey should be intuitive and easy-to-use. Customers should easily browse and find products for them. Once they are ready to check out, the system should be able to guide the customer through its checkout process swiftly and smoothly. It is important for the

system to be easy and simple to use. This will improve the customer's experience and, in the long run, could become a memorable moment for the customer.

Security

Security is an utmost important feature for Minima Basics as all monetary transactions and sensitive data within its system are online. The business' system should be resilient to various kinds of attack, such as DDoS, malware, and potentially fraudulent activities. Minima Basics deals on the daily with sensitive data such as the customer's account passwords, customer's credit card information, and addresses. Therefore, the proposed system should always consider security as it must to always keep the customer's sensitive data confidentiality.

Performance

Performance is always a prime concern for e-commerce businesses like Minima Basics. Fast loading times, infrequent crashes, and infrequent downtimes are some examples of reliable performance indicators. One of the company's goals is to increase its website traffic. Without reliable performance, customers would immediately leave Minima Basics' website. Ultimately, losing potential sales. The proposed system should not negatively affect the performance.

Maintainability

As a small growing company with limited capital spending, maintainability is a characteristic that should be in the system. Any modifications or new features to its system should always consider a reasonably low operational cost. Having a maintainable

system means the business can dedicate its capital to possibly research and expand new products.

Functional Requirements

Minima Basics functional requirements are the following: third-party integration friendly, mobile friendliness, and provide relevant, accurate and real-time data.

Third-Party Integration Friendly

The foundation of Minima Basics' system is within Shopify and its website. Therefore, any modification or new features to its system will need to be third-party integration friendly. In other words, if the new system suggests using something external to its foundation, it should have the capability to easily integrate within Minima Basics' system.

Mobile Friendly

In today's world, it is no secret that a big percentage of the population uses a smartphone on a daily basis. To support Minima Basics' goal to always increase website traffic, the new system will need to be mobile friendly. Namely, all the features that are working well on a desktop will need to work on a mobile smartphone as well.

Relevant, Accurate, and Real-Time Data

By providing relevant, accurate, and real-time data, Minima Basics can make important business decisions and replenish inventory accordingly. The new proposed system should consider the importance of gathering relevant and accurate data.

9

Models of the Proposed System

9. Specifications & Models of the Proposed System

Proposed Subsystems ¹⁸

Following the fact-finding techniques and PIECES analysis conducted, several underlying problems were identified, as mentioned in the Problem Analysis section. Left unaltered, Minima Basics' information systems run the risk of causing further inventory complications as the company grows its client base. Furthermore, as this client base grows, the system may be unable to meet the demands of its users and its user requirements. The following section outlines proposals to improve Minima Basics' subsystems based on the PIECES analysis. By implementing these proposals, Minima Basics will be better equipped to meet its users needs.

Subsystem 1 - Generate Sale ¹⁹

Upon analysis of Minima Basics' first subsystem, it was found that the current process is efficient and sufficient for the company's current scope and user requirements--pending modifications to Subsystem 3. In the current system, stock information was not accurately displayed on the ecommerce website and customers had the ability to order out-of-stock products under the assumption that the products were available and would be readily shipped. With the proposal for the third subsystem and as stated in the PIECES

¹⁸ Refer to Appendix N for PIECES Table 2

¹⁹ Refer to Appendix O for Proposed Subsystem 1: Generate Sale

analysis, Subsystem 1 would only need one modification and that is to add a new data flow for products available to pre-order.

In the proposed system, modifications in Subsystem 3 will enable stock information available on the website to be accurate; therefore, customers will have the option to order products that are in-stock and available, or pre-order products that are out-of-stock and currently unavailable. Once they have decided if they would like to pre-order an out-of-stock product, the product is then added to the same virtual shopping cart that available products are added to. From there, the sale generating process remains the same as the current system.

Subsystem 2 - Process Payment

As with the first subsystem, upon analysis of its data flows and processes, Subsystem 2 was also found to be efficient and sufficient for the needs of the system owner and its other system users. Furthermore, the PIECES analysis indicated that there are currently no existing problems within the subsystem. Therefore, no proposal was made to modify the second subsystem.

Subsystem 3 - Fulfill Order²⁰

The third subsystem being analyzed consists of the processes involved with fulfilling an order once it has been created and paid for. The PIECES analysis indicated

²⁰ Refer to Appendix O for Proposed Subsystem 3: Fulfill Order

that the third subsystem needed the most modifications in order for the system to flow more efficiently.

The first modification involves what happens to the information for paid orders once Minima Basics has been notified of the orders. In the current subsystem, once the seller is notified of an order, the first process done is to check the availability of the products ordered using information from the warehouse data store. Information from unavailable products is used to update the catalogue and then notify the customer of the product's unavailability; information from available products are used to start picking and packing the order. This process was deemed inefficient as it created the unnecessary task of needing to manually email a customer to let them know a product is unavailable when they should have already known that a product is unavailable before confirming and paying for their order.

In the proposed system, the process for checking a product's availability is eliminated. Instead, once the seller is notified about a placed order, the catalogue is immediately updated first and foremost to reflect these changes. As a result, the ecommerce website will reflect accurate information of any remaining inventory that is not yet "reserved" by orders that are already paid for. This also eliminates the need for a process to notify a customer if they ordered an out-of-stock product. Instead, they will see on the website if a product is available and can be ordered, or if it is unavailable and can be pre-ordered.

The next modification involves how inventory levels are tracked on the warehouse side of the system. In the current system, after product availability is checked, the

information about unavailable products goes two ways: (1) to update the catalogue accordingly, and (2) to order more inventory. In the latter path, information comes from both checking the product availability and from the warehouse data store. This information is then processed to create an order for more inventory from the suppliers.

In the proposed system, due to the elimination of the process for checking product availability, the described path for this data flow is no longer viable. Instead, after the catalogue is updated, the order is picked. As the order is being picked, inventory levels at the warehouse are updated accordingly. The information created from these updates are then stored in the warehouse data store for future use when inventory is needed. In that case, that information will be used to order more inventories from the suppliers.

The final modification involves receiving orders from the suppliers. In the current system, Minima Basics will receive their batch order from their suppliers and this information will be stored into the warehouse data store. With the addition of the updating inventory process in the proposed system, the warehouse data store may become overloaded as it receives two different types of information but only outputs one. To combat this, information after receiving an order from suppliers will go through the process of updating inventory accordingly before being stored in the warehouse data store. This process will consolidate information for both decreases in inventory from customer orders as well as increases in inventory from receiving inventory from suppliers.

It is important to note that another key contributor to the problems the system has with tracking inventory is involved with Minima Basics' marketing campaigns. These campaigns involve giving free products to social media influencers as well as product

contests and giveaways held on the company's social media platforms. Due to the scope of the systems being analyzed, improvements to the tracking and distribution of these free products are not reflected in the proposed DFDs. However, this inefficiency can be handled by updating the catalogue and inventory immediately upon starting the process for giveaways similarly to the modifications made in the third subsystem.

Narratives of the Proposed Subsystems

Subsystem 1 - Generate Sale

As an e-commerce store, Minima Basics' main subsystem is to generate sales through its website. The website contains a catalogue of products. The journey begins with the customer browsing the website and selecting products to be added to the shopping cart. **Customers have the option of adding available products to their shopping cart; products that are unavailable have the option of being pre-ordered.** The website updates the shopping cart to reflect any changes made by the customers. Once the customer is ready to checkout, Minima Basics checks if you are an existing customer or a new customer. The customer has three options: (1) to sign into their account if they have an account already, (2) to sign up for a new account or (3) to enter name, email, address, and phone number and be set as a guest. If the customer goes for option #2, the website will store the information in its customer database. If the customer decides to be recognized as a guest, Minima Basics will temporarily store the information into its guest's database for shipping purposes.

Once relevant customer information has been entered, Minima Basics will calculate the price of the shopping cart. The system pulls out information from its

products' prices database. At this moment, the customer has the chance to enter a promotion code if they have one. The promotion code will be applied according to the price if they decide to enter a promotion code. If the customer was a returning customer, they also have the chance to use their accumulated points to have a discount on their purchase. Minima Basics has a database for both the promotion codes and points.

Once the price had been calculated, Minima Basics then asked the customers their shipping preference. Then immediately after the shipping method has been selected, a purchase order is generated and then stored in its respective database. After the purchase order, Minima Basics will then create an invoice which is sent back to the customer and also stored in its respective database.

Subsystem 2 - Process Payment

In the process payment subsystem, the customer is taken through the steps to pay for their order. To start with, the system picks the information needed from the invoice database. Then it asks the customer to enter their payment method. Once the payment information has been entered, Minima Basics verifies if the card entered by the customer is valid. The payment information is sent to a financial institution to be verified. If the payment information is rejected, then Minima Basics will request the customer to enter a valid card again. The new card is then verified again. If the payment information is accepted, then the system dispatches the payment. Immediately after executing the payment, a receipt is generated. This receipt is sent to the customer and stored in its respective database. If the customer was not recognized as a guest, then Minima Basics

will calculate the total points earned from the customers' purchase. The point tally is then stored into its respective database.

Subsystem 3 - Fulfill Order

Finally, after paying for the order, the next steps are all the processes taken in place to fulfill the order of a customer. The journey begins with Minima Basics notifying the owner of an order with information from the receipts database. After being notified of a new order, the owner proceeds to check the product availability from her warehouse – where all the products are stored. If the product is unavailable, she updates the catalogue to reflect the stock level on the website and then she notifies the customer via email about the unavailable products and that their ordered product is expected to be delayed in terms of shipping. After being notified of the new order, she updates the online catalogue to reflect changes to available products as products on the order are now reserved and unavailable at the moment to future shoppers. If the ordered products are available, then she picks the order and then packs the order. As the order is picked, she updates her warehouse inventory levels to reflect the picked products accordingly. This information is then stored in the warehouse. A packing slip is printed immediately after the order is packed. This packing slip is stored in its respective database for future reference. Afterwards, the owner creates a shipping label. All the information related to the shipping label is taken from the third-party courier/postal service and stored in its respective database. Once the shipping label is created, the owner proceeds to print a “thank-you” note. Finally, the completed order is then shipped to the third-party courier/postal service for the last mile delivery. The customer receives a tracking number for their order as well.

Furthermore, when the products are unavailable, the owner will order new batches of inventory of those unavailable products from her suppliers. Once the products are received from her suppliers, she stores them into her warehouse. When Minima Basics receives orders from suppliers, the inventory levels are updated accordingly. This information is also stored in the warehouse. Whenever inventories reach the optimal reorder point, the system owner orders more inventory from the suppliers.

10

Conclusions & Limitations

10. Conclusions and Limitations

The Project

Minima Basics is a small young company created by Joanne Ly, a JMSB marketing alumni, to inspire people to stay on track and organized as well as be the boss of their own environment. Like many businesses, it has a lot of potential to grow, and it has some underlying problems where the company can improve. Although no organization is perfect, everyday is an opportunity to learn something new. For Minima Basics, they could benefit greatly if they undertake the following problems: inadequate response time from the system, lack of relevant information, some data are not captured in time to be useful, finances are unknown, effort required for some tasks is excessive, and not a standardized process. To conquer these problems, we recommend implementing the following solutions in the system: to standardize an inventory tracking process where the owner updates their inventory each time there is a movement of goods, to update the catalogue (website) each time a new order has been received, and to have an established inventory database.

Limitations

The most apparent limitation we have faced is the fact that the company only employs one person, who is also the owner. Due to the fact that she had a background in marketing and not business technology or information intelligence (IT), some answers of our interview questions were limited. We had to explain some basic system concepts before asking questions in order to put in the correct mindset. However, even with this effort, we had to guide her to find the right kind of information that we were looking

for. Therefore, to obtain more information, we had to rely on other fact-finding techniques other than interviews.

Another limitation was a time constraint on the scope of the project. For the scope of our project, we were required to have at least 2 subsystems and we analyzed 3 subsystems. Minima Basics had other subsystems that were available such as marketing a product or developing a public relation. We would have loved to explore more subsystems of the business in order to fully understand the business and assist Minima Basics in improving the business. However, due to our semester having only 13 weeks, we had to choose the most important subsystems and stay within scope of our project to deliver a set of high-quality deliverables. Thus, we did not analyze the accounting process; however, we did identify general problems in our PIECES analysis that would have otherwise been a part of a proposal for an accounting process. This proposal would have included recommendations for how to optimally create a budget in order to track spending habits.

Lessons Learned

In conclusion, after 13 weeks dedicated to the project, we were able to yield insightful results. Each member was able to sharpen and grow their business/system analyst skills, improve on time management skills, expose their abilities in data collection, and perform detailed analysis on findings to form a meaningful recommendation. Not only have we experienced a typical business/system analyst's role, but this project also allowed us to bridge the gap between theory and practice. The typical saying is that students will acquire an abundance of theoretical knowledge. However, students who had

the opportunity to have any form of practical knowledge, would agree that they have obtained a deeper understanding of a concept due to personally experiencing it. With this in mind, we are all confident that this project allowed us to obtain valuable practical knowledge. We will all cherish all the steps taken to accomplish this project and carry it on to our careers.

Throughout the progression of the project, each team member has contributed consistently to produce a high-quality report and project deliverables. Some of us have had the chance to lead a team for the first time and the results were positive. Prior to this class, we all heard rumors that BTM 481 would be very demanding. Yes, the rumors were true. However, all team members would agree that we were able to combat all the negative rumors and pull through because of successful team management techniques, time management, and organization. Our positive experience was apparent as during the middle of the semester, our team was a bit more advanced in terms of our project deliverables when compared to other classmates. Although at the beginning of the semester, some team members were quieter due to personality, this did not affect the team dynamic at all due to the team leader encouraging relatable open discussions during each meeting. As near the end of the project, some members would even openly start new conversation topics.

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11

Appendices

Appendix A

**Initial Thank You
Letter**

**Final Thank You
Letter**

Initial Thank You Letter

Minima Basics
 PO Box 99900 QP 199 782
 RPO MACKAY
 MONTREAL QC H3G 082

To Mrs. Joanne Ly

We are writing you this letter to let you know that we have officially decided to pursue your ecommerce business for our business analysis report. We would like to thank you for giving us the opportunity to work with you. In the following weeks we hope to gain a better understanding of your business to provide you with feedback on how to improve your ecommerce business.

The scope of the project covers major business processes “subsystems” such as 1: Generate sale, 2: Payment process and 3: Fulfill order, that are being used whenever a customer buys from your business.

In order to complete this project, we expect:

1. Interviews/ meeting (8-10 hours in total) schedule with mutual agreements every Friday
2. Client's co-operation for at least 13 weeks until the end of the report
3. Permission to interview the owner of the business process
4. Having access to samples of documents and reports as they are efficient for the project

Throughout the semester, we will be presenting the following:

- A completed report of the system analysis such as documentation and analysis of the businesses information system and proposed system. DFD narrative, user requirements, use case model and PIECES analysis and how data is being stored, processed and collected.
- A proposal of improvements in the businesses current information system which will bring solutions to the problems that the owner has met.
- An invitation to the group oral presentation at the end of the semester

Finally, we would like to let you know that we are pleased to have the opportunity to work with you. We are super motivated to start working with you and your company and hopefully as a team we will be able to help you improve your business further.

Kind regards,

Calvin Yip
Chelsea Leano
Hanan Saad
Lamine Mbengue
Sylvain-Chea Chen
Vaishnavi Patel

Final Thank You Letter

Minima Basics
 PO Box 99900 QP 199 782
 RPO MACKAY
 MONTREAL QC H3G 082

Dear Mrs. Joanne Ly

To start, we would like to thank you for letting our team elaborate on our system analysis report for your Minima Basics. We would like to let you know that the system analysis report is now completed. We appreciate your collaboration and support for this project. Thank you for taking the time from your own personal schedule to help us realize this project.

We cannot be more grateful for your participation and your role as a client during this project. This project gave us more knowledge where we were able to apply all the theory concepts learned in class and apply it to this project through this semester.

Please do not hesitate to contact us or our professors for any concerns or questions you have. Our contact information, as well as the teacher's information will be written at the end of this paper. We thank you for your collaboration into this project.

Sincerely,

Name	Email
Calvin Yip	calvin.cf.yip@gmail.com
Chelsea Leano	chelsea.leano@gmail.com
Hanan Saad	hsaad8592@gmail.com
Lamine Mbengue	mbenguelams@gmail.com
Sylvain-Chea Chen	sylvain-chhen@hotmail.com
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cc: Dr. M. Buyukkurt cc: Dr.Suchit Ahuja	meral.buyukkurt@concordia.ca suchit.ahuja@concordia.ca

Client's Contact Information

Minima Basics	
Name	Joanne Ly
Email	info@minimabasics.ca
Website	https://minimabasics.ca/
Address	PO Box 99900 QP 199 782 RPO MACKAY MONTREAL QC H3G 082

Appendix B

Team 4 Contract

Team 4 - Contract

1. Meeting Coordinates

Meetings will be held every **Friday morning from 10:00 to 11:30 AM**. They will be conducted via online video communication platforms (i.e. Zoom Cloud Meetings or Facebook Messenger). The platform will be decided on a per meeting basis, based on the technical needs of each meeting. Meetings may be extended as needed though members are not required to attend the extension if they have prior obligations. Additional meetings will be scheduled as necessary, given advanced notice.

2. Communication Media:

Outside of team meetings, team communication will be held via Facebook Messenger. Members are expected to respond to relevant messages (e.g. if they are tagged specifically: `@member_name`) within 48 hours of receiving the message.

3. Members

3.1. The team members consist of:

- Calvin Chun Fung Yip
- Chelsea Leano
- Hanan Saad
- Lamine Mbengue
- Sylvain-Chea Chen
- Vaishnavi Patel

3.2. Members are entitled to the following rights:

- Fair and equal treatment from all members
- Majority rule when voting on a decision
- Provide constructive feedback to other members
- Get help or ask for help from other team members
- Free speech to express ideas/opinions without judgment

3.3. Members must respect the following responsibilities:

- Complete tasks on time—meet the set deadlines
- Inform the team of relevant information when it happens (e.g. scheduling issues, problems, difficulty to finish tasks, needing assistance)
- Finish tasks with the best of one's ability
- Follow the contract rules
- Provide due diligence for each task/work—watch out for plagiarism; always cite your sources

Essentially, the expectation from the team is simply to be present when you are needed and remember to ask for help if you need help or if you are unsure of a task.

Most importantly, have fun and enjoy each other's presence.

4. Meeting Responsibilities

4.1. Team Leader

The team will have a **semi-rotational** assigned leader for each scheduled meeting. The team leader will also have a “right hand” person who will assist the team leader with his/her responsibilities.

The team leader’s roles and responsibilities include:

- Managing the time, schedule, and discussion(s) during the meeting.
- Being the spokesperson during the meeting.
- Mediating any conflict during the meeting.
- Ensuring that all team members understand their specified task for the upcoming week.
- Ensuring that the team is organized to move forward to each step of the project - this could include, but is not limited to: preparing the agenda for the meeting, submitting the final copy of each requested submission on Moodle, etc.

4.2. Secretary

The secretary role for meetings will be assigned on a **semi-rotational** basis. Though one of the secretary’s key roles is to take notes, every member is expected to take their own notes during the meetings.

The secretary’s roles and responsibilities include:

- Taking attendance at the beginning of each meeting.
- Ensuring key information and assigned tasks are recorded.
- Filling out **Meeting Minutes** during and at the end of each meeting.
- Organizing and consolidating all members’ notes into Google Docs.

5. Performance Expectations at Team Meetings

5.1. Attendance and Punctuality

Attendance will be recorded each meeting by the secretary in rotation. Each team member is expected to attend and be on time for every scheduled meeting. Remember, it’s not about following rules—it’s about respecting your teammates’ time. Valid reasons for tardiness or absences include faulty internet connection, illness, or personal/family emergency.

Members who expect to be late should:

- Notify the team as soon as possible via Facebook Messenger group chat and give an estimate of how late they expect to be.
- Give at least 1 hour notice if they expect to be more than 15 minutes late.
- Members 15 minutes late or more must give a valid reason for their tardiness.

Members who expect to be absent should:

- Give the team 24 hour notice via Facebook Messenger group chat.
- Members must give a valid reason for their absence(s).

5.2. Participation in Discussions and Task Handling:

Team members are expected to contribute to the best of their abilities during team discussions. We encourage team members to ask questions to drive the discussion further—your thoughts/ideas and opinions matter!

Every team member is expected to be **sufficiently prepared** for upcoming meetings/discussions—when every member is prepared, we can all have an intellectually stimulating discussion.

Every team member is expected to **ask other members for help** and **provide help when asked** when it comes to tasks/questions/confusions, etc., rather than submitting work of poor quality. The team will also have a weekly meeting to review and assess if the tasks were completed adequately or if it needs further revisions.

When it comes to task handling, each project task will be initially assigned to a member depending on their skills. However, this does not mean that the assigned member will be working alone. He/she has the responsibility to oversee the task until its completion. We encourage the members to seek help/assistance when needed. Essentially, assigning the tasks to a specific member is just like appointing the member as the lead “project manager” for the assigned task.

When it comes to assessing members’ work quality, essentially, “we will know when the work is deemed as “quality work” or if it is an “I did it in the last 5 minutes” type of work.

5.3. Consequences

If any of the above rules and regulations are not respected, then the violator will be subjected to consequences. The first instance of violation will result in a warning and a serious discussion with the team leader and the team. The second instance will be a severe warning and another discussion with the team leader and the team. For further instances of violation, the violator will be subjected to poor peer evaluation grades and will be reported to the professor.

6. Guidelines to Improve Effectiveness

6.1. Meeting Guidelines

To have an effective and productive meeting, the suggested format of a meeting should look like the following:

1. Introduction to today's meeting purpose.
2. Review and update the team on the task progress of the previous week.
3. Discussion on difficulties/confusion/uncertainties concerning tasks.
4. Clarify and resolve the difficulties/confusion/uncertainties concerning tasks.
5. Plan for next week's tasks and update on priorities.

Every team member is expected to participate and contribute to each meeting. Again, we encourage all team members to voice their ideas, opinions, questions, etc. in order to have an intellectually stimulating discussion during each meeting.

6.2. Organizational Guidelines

To have an organized team, there will be a schedule planner inside the shared Google Drive where it will show all the relevant tasks, deadlines, and priorities for the upcoming week.

AGREEMENT & SIGNATURES

I, _____, am currently enrolled in BTM 481: Information Systems Analysis Section B Fall 2021, and have read and agreed to the terms and conditions in the Team #4 Contract.

By signing this contract, I, _____, confirm that the rules and regulations set above are fair and are in the best interest of the team to achieve an exceptional quality project.

Failing to respect the above rules and regulations, I, _____, understand that there will be consequences [refer to consequence section].

Date: September 24th, 2021	
Name:	Signature:
Calvin Chun Fung Yip	
Chelsea Leano	
Hanan Saad	
Lamine Mbengue	
Sylvain-Chea Chen	
Vaishnavi Patel	

Appendix C

Meeting Minutes

Meeting # (1)	
Date:	September 24, 2021
Start time:	10:00
End time:	11:30
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Review team contract
2.	Sign contract
3.	Clients?
4.	Client proposals
5.	Class readings

Required Materials/Documents	
• Team contract	

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Team contract • Sign contract • Potential clients • Writing client proposals • Scheduling 2nd meeting • Submitting contract • Class readings
Decisions
<ul style="list-style-type: none"> • Potential 2nd meeting times: Tuesday night, Friday mornings (1st meeting), Weekends
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (11:31), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • ALL MEMBERS - find clients and complete a proposal
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday at 10:00 AM

Meeting # (2)	
Date:	October 1, 2021
Start time:	10:15
End time:	11:15
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1. Client + Proposal 2. Discuss about Week #4 slides + questions? 3. Talk about the DFD exercise	

Required Materials/Documents	
• Client proposals	

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Client proposal • Scheduling meetings with client (client availability) • Client overview <ul style="list-style-type: none"> ◦ Questions for Calvin about client?
Decisions
<ul style="list-style-type: none"> • Choose client (Minima Basics)
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (11:15), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • - Check client availability for interviews • - Add questions to interview list
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday, 10:00 AM

Meeting # (3)	
Date:	Oct. 8, 2021
Start time:	10:00
End time:	10:45
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Thank you letter
2.	Interview questions

Required Materials/Documents	
• Interview brainstorm document #1	
• Interview minutes	

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Thank you letter • Scheduling interview with client <ul style="list-style-type: none"> ◦ Scheduling issues on Thanksgiving weekend?? • Interview questions • Fill out peer midterm review • How to fill record interviews (+ consent from interviewee)
Decisions
<ul style="list-style-type: none"> • Sylvain will record interview meetings
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (10:45), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Letter of appreciation to client • Interview questions final formatting • Peer midterm feedback
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday, October 15

Meeting # (4)	
Date:	October 15, 2021
Start time:	10:00
End time:	11:25
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1. DFDs	

Required Materials/Documents	
• individual brainstormed DFD	

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • confusions/explanation with "way-of-thinking" when creating individual DFDs <ul style="list-style-type: none"> ◦ When is product availability checked? <ul style="list-style-type: none"> ▪ When is the customer notified about product availability? ▪ Can customers cancel out-of-stock orders? ▪ How do pre-orders (out-of-stock products) fit in the DFD? • When does the customer receive order confirmation? Order invoice? • At what point is QA done for products/inventories? • What happens to defective/damaged products from suppliers? • How do customer returns/refunds work? • At what point during the customer order process is MinimaBasics notified (by Shopify) via email? <ul style="list-style-type: none"> • clarifications and questions to ask Joanna in next meeting regarding processes (regarding questions/confusions from above)
Decisions
<ul style="list-style-type: none"> • How to compile/choose the final DFD?
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (11:25), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Revise DFDs for vote (due Sunday) • Add questions to interview brainstorm Google Doc for next client interview
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday, Oct. 22

Meeting # (5)	
Date:	Oct. 22
Start time:	10:00
End time:	11:33
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1. Update team about interview 2. DFD - 2 subsystems 3. PIECES	

Required Materials/Documents	
• 2 part DFDs	

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Teams for DFD walkthrough • DFD checklist for both subsystems • Prep for DFD walkthrough
Decisions
<ul style="list-style-type: none"> • Teams for 2 subsystems
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (11:33), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Reformat Payment DFD • Reformat Sales DFD
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Oct. 29

Meeting # (6)	
Date:	Oct. 29, 2021
Start time:	10:00
End time:	10:33
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Go over individually done DFDs

Required Materials/Documents	
<ul style="list-style-type: none"> • Level 0 DFD • Context Level DFD 	

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Compare DFDs <ul style="list-style-type: none"> ◦ Add customer input (Process 11) • PIECES
Decisions
<ul style="list-style-type: none"> • How to prepare PIECES analysis
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (10:33), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Finalize DFD (context-level, level-1) • Individual PIECES assessment
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday, November 5, 2021

Meeting # (7)	
Date:	Nov. 1, 2021
Start time:	4:16
End time:	6:00
Location:	Zoom Breakout Room
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1. PIECES	
2. Use Case	
Required Materials/Documents	
• Individual brainstormed PIECES	

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Compare PIECES framework • Compile individual PIECES into one template • Start Use Case
Decisions
<ul style="list-style-type: none"> • What are the agreed upon symptoms and underlying issues for PIECES?
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (6:00), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Review accomplished tasks to divide report for Friday meeting • Review notes for Use Case to finalize diagram
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday, Nov. 5

Meeting # (8)	
Date:	Nov. 5, 2021
Start time:	10:00
End time:	10:30
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Divide final report parts for accomplished sections
Required Materials/Documents	
•	Project guidelines doc

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Who will be writing each section for the report?
Decisions
<ul style="list-style-type: none"> • (See assigned tasks)
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (10:30), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Executive summary (Vaishnavi, Lamine) • Client background (Vaishnavi, Lamine) • Team management (Hanan, Sylvain) • System investigation (Lamine, Vaishnavi) • Fact-finding techniques (Lamine, Vaishnavi) • Models of the current system (Chelsea, Calvin) • Problem analysis: PIECES Framework (Sylvain, Hanan) • User requirements (Hanan, Sylvain) • Proposed system (Chelsea, Calvin)
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Monday, November 8 (class breakout room)

Meeting # (9)	
Date:	November 8
Start time:	3:20-3:35, 4:23-5:10
End time:	5:15
Location:	Zoom in-class breakout rooms
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Wait for prof to go over PIECES and Use Case
Required Materials/Documents	
•	Use Case draft PIECES (pt. 1)

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • PIECES (pt. 1) <ul style="list-style-type: none"> ◦ P & DS #s ◦ PIECES pt. 2 • Use Case <ul style="list-style-type: none"> ◦ Remove dependencies between use cases
Decisions
<ul style="list-style-type: none"> •
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (5:10), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Proposed DFDs (based on PIECES): <ul style="list-style-type: none"> ◦ SS1 (Hanan/Sylvain) ◦ SS2 (Lamine/Vaishnavi) ◦ SS3 (Calvin/Chelsea)
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday, Nov. 12

Meeting # (10)	
Date:	Nov. 12
Start time:	10:00
End time:	11:23
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Proposed DFD drafts
Required Materials/Documents	
•	Proposed DFD drafts

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Proposed DFD draft presentations and Q&A
Decisions
<ul style="list-style-type: none"> • PROPOSED Subsystem 1: <ul style="list-style-type: none"> ◦ Keep [Guests] DS? ◦ Add [Send out of stock info] process? ◦ Add [Pre-order product] process • Subsystem 2: <ul style="list-style-type: none"> ◦ CURRENT <ul style="list-style-type: none"> ▪ Add [Add points] process after [Points] DS? <ul style="list-style-type: none"> ▪ Add new DF from [Add points] process to [Customers] DS? <ul style="list-style-type: none"> ▪ UPDATE level-0 for SHARED DS • PROPOSED <ul style="list-style-type: none"> • Add finances?? <p>PROPOSED Subsystem 3:</p> <ul style="list-style-type: none"> • Eliminate [Check product availability] and [notify customer processes]? • Add [Update inventory] process? <ul style="list-style-type: none"> • Update as soon as order is picked to give more accurate reflection of actual inventory levels?
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (11:23), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Proposed DFD Subsystem 1 edits • CURRENT Subsystem 2 edits • Proposed DFD Subsystem 3 edits • Level-0 edits • Update PIECES table 2 • Screenshots of Shopify dashboard
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • November 15 (in-class breakout room)

Meeting # (11)	
Date:	Nov. 15, 2021
Start time:	3:00
End time:	5:00
Location:	Zoom in-class breakout room
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	(sick)

Agenda
1. Proposed DFD edits
Required Materials/Documents
<ul style="list-style-type: none"> • Proposed DFDs

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Edits to proposed DFDs • PIECES (Table 2)
Decisions
<ul style="list-style-type: none"> • Report deadline extended to Friday, November 26.
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (5:01), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Work on individual parts for the report (due Nov. 26) (EVERYONE)
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday, Nov. 19th 2021 @ 10PM

Meeting # (12)	
Date:	Nov. 19, 2021
Start time:	10:00
End time:	10:30
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Final report updates and questions
Required Materials/Documents	
•	Report outline and guidelines

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Final report update and guidelines <ul style="list-style-type: none"> ◦ PIECES <ul style="list-style-type: none"> ▪ What is connectivity? ▪ What are system owner directives? • System Investigation <ul style="list-style-type: none"> ▪ What controls are we using? (<i>examples</i>) ▪ What feedback is the system receiving? (<i>examples</i>) • Fact Finding Techniques <ul style="list-style-type: none"> • What fact-finding techniques did we use? (<i>include user journey/story screenshots</i>)
Decisions
<ul style="list-style-type: none"> • Prepare report questions for professor on Monday's break out room session
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (10:30), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Work on final report (EVERYONE)
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Monday, November 22 @ Zoom in-class breakout room

Meeting # (13)	
Date:	Nov. 22, 2021
Start time:	3:10
End time:	3:40
Location:	Zoom in-class breakout room
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Updates on report
Required Materials/Documents	
•	Proposal report

Minutes
Introduction
<ul style="list-style-type: none">• Leader's opening remarks• Announcements
Issues/Items to Discuss
<ul style="list-style-type: none">• Updates on report
Decisions
<ul style="list-style-type: none">•
Adjournment of Meeting
<ul style="list-style-type: none">• The meeting adjourned at (3:40), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none">• Finish report parts by Friday
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none">• Friday, Nov. 29

Meeting # (14)	
Date:	November 26
Start time:	10:00
End time:	11:30
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Final report
Required Materials/Documents	
•	Final report draft

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • What hasn't been done yet for the final report? • Changes to CURRENT and PROPOSED subsystem 2 • Which members will start the presentation? • Which members will finalize the report?
Decisions
<ul style="list-style-type: none"> •
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (11:30), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Finish all sections by tomorrow (Nov. 27) (EVERYONE) • Finish formatting and revision (Dec. 1) • Finish "beautifying" report (Dec. 4) • Upload parts for PowerPoint presentation (Dec. 3) <ul style="list-style-type: none"> ○ Intro ○ Company background ○ Fact-finding ○ Current system ○ PIECES (table 1) ○ User requirements ○ Proposed system (PIECES table 2) ○ Conclusion <p>Have presentation/script ready to practice/go through presentation (Dec. 3) (EVERYONE)</p> <ul style="list-style-type: none"> ○ Possibility of meeting over weekend (Dec. 4 or Dec. 5) for more practice <p>Presentation (Dec. 6)</p> <p>Hand in electronic version of report, LucidChart files, PowerPoint (Dec. 7)</p> <ul style="list-style-type: none"> • Hand in physical copy of report (Dec. 6 [10-12] or Dec. 9 [11-1])
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Nov. 29 (in-class Zoom breakout room)

Meeting # (15)	
Date:	November 29, 2021
Start time:	3:00
End time:	4:20
Location:	Zoom breakout room
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Report update
Required Materials/Documents	
•	Report PowerPoint

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Updates on report • Updates on PowerPoint
Decisions
<ul style="list-style-type: none"> •
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (4:20), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Finish reviewing report • Finish PowerPoint
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday, Dec 3

Meeting # (16)	
Date:	December 2, 2021
Start time:	7:00
End time:	9:30
Location:	Google Meets
Leader:	Vaishnavi
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	
Lamine Mbengue	x
Sylvain-Chea Chen	
Vaishnavi Patel	x

Agenda	
1.	Finalize formatting of report and appendix
Required Materials/Documents	
• Report (Google Doc)	
• Report (Word doc)	
• Appendices (from shared Google Drive folder)	
• Appendix (Word doc)	

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • Finalize formatting of report and appendix
Decisions
<ul style="list-style-type: none"> •
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (9:30), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Attach screenshots and other relevant appendices (Vaishnavi) • Final report formatting and "beautifying" (Chelsea)
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Friday, Dec. 3

Meeting # (17)	
Date:	December 3, 2021
Start time:	10:00AM
End time:	11:30AM
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Chea Chen	x
Vaishnavi Patel	x

Agenda	
1.	Practice for Oral Presentation
Required Materials/Documents	
•	PowerPoint presentation for project

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • To practice for the oral presentation
Decisions
<ul style="list-style-type: none"> •
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (11:30AM), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> • Make minor corrections after hearing feedback from team leader about the presentation slides
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> • Saturday or Sunday, December 4th or 5th, 2021

Meeting # (17)	
Date:	December 4, 2021
Start time:	12:30
End time:	2:00
Location:	Google Meets
Leader:	Calvin
Scribe:	Chelsea

Attendance	
Calvin Chun Fung Yip	x
Chelsea Leano	x
Hanan Saad	x
Lamine Mbengue	x
Sylvain-Cheah Chen	x
Vaishnavi Patel	x

Agenda	
1.	Practice for Oral Presentation
Required Materials/Documents	
•	PowerPoint presentation for project

Minutes
Introduction
<ul style="list-style-type: none"> • Leader's opening remarks • Announcements
Issues/Items to Discuss
<ul style="list-style-type: none"> • To practice for the oral presentation
Decisions
<ul style="list-style-type: none"> •
Adjournment of Meeting
<ul style="list-style-type: none"> • The meeting adjourned at (2:00), with the agreement of all members present.
Tasks Assigned
<ul style="list-style-type: none"> •
Date, Time, and Location of Next Meeting
<ul style="list-style-type: none"> •

Appendix D

Deliverables

Tracking

Shared Google Drive

Deliverables Tracking

Project Deliverables	Done?	You can use this column to describe the current status of the task (i.e. progression, troubles, etc.)	
		Current State? (Description)	Who Is Assigned?
Concise Narrative	<input checked="" type="checkbox"/>		
Level 1 subsystem	<input checked="" type="checkbox"/>		
Hierarchy DFD	<input checked="" type="checkbox"/>		
Use Case	<input checked="" type="checkbox"/>		
PIECES analysis	<input checked="" type="checkbox"/>		
PIECES narrative	<input checked="" type="checkbox"/>		
Proposed DFD system	<input checked="" type="checkbox"/>		
Final Letter	<input type="checkbox"/>		
Copyright Form	<input type="checkbox"/>		
Peer Evaluation form	<input type="checkbox"/>		
Final Report	<input type="checkbox"/>		
Executive Summary	<input type="checkbox"/>		
Client Background	<input type="checkbox"/>		
Team management	<input checked="" type="checkbox"/>		
System investigation	<input checked="" type="checkbox"/>		
Fact Finding Techniques	<input checked="" type="checkbox"/>		
Models of the Current System	<input checked="" type="checkbox"/>		
Problem Analysis: PIECES Framework	<input checked="" type="checkbox"/>		
User Requirements	<input checked="" type="checkbox"/>		
Specification and Description of the Proposed System	<input checked="" type="checkbox"/>		
Conclusion and Limitations	<input checked="" type="checkbox"/>		
APPENDIX: Use of Glossary	<input checked="" type="checkbox"/>		
APPENDIX: Team Background	<input checked="" type="checkbox"/>		
APPENDIX: Team Management	<input checked="" type="checkbox"/>		
APPENDIX: System Investigation	<input checked="" type="checkbox"/>		
APPENDIX: Fact Finding Techniques	<input checked="" type="checkbox"/>		
APPENDIX: Model of the Current DFD System	<input checked="" type="checkbox"/>		
APPENDIX: PIECES Framework	<input checked="" type="checkbox"/>		
APPENDIX: Specification and Description of the Proposed System	<input checked="" type="checkbox"/>		

INTRODUCTION (Vaishnavi)	0.5
Company Background (Vaishnavi)	2
Fact Finding (Lamine)	2.5
CURRENT SYSTEM (Calvin)	4
PIECES TABLE 1 (Sylvain)	4
USER REQUIREMENTS (Hanan)	2.5
PROPOSED SYSTEM (including PIECES TABLE 2) (Chelsea and Sylvain)	4
CONCLUSIONS (Vaishnavi)	1
	20.5

Deadline: November 27th, 2021

Each time we meet = a checkpoint

DEADLINE for FORMATTING and PACKAGING THE FINAL REPORT:

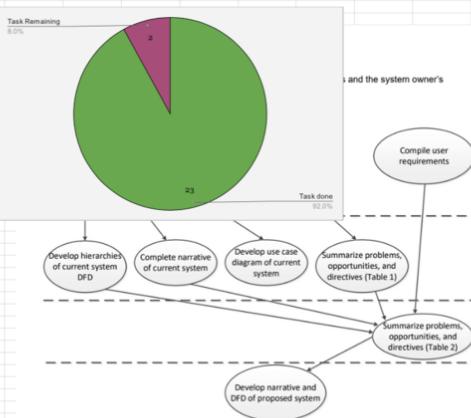
WEDNESDAY, DECEMBER 1ST, 2021

DEADLINE FOR BEAUTIFY REPORT, SATURDAY, DECEMBER 4TH, 2021

DEADLINE FOR POWERPOINT PRESENTATION: FRIDAY, DECEMBER 3RD, 2021

Task done Task Remaining %

23 2 0.92



Shared Google Drive

The screenshot shows a Google Drive interface with the following details:

- Left Sidebar:**
 - New
 - My Drive
 - Computers
 - Shared with me
 - Recent
 - Starred
 - Trash
 - Storage: 3.78 GB of 15 GB used, Buy storage
- Search Bar:** Search in Drive
- Breadcrumb:** My Drive > BTM 481 - Section B FALL 2021 Team #4
- Folders:**
 - Team Contract
 - Project Proposal
 - Models and Analysis (DFD, P...)
 - Meeting Minutes
 - Interview Files
 - Final Project (Report, Presen...)
 - Copyright form signed
 - BTM 481 - Project Sample
 - Collected Documents
- Files:**
 - Schedule of Team #4.xlsx
 - Project Deliverables Tracker
 - Client Contact Info
 - BTM 481 Project Guidelines ...
 - Project Update for this week...
 - Project Update that is due for next week's class...
 - Reading for next week's class...
- Details Panel (Right):**
 - Title:** BTM 481 - Section B FALL 2021 Team #4
 - Details Tab:** Selected, showing:
 - Who has access:** Me, C, H, +1, G
 - System properties:**
 - Type: Google Drive Folder
 - Location: My Drive
 - Owner: me
 - Modified: Sep 20, 2021 by me
 - Opened: 2:17 PM by me
 - Created: Sep 13, 2021 with Google Drive
 - Activity Tab:** Unselected

Facebook Group Chat

Sep 29, 2021, 4:50 PM

hi guys just a reminder that tonight is the deadline to submit the contract review exercise

Also, the topics that we will discuss at our Friday meeting will be the following:

Client + Proposal; Week #4 slides discussion; talk about the DFD exercise

To be prepared, I suggest the minimum is to take some notes and watch the video regarding the DFDs

Take care, see you all on Friday morning~ 🤗

1️⃣ 2️⃣ 3️⃣

Oct 27, 2021, 8:47 PM

Chelsea

Hey guys, I combined EE(manufacturing supplier) and EE(packaging supplier) into just a single EE(Supplier). There was just no way to prevent crossing lines since they were both inputting and outputting to/from the same 2 processes.

1️⃣ 4️⃣

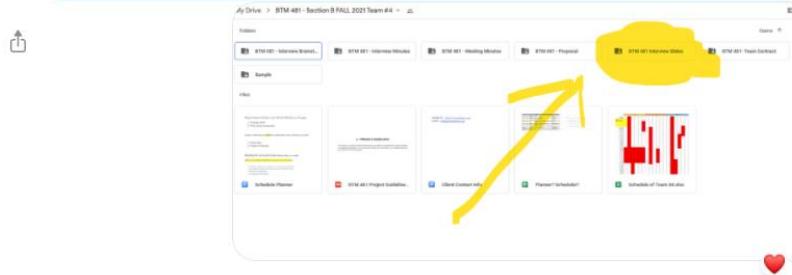
I'd need to add a duplicate supplier just to prevent 1 crossing dataflow which seems like it'd be over complicating it

1️⃣ 4️⃣

Oct 10, 2021, 1:21 AM

hey guys~ I've created a small PowerPoint for our first interview to put some structure. I have stored it in a new folder called "BTM 481 - Interview Slides". Take a look at it, if you have anything you would like to add feel free to do so! - I've tried to include most of the questions that we brainstormed - if you guys have some new questions feel free to add them in the PowerPoint.

I will send this PPT to our client near noon or afternoon



Oct 17, 2021, 11:54 AM

We could extend the deadline, that's okay, but we will need a concised DFD before class tmr, so we can have the feedback from the teacher - that's why I thought Sunday (today) was a reasonable deadline to finish & vote

Oct 18, 2021, 7:54 AM

Hanan



Which program did you use guy to make your DFDs in this look
I wrote mine on a paper but I want to write it using a program

Oct 18, 2021, 9:20 AM

Sylvain



Lucidchart

Oct 18, 2021, 11:51 AM



i can see 5 new revised versions of the DFD, are we ready to vote?



Appendix E

Glossary of Terms

Glossary of Terms

This document is to be included in the report as an appendix. Its purpose is to provide the necessary terminology for the clients while reading the report

SYSTEMS APPROACH

- **Systems approach** is “the way of thinking about the job of managing. It provides a framework for visualizing internal and external environmental factors as an integrated whole. It allows recognition of the function of subsystems, as well as the complex suprasystems within which organizations must operate. Systems concepts foster a way of thinking, which, on the one hand, helps the manager to recognize the nature of complex problems and thereby to operate within the perceived environment. It is important to recognize the integrated nature of specific systems, including the fact that each system has both inputs and outputs and can be viewed as a self-contained unit. But it is also important to recognize that business systems are a part of larger systems- possibly industries, or even society as a whole. Further, business systems are in a constant state of change- they are created, operated, revised, and often eliminated.²¹
- A **system** is a collection of organized, interrelated, and interacting entities or ideas working together to achieve a common goal.
- The scope of the information system analyzed in the project is defined in terms of **system components**:
 - Subsystem: a group of related processes
 - Input: flow of data from the environment to the system
 - Outputs: flow of data from the system to the environment
 - Entity: the smallest business process
 - Interface: flow of data between subsystems

²¹ Kenneth Boulding, “General Systems Theory—the Skeleton of Science,” *Management Science* 2(3): p.197, 1956.

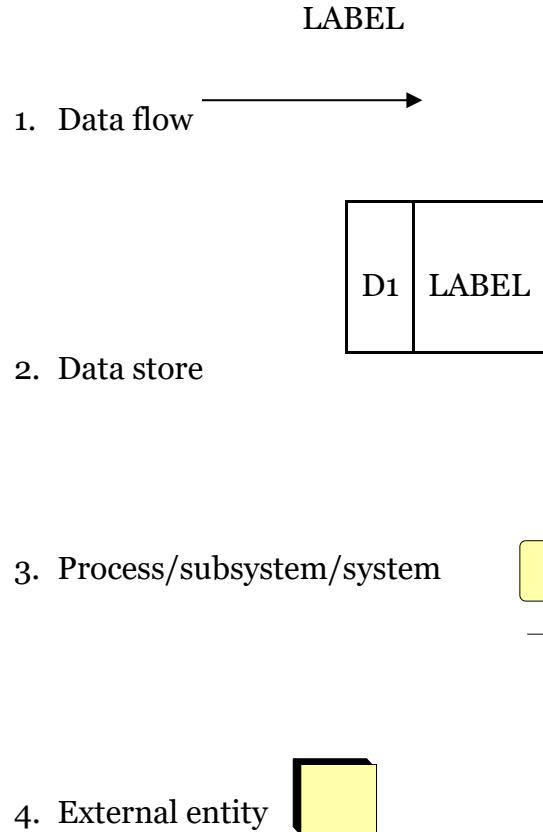
- Buffer: Extra resources at the interfaces used to reduce dependence between subsystems
- Boundary: Separates the system from the environment and defines the scope of the system
- Feedback and control: Reaction of the environment to the system's performance that is voluntary rather than scheduled and required like input and the internal mechanism the system uses to respond to it in order to maintain itself
- Constraint: Limited resources available to the system

LOGIC DEFINITION TOOLS

- Logic definition tools are used to represent the logic inside a process of a DFD. It is used to supplement a process in a DFD when the logic is too complex and cannot be represented in sufficient detail otherwise. The logic definition tool used in this project is Decision Table which summarizes the decision steps as a set of conditions and the corresponding actions. The conditions in a decision table correspond to the inputs to the process in the DFD. The actions in a decision table correspond to the outputs from the process in the DFD.

DFD (DATA FLOW DIAGRAM)

- A DFD is used as a communication tool between the systems analyst and the system user/owner to verify the accuracy of the system analyst's understanding of the current information system. It is also used as a representation of the system proposed by the systems analyst following the analysis of the current system and user requirements. The latter is used in designing the proposed system.
- A DFD is a graphic process modeling tool used to depict the flow of data as it travels from the external entities to an information system and passes through the system's processes and data stores.
- Four basic symbols are used in a DFD to represent its four components of DFD:



- There are two kinds of process modeling: logical and physical. During the systems analysis phase of systems development, logical process modeling is used to represent “what” information processing is done in the system without suggesting how the processes are carried out. During the design phase of system development, physical process modeling is used to represent “how” the information processing is done.

PIECES

- PIECES is a framework that is used to categorize the vast amount of information gathered during the systems analysis phase into problems, opportunities, and directives by the system owner. Each category addresses the need to correct or improve some aspect of the current information system. This aids the systems analyst in generating alternatives.
- PIECES is an acronym comprised of the first letter of each of the six categories of the framework:

Performance

Information (and data)

Economics, control costs, or increase profits

Control or security

Efficiency of people and processes

Service to customers, suppliers, partners, employers...

- The categories of the PIECES framework are neither exhaustive nor mutually exclusive. The same problem/opportunity/directive may be classified in more than one category.

Appendix F

Project Proposal

Minima Basics Project Proposal

<https://minimabasics.ca/>

Business Background

Minima Basics is an online business that was founded in 2019, by Joanne Ly, JMSB alumni who majored in Marketing, that sells desk organizers and various other stationery. The motivation of the company is to help individuals feel organized, focused, and inspired when it comes to sitting in front of a desk or your home office. Currently, the company only has 1 person who manages all business functions such as Operations, Marketing, and Finances.

The chosen sub-systems that will be included in the scope of the project consist of:

- Receiving orders from supplier
- Sorting inventory
- Picking up orders
- Packing customer orders
- Scheduling deliveries for customer and supplier orders
- Shipping customer orders
- Tracking customer orders
- Tracking products inventory
- Processing customer payments
- Generate sale

Known issues:

- There are frequent errors for tracking the inventory
- Picking and packing customer orders are time consuming (not efficient)
- The products are often damaged upon arrival from the supplier – business have to order and send new product to customer
 - This causes delay in delivery dates
- Some tasks are done manually causing frequent errors and loss of accuracy

What will we do to help our client?

We will analyze the business processes through the lens of a systems analyst. We will document and analysis the company information system and the proposed system. Different methodology such as DFD Narrative, User requirements, Use Case Model and PIECE analysis will be used to provide a detailed report. Finally, we will propose improvements in the business' current information system that will bring solutions to problems and meet the user's requirements.

Appendix G

**Client Interview
PowerPoint
Presentations**

Interview 1

Interview #1

Agenda

1. Opening remark + introduction of our team and project
2. Expectations regarding our relationship and project?
3. Background story of MinimaBasics
4. Brief Explanation about System and subsystems
5. Question time!
6. Ending remark

THANK
YOU!
😊

Our Project and Team

- BTM 481: Information Systems Analysis
- Purpose of project
 - System perspective (processes, data flow, etc.)

Any expectations regarding our relationship and project?

Background Story of Minima Basics



- ★ Creation story
- ★ Company's mission
- ★ Current difficulties?
- ★ Future projects/Goals for the next few years?

<p>What is a system and a subsystem?</p> <p>System Def: Organized, interrelated, and interacting entities or ideas that work together to achieve a common goal</p> <p>Subsystem Def: Grouping of related entities of the system</p>	<p>Example: A Bookstore</p> <p>System = the book store</p> 	<p>[Themes: Inventory/Supply]</p> <ol style="list-style-type: none"> 1. What are the step by step processes once you receive an order from a customer? 2. How do you order your products? 3. How do you track the delivery schedule for the products you ordered? 4. How do you track your inventory? 5. Do you have a system of tracking? If so, how? 6. How do you store your products? 	<p>[Theme: Miscellaneous/etc.]</p> <ol style="list-style-type: none"> 1. What happens if there is no stock? How does the system respond? 2. What happens if a customer wants a refund? 3. When thinking about your system, what are your expectations to it? 4. Do you have a system for tracking your financials and its security? 5. How do you keep track of your finances/accounting? 6. How do you ensure quality for your products? (Quality Assurance) 7. Any more dynamics/other questions?
<p>Subsystems - all major business processes within the system.</p> <ul style="list-style-type: none"> • Process new membership • Place orders to publishers • Manage relationships with publishers • Manage employees • Track inventory of books • Sell books to customers • etc. 	<p>Question Time!</p> 	<p>[Theme: Other/etc.]</p> <ul style="list-style-type: none"> • Do you generate some kind of weekly/monthly report? • What are the documents that are being used and generated? • Do you interact with other people outside of the business? • Specific unique problem that you have faced in the past? 	<p>Any more questions? Comments? Anecdote? Realizations? Epiphany?</p> 
<p>A few things to know first...</p> <ul style="list-style-type: none"> • You do not need to answer all questions, if you do not have an answer <ul style="list-style-type: none"> - in case of the question is not clear, let me know! • Feel free to jump in the conversation if you have a comment or anything relevant • Feel free to ask follow up questions during the moment - sometimes we might forget questions if kept too late <ul style="list-style-type: none"> - allow the presenters to take a break before jumping in =) 	<p>[Themes: Customers/sales/orders]</p> <ol style="list-style-type: none"> 1. Walk us through your order process: <ol style="list-style-type: none"> 4. Who takes your order? 5. What are the key steps in my process on how my order 2. Do you have customer accounts/customer details? Where are they stored? 3. How do you keep track of your customer's order? 4. How do you ship your products to your customers? 5. Are you offering any services? 		

Interview 2



Opening Remarks



What is a DFD diagram?

The goal of a dfd is to show the **way information flows through a process or system**

Physical vs. Logical DFD?

Logical = focus on **what** happens in a particular information flow:

- ★ what information is being transmitted,
- ★ what entities are receiving that info,
- ★ what general processes occur,
- ★ Etc.

Physical = focus on **how** things happen in an information flow:

- Software
- Hardware
- Files
- People
- Etc.

Symbols Meaning



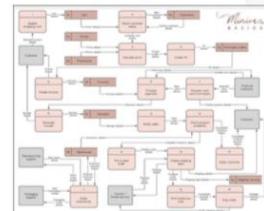
Symbols Meaning (cont'd)

D# Data Store

Think of this as your tiny little database
(the content of your data is stored in here)

External Entity
Any entity that exists outside of the system

DFD Feedback: Let's go through our DFD together



- Any comments?
- Any Questions?
- If there is anything that is unclear please let us know

Question Time!

Deeper Understanding regarding inventory

- when is there a check of inventory - after confirmed payment or before?
- Can customers cancel after they are notified there is no stock for their products?
- What happens to bad products from suppliers?
- Since you update the stock availability manually to reflect it on your website. For the customer who paid before you updated the catalog, they will receive an email update stating that their products will be delayed due to no inventory (backorder). For new customers who are about to add a non-available product - what do they see on the website?

Understanding new functions

Point System

- How do you track the points? Does the customer have to link their minimal basics account with their social media? (Go through step by step)

Affiliate Program

- How does that work? (Go through step by step)

Wholesale and Collaboration

- How does that work? (Go through step by step)

Refund and Credit system

- How does that work? (Go through step by step)

Appendix H

Interview Minutes

Interview # (1)	
Date:	Monday, September 27th, 2021
Start time:	10:50 PM
End time:	11:30 PM
Location:	Google Meet
Interviewee:	Joanne Ly (Owner of MinimaBasics)

Interviewer(s) (which team members are conducting the interview?)	
Calvin Chun Fung Yip	<input checked="" type="checkbox"/>
Chelsea Leano	<input type="checkbox"/>
Hanan Saad	<input type="checkbox"/>
Lamine Mbengue	<input type="checkbox"/>
Sylvain-Chea Chen	<input type="checkbox"/>
Vaishnavi Patel	<input type="checkbox"/>

Agenda
1. Discussion about MinimaBasics' business while interviewer guides interviewee with questions

Required Materials/Documents
•

Minutes
Interview Objectives
<ul style="list-style-type: none"> • To understand the main business functions and some known issues
Updates from Client
<ul style="list-style-type: none"> •
Progress Report: Accomplished tasks
<ul style="list-style-type: none"> • Initial proposal
Progress Report: On-going tasks
<ul style="list-style-type: none"> • N/A
Q & A
<ul style="list-style-type: none"> • What are the top business functions that your business focuses on? • Any known issues related to that specific business function
Tasks for Team Members
<ul style="list-style-type: none"> • Reflect interviewee's answers in the proposal

Interview # (2)	
Date:	October 11, 2021
Start time:	8:00 pm
End time:	8:50
Location:	Google Meets
Interviewee:	Joanne Ly

Interviewer(s) (which team members are conducting the interview?)				
Members	Facilitator	Scribe	Recorder	Attendee
Calvin Chun Fung Yip	x			
Chelsea Leano		x		
Hanan Saad		x		
Lamine Mbengue		x		
Sylvain-Chea Chen			x	
Vaishnavi Patel				

Agenda
<ol style="list-style-type: none"> 1. Opening remark + introduction of our team and project 2. Expectations regarding our relationship and project? 3. Background story of MinimaBasics 4. Brief Explanation about System and subsystems 5. Question time! 6. Ending remark

Required Materials/Documents
<ul style="list-style-type: none"> • Interview PowerPoint (notes, questions, etc.)

Minutes
Interview Objectives
<ul style="list-style-type: none"> • Create a narrative in order to develop a DFD
Updates from Client
<ul style="list-style-type: none"> • Client expectations: <ul style="list-style-type: none"> ◦ learn from our analysis ◦ constant feedback from team (improvements that can be made) • Current difficulties: <ul style="list-style-type: none"> ◦ Increase product options (including apparel)
Progress Report: Accomplished tasks
<ul style="list-style-type: none"> •
Progress Report: On-going tasks
<ul style="list-style-type: none"> • Project overview • Q&A • What the client should expect from the team (& for next meeting)
Q & A
<ul style="list-style-type: none"> • (See interview Powerpoint)
Tasks for Team Members
<ul style="list-style-type: none"> • Upload interview notes onto Google Drive • Write-up basic DFD

Interview # (3)	
Date:	October 20th, 2021
Start time:	8:00PM
End time:	8:45PM
Location:	Google Meets
Interviewee:	Joanne Ly

Interviewer(s) (which team members are conducting the interview?)				
Members	Facilitator	Scribe	Recorder	Attendee
Calvin Chun Fung Yip	x			
Chelsea Leano				
Hanan Saad				
Lamine Mbengue		x		
Sylvain-Chea Chen		x	x	
Vaishnavi Patel		x		

Agenda
<ol style="list-style-type: none"> 1. Opening Remarks 2. Brief Explanation of DFD diagram and its purpose 3. Feedback for our DFD diagram 4. Question Time

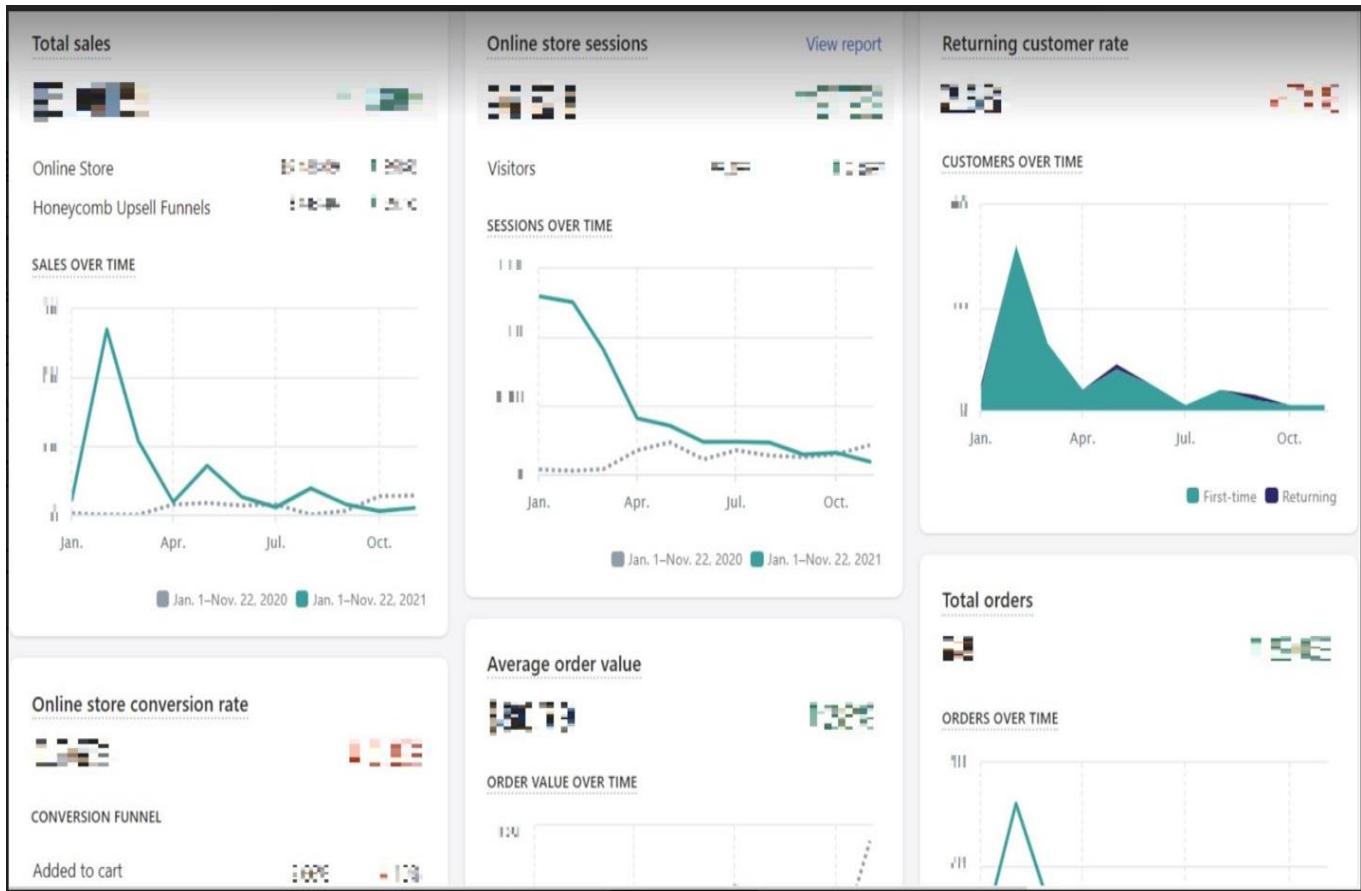
Required Materials/Documents
<ul style="list-style-type: none"> • Interview PowerPoint (notes, questions, etc.)

Minutes
Interview Objectives
•
Updates from Client
•
Progress Report: Accomplished tasks
•
Progress Report: On-going tasks
<ul style="list-style-type: none"> • Project overview • Q&A • What the client should expect from the team (& for the next meeting)
Q & A
<ul style="list-style-type: none"> • (See interview Powerpoint)
Tasks for Team Members
<ul style="list-style-type: none"> • Upload interview notes onto Google Drive • Update the DFD with new information • Start thinking about PIECES

Appendix I

**Collected
Documents**

Dashboard



Purchase Order

[←](#) #MB1103 (Paid) (Fulfilled) Archived

October 8, 2021 at 9:48 p.m. from Online Store [Refund](#) [Return items](#) [Edit](#) [More actions](#) [Previous \(J\)](#)

Fulfilled (1) #MB1103-F1 [...](#)

Location
Home

UPS [Show more](#)

1Z74XY146821399067 [Delivered](#)

 1 Acrylic 2 drawers storage box \$40.00 × 1 \$40.00
SKU: 10001

Paid

Discount	happy 2 years	-\$8.80
Subtotal	1 item	\$31.20
Shipping	FedEx Ground (1.128 kg)	\$16.31
Tax	State Tax 5.3%	\$2.52
Total		\$50.03

Paid by customer \$50.03

Timeline [Show comments](#)

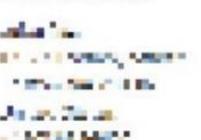
Notes [Edit](#)
No notes from customer

Customer
 1 order

CONTACT INFORMATION [Edit](#)



SHIPPING ADDRESS [Edit](#)


[View map](#)

BILLING ADDRESS
Same as shipping address

Shipping Records

	Order #MB1103 October 8, 2021
SHIP TO 	BILL TO 
<hr/>	<hr/>
ITEMS	
 Acrylic 2 drawers storage box 10001	QUANTITY 1 of 1
<hr/>	
Thank you for shopping with us!	
Minima Basics	
info@minimabasics.ca minimabasics.ca	

Packing Slip

	2	
Expedited Parcel™ Colis accélérés^{MC}		
TO: / À:		
		
<hr/> R2C 2A3 <hr/>		
		
TRACKING NUMBER	4007 6626 7705 8947	N° DE REPÉRAGE
<hr/> <p>Sender warrants that this item does not contain non-mailable matter. L'expéditeur garantit que cet envoi ne contient pas d'objet inadmissible.</p> <hr/>		
FROM / DE: Minima Basics 3695 rue de l'Acadie Bureau 100, Montréal Québec H2T 2M1	36x36x36cm 9.340 KG VEEV (CU)	
MANIFEST NOT REQ MANIFESTE NON REQ		
EST/OEE V2002 3.594 SPEC 3695 V2		P/F: 4007662 A/C
PIN / NIP: 4007 6626 7705 8947 Ref./Réf. 1: Order #1003		
Order No.: / N° d'commande: P203577746		

Shipping Label

Billing and shipping

Billing

TEST TEST
TEST
TEST
TEST
TEST
TEST
TEST
TEST TEST
TEST

Shipping

TEST TEST
TEST
TEST
TEST
TEST
TEST
TEST
TEST TEST
TEST

Payment method

TEST **** * TEST
TEST

Shipping method

TEST \$0.00

TEST

[VIEW ORDER](#)

Follow us on Instagram for more inspiration and transformations.

Minima Basics
info@minimabasics.ca

Receipt

	TEST	\$0.00
	Variant: TEST	
	Weight: 0gr	
	Qty: 1	
	TEST	\$0.00
	Variant: TEST	
	Weight: 0gr	
	Qty: 1	
Order total		
Subtotal price:		\$0.00
Discount:		\$0.00
Shipping price:		\$0.00
Total price:		\$0.00

Confirmation Email



Thank you for your order

Hey ,

We have received your order and will contact you when your package is shipped. Below is your purchase information.

Ready to receive your order? It's almost time.

Here's what to expect:

- Organize your favorite pens & notebooks.
- Make your workspace into a dream home office.
- No more clutter on your desk

We Can't Wait to See You in Action!

Order summary

Order: TEST

Mon, Nov 22, 2021 21:12

Other Collected Documents

	Dashboard Report.jpg		Nov 23, 2021
	packing slip.jpg		Nov 23, 2021
	Purchase Order.jpg		Nov 23, 2021
	Shipping Label.jpg		Nov 23, 2021
	thank you email part 1.jpg		Nov 23, 2021
	Thank you email part 2.jpg		Nov 23, 2021
	thank you email part 3.jpg		Nov 23, 2021

Appendix J

User Journey

User Journey

The screenshot shows the Minima Basics website homepage. At the top, there's a pink banner with the text "Buy CA\$85 to get free shipping" and a close button "x". Below the banner is the Minima Basics logo. The navigation bar includes links for "SHOP ALL", "DESK MAT", "ACRYLIC", "MARBLE", and "ABOUT". On the right side of the header are links for "CAD", a search icon, a user icon, and a shopping cart icon. The main heading "SHOP ALL" is centered above a descriptive text: "Shop all the amazing curated products designed by Minima Basics, all here to help you all feel more organized, make a room full of motivation and inspiration. Remember to always: Buy, Keep and Organize things with INTENTION and everything else in life will define its PURPOSE." Below this text are filtering options: "FILTER BY All products" and "SORT BY Best selling". It also indicates "12 products". Three product thumbnails are displayed: a clear acrylic organizer with pens and sticky notes, a clear acrylic pen holder with pens and a small potted plant, and a clear acrylic shelf organizer with books and a can. A red notification badge with the number "1" is visible on the left side of the page.

Your cart

[Continue shopping](#)

Product	Price	Quantity	Total
 Waterproof PU Leather Mouse Pad Mat Color: Pink & Silver Remove	\$35.00	<input type="text" value="1"/>	\$35.00
 Trio essential acrylic desk organizers Remove	\$95.00	<input type="text" value="1"/>	\$95.00
 Acrylic slanted pen shelf organizer Remove	\$28.00	<input type="text" value="1"/>	\$28.00



[Cart](#) > [Information](#) > [Shipping](#) > [Payment](#)

Contact information

Already have an account? [Log in](#)

Email
BobWasHere@gmail.com

Sign up for exclusive offers and updates via text and email.

Shipping address

First name
Bob

Last name
Bob

Company (optional)

Address
1450 Rue Guy

Apartment, suite, etc. (optional)
MB 12-101

City
Montréal

Country/region
Canada

Province
Quebec

Postal code
H3H 1J5

Phone number for updates and exclusive offers.
(514) 123-4567



[Continue to shipping](#)

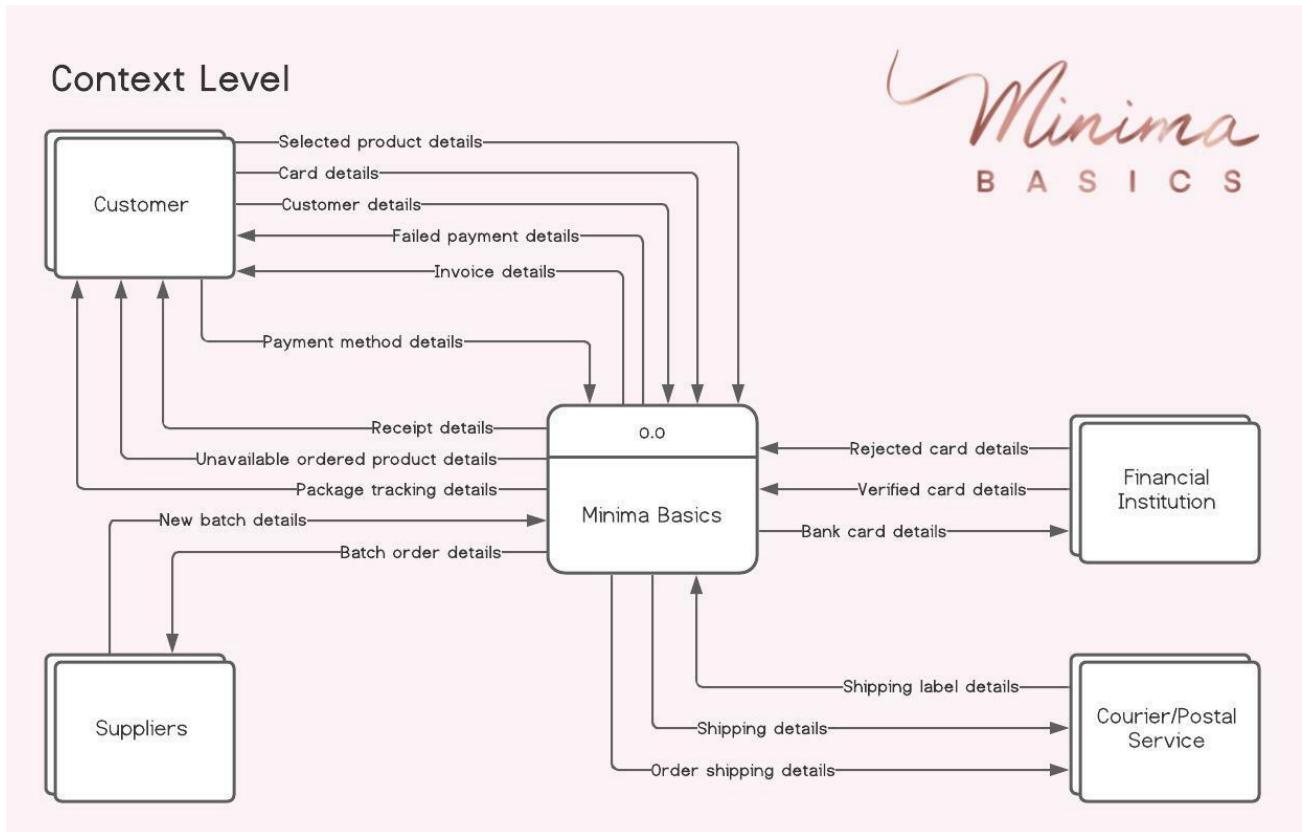
[Return to cart](#)

Appendix K

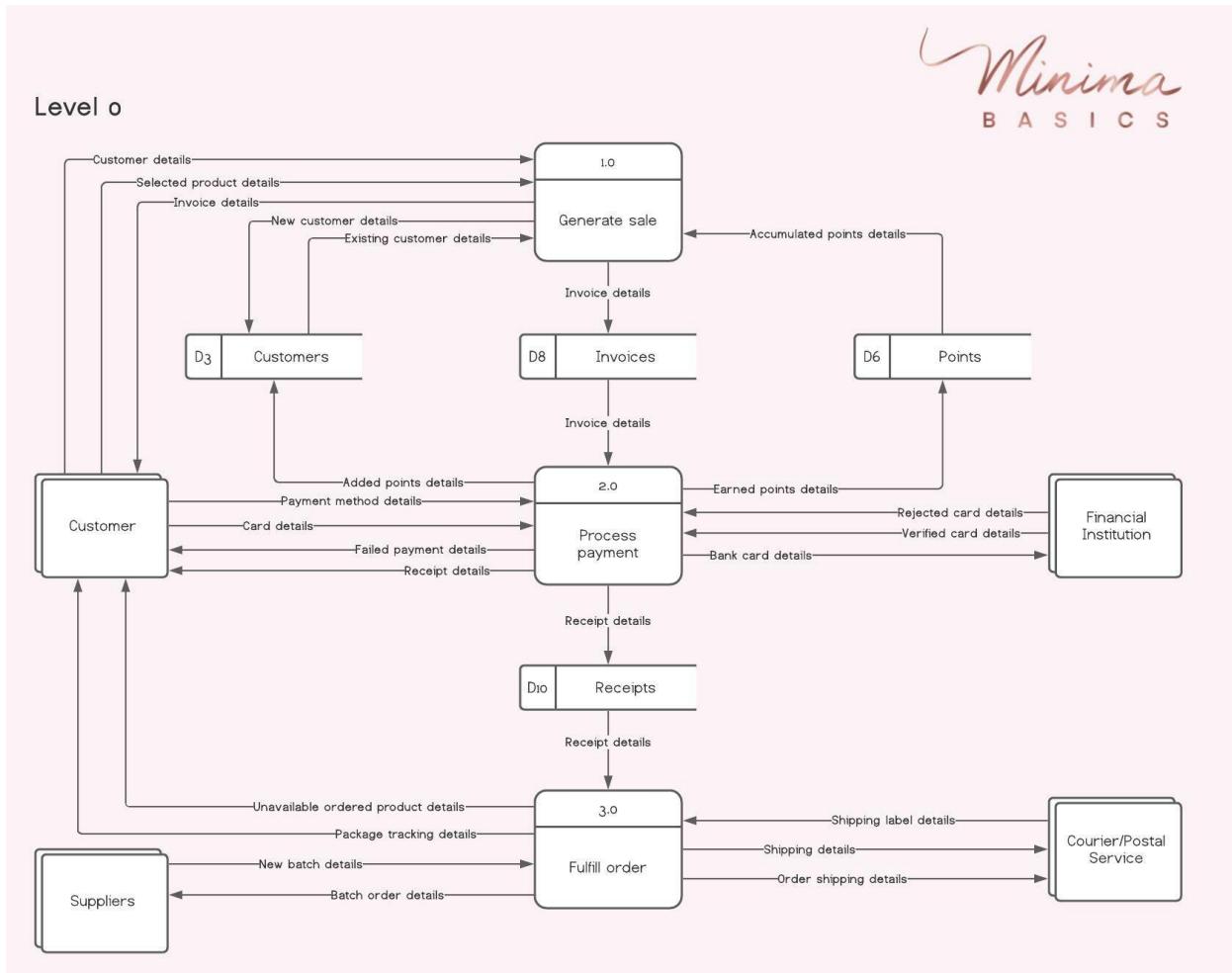
Current System

DFDs

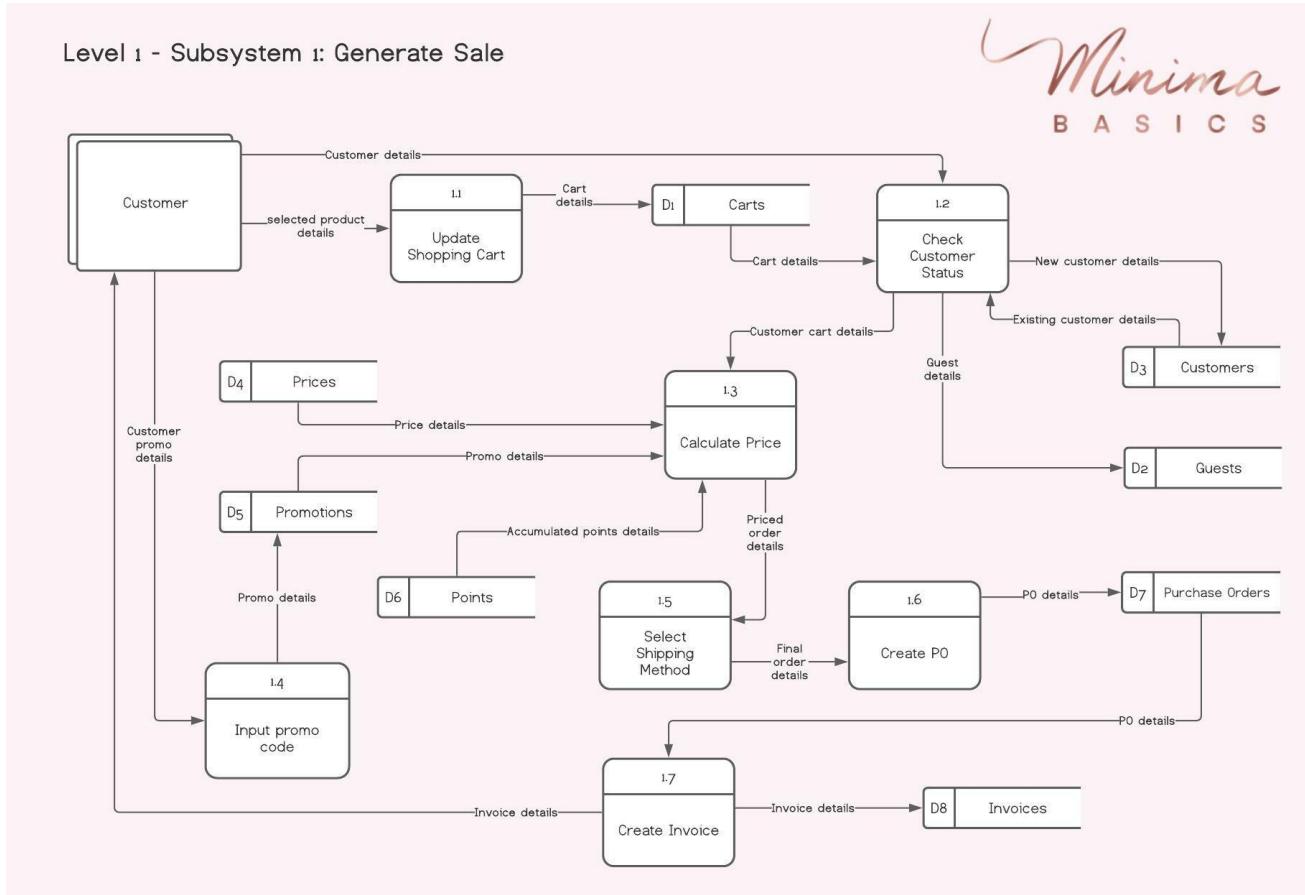
Context Level



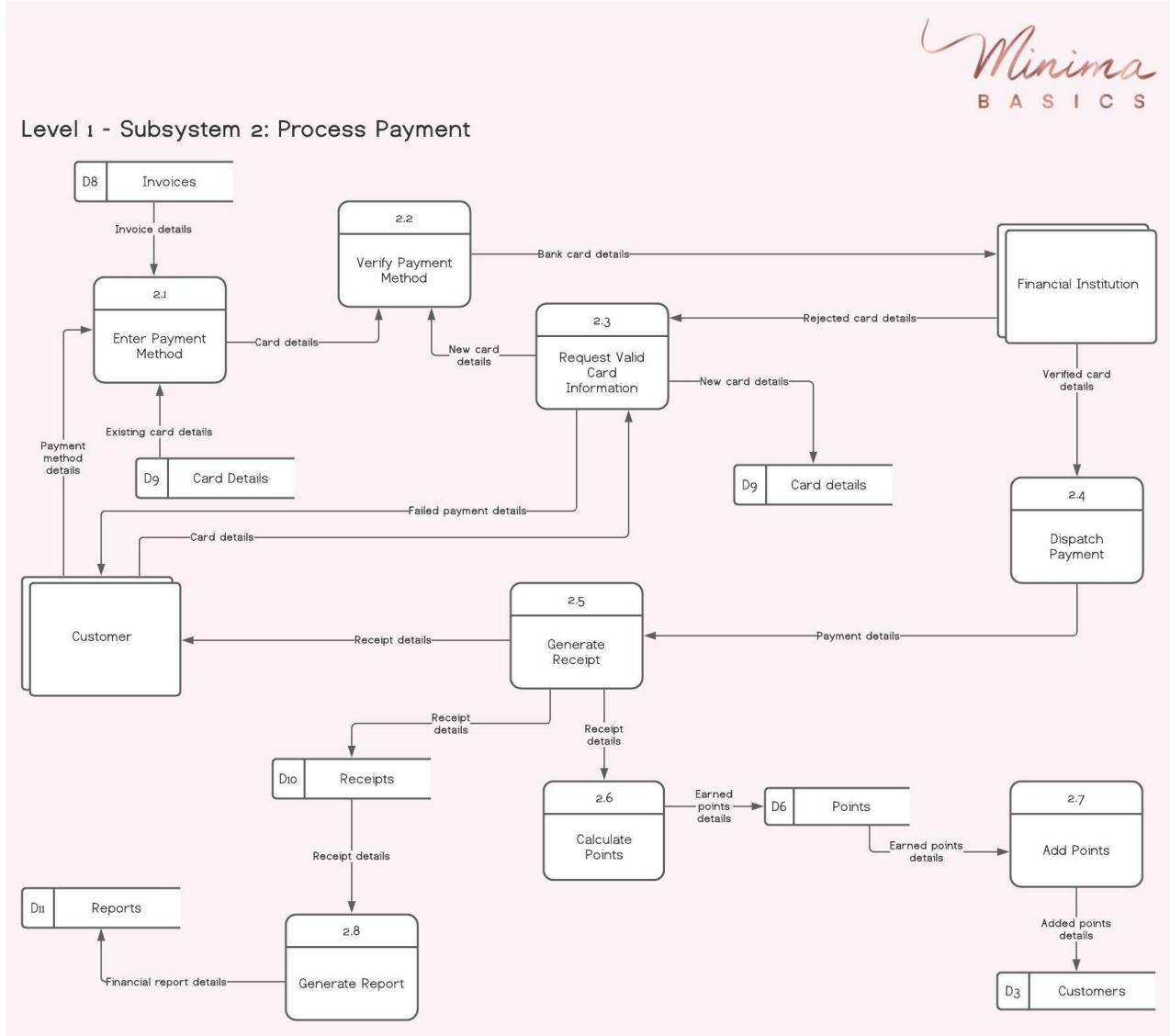
Level 0



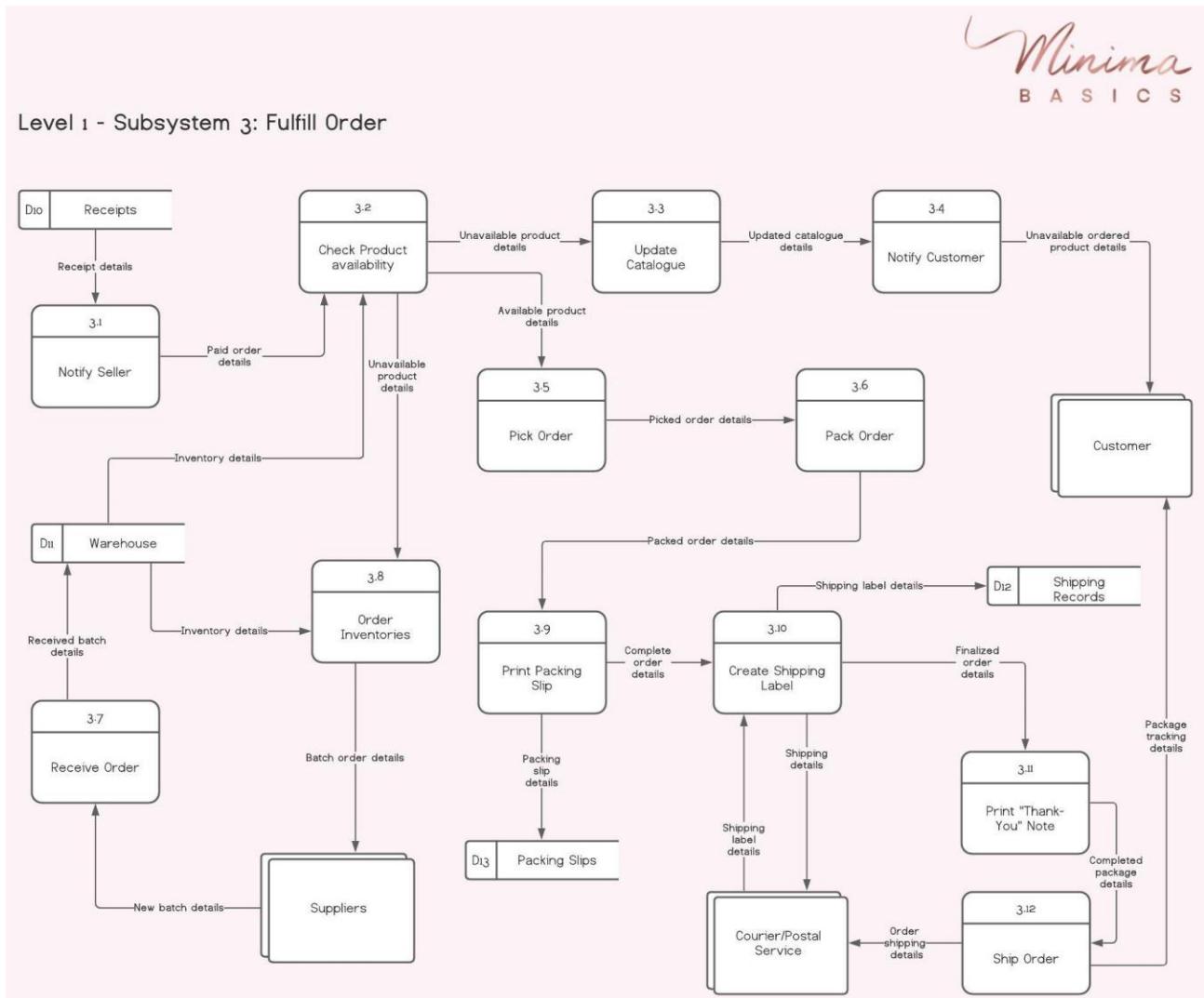
Level 1 - Subsystem 1: Generate Sale



Level 1 - Subsystem 2: Process Payment



Level 1 - Subsystem 3: Fulfill Order

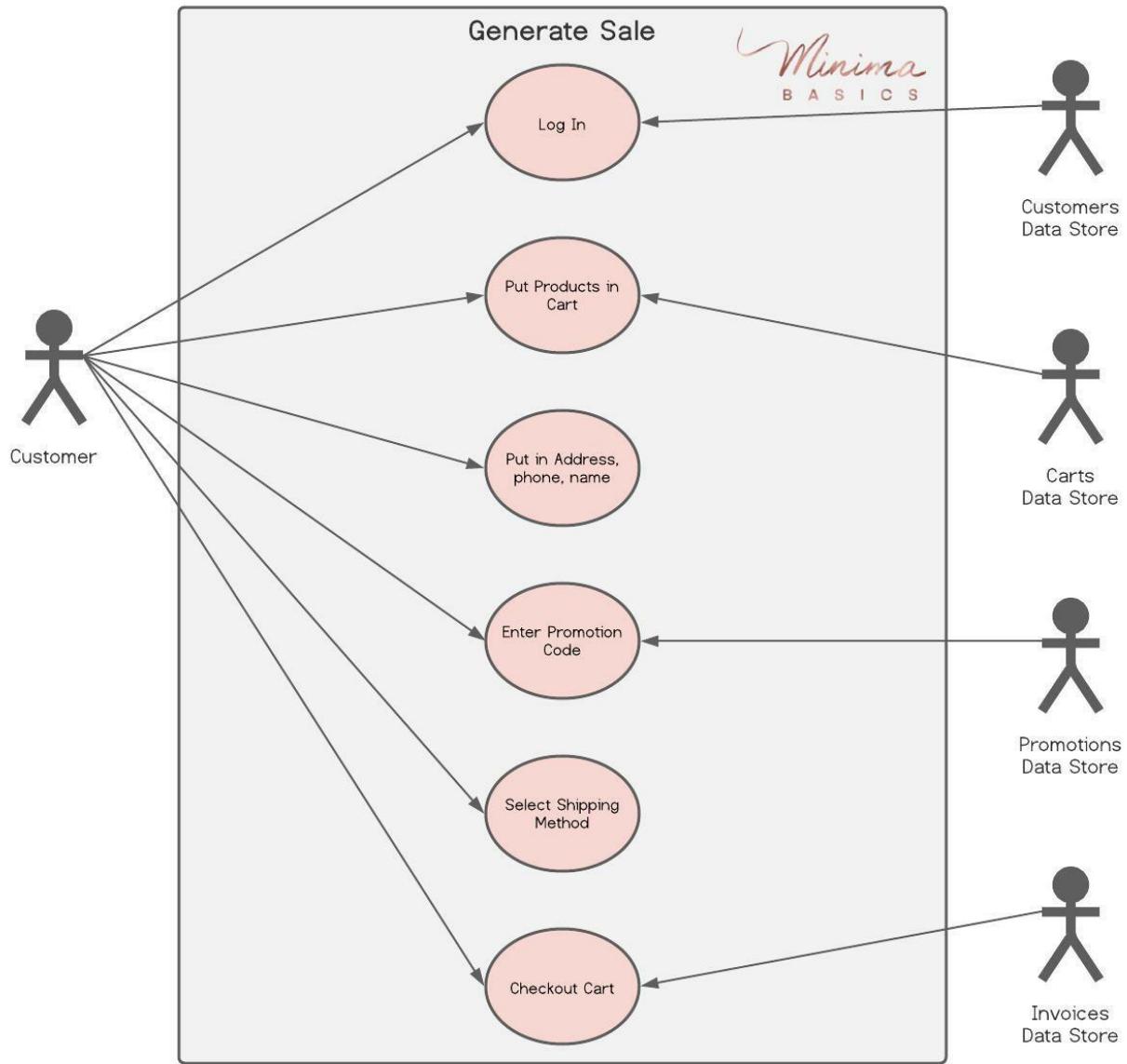


Appendix L

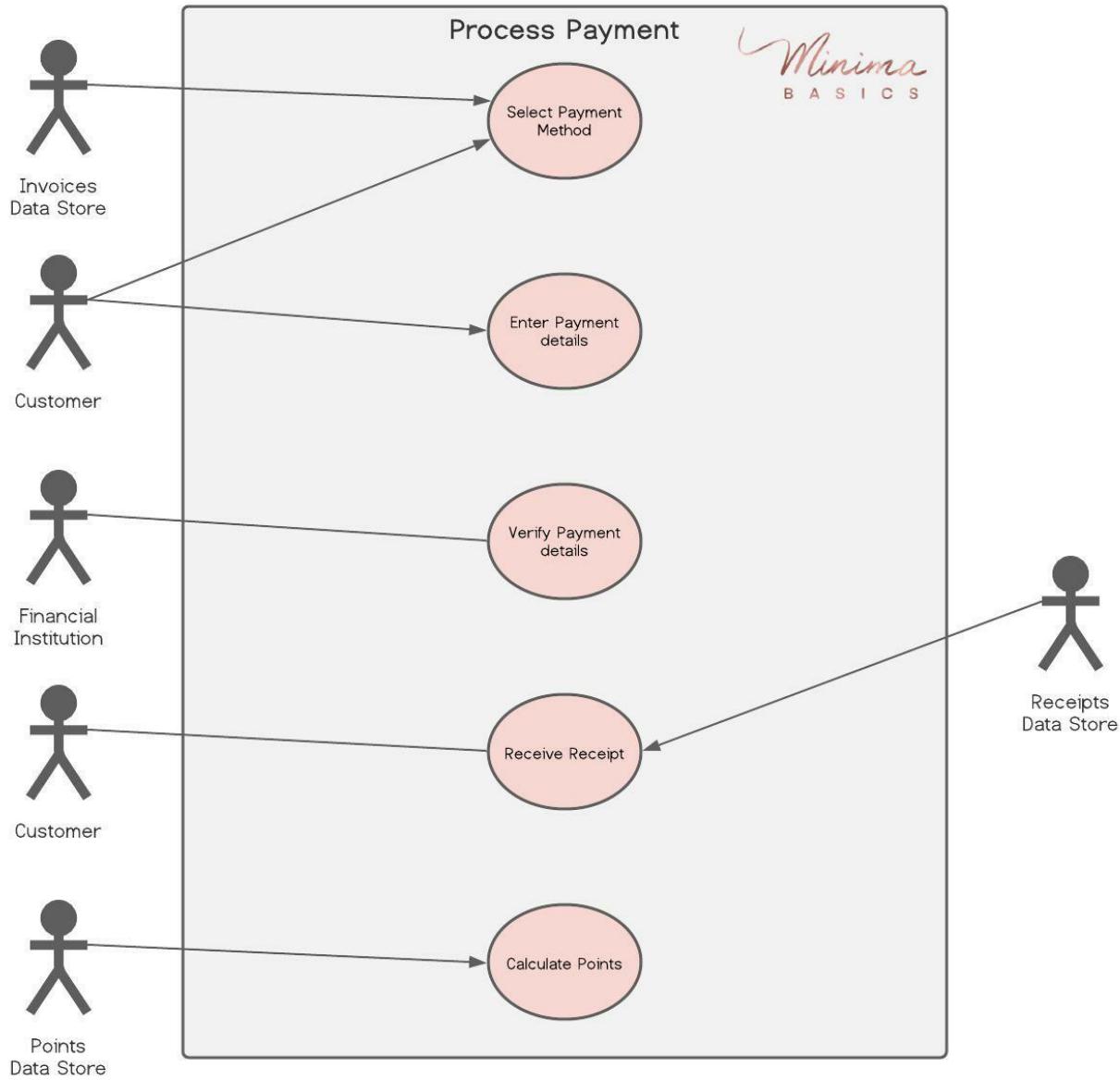
Current System

Use Case

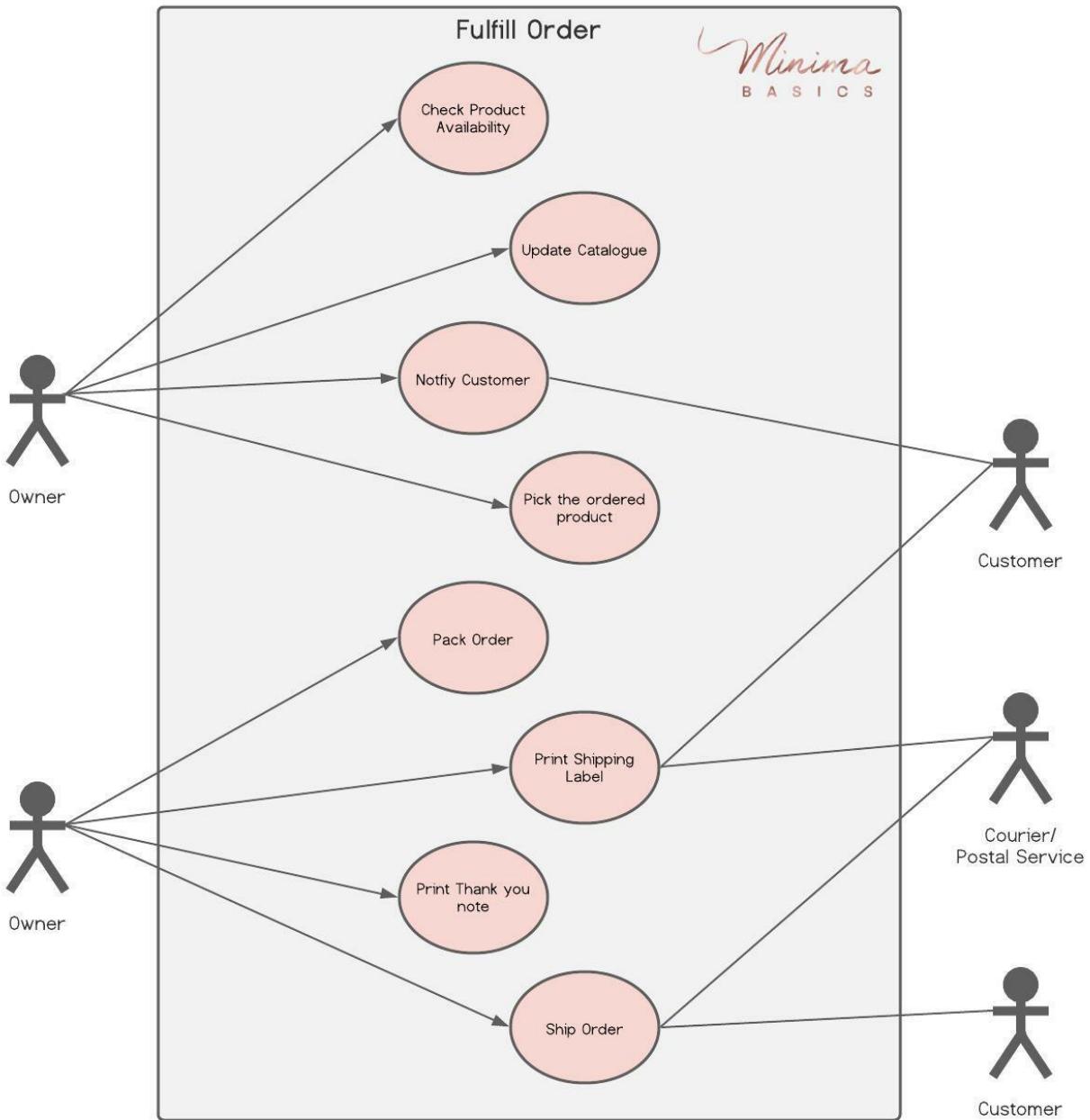
Generate Sale Use Case



Process Payment Use Case



Fulfill Order Use Case



Appendix M

PIECES Table 1

PIECES Analysis

P&DS #s	System/subsystem Label							Underlying Problem Codes
	Symptoms/Problems	P	I	E	C	E	S	
D1	Some out-of-stock products are still listed on the website and can be ordered.	X	X					A, B, C
P3.2 ; P3.3; P3.4	Update catalogue to reflect up-to-date stock information on website.	X				X		A, C, E
D11; P3.2; P3.8	Items stock out regularly.		X	X				B, C
P3.4	Owner must email and notify customers manually if they purchase an out-of-stock item.	X	X			X		A, C, E
D11; P3.2; P3.8; P3.7; P3.3; P3.4	Inventory is not tracked.		X	X				B, D, F
D11; P3.2; P3.3; P3.4; P3.8	Free product giveaways are not tracked.		X	X				B, D, F
D2; 1.2	Guest details are only used for conservation purposes.	X	X					B, C

Underlying Problem Codes	Code Descriptions
A	Inadequate response time
B	Lack of relevant information
C	Data not captured in time to be useful
D	Finances are unknown
E	Effort required for task is excessive
F	Not a standardized process

General Problems:

- Damaged products from suppliers.
- No budget for spending.
- Having trouble finding new product

Appendix N

PIECES Table 2

PIECES Table 2

Legend:

Deleted Process and/or DS

Modified Process and/or DS

New Process and/or DS

Underlying Problem Code	From Table 1 Subsystem#, (P#, D# in the current system DFD)	Impact on the proposed system DFD (P#, D# in the proposed system DFD)	No impact on the DFD – (requires only IT solution)
A	P1.o: D1; P2.o: n/a P3.o: P3.2; P.3.3; P3.4	P1.o: P1.1, D.1 P2.o: P3.o: P3.2; P3.3; P3.4	N/A
B	P1.o: D1; D2; D10; P1.2; P2.o: D11; D12; P3.o: P3.2; P3.3; P3.4; P3.8;	P1.o: P1.1, D.1 P2.o: P3.o: P3.2; P3.3; P3.4; P3.7 P3.8; P3.12; P3.13; D11	N/A
C	P1.o: n/a P2.o: n/a P3.o: P3.2; P3.3; P3.4	P1.o: P1.1, D.1 P2.o: P3.o: P3.2; P3.3; P3.4;	N/A
D	P1.o: n/a P2.o: D11; P3.o: P3.2; P3.3; P3.4; P3.8;	P1.o: P2.o: P3.o:	N/A
E	P1.o: n/a P2.o: n/a	P1.o: P2.o:	N/A

	P3.o: P3.2; P3.3; P3.4;	P3.o: P3.2; P3.3; P3.4;	
F	P1.o: P2.o: D11; D12; P3.o: P3.2; P3.5; P3.-12; P3.3; P3.4;	P1.o: P2.o: P3.o: P3.2; P3.3; P3.4; P3.5; P3.6; P3.7; P3.8; P3.13; D12	N/A

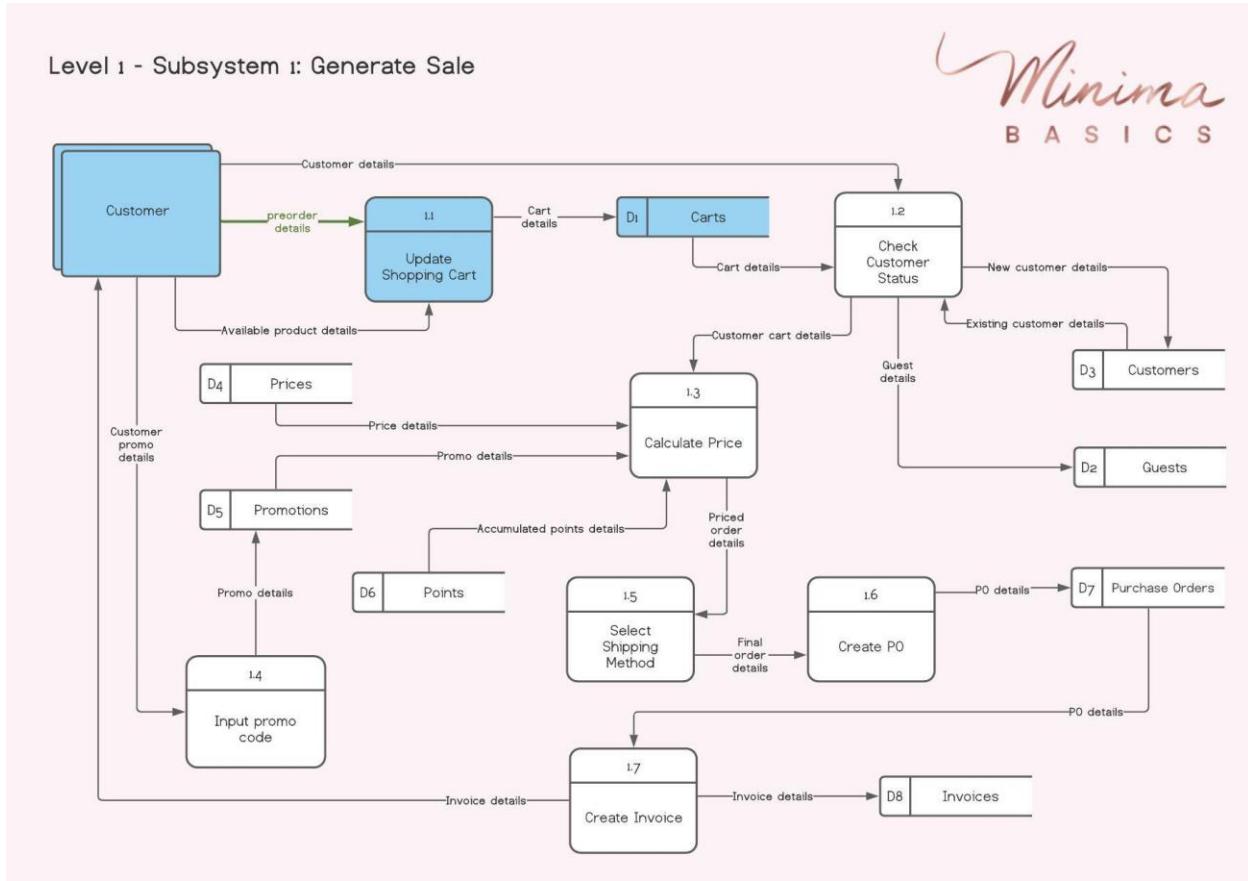
Underlying Problem Codes	Code Descriptions
A	Inadequate response time
B	Lack of relevant information
C	Data not captured in time to be useful
D	Finances are unknown
E	Effort required for task is excessive
F	Not a standardized process

Appendix O

Proposed System

DFDs

Proposed Generate Sales DFD



Proposed Fulfill Order DFD

