AKBAY

(Easy Business Management System)

Project Documentation Submitted to the Faculty of the

School of Computing and Information Technologies

Asia Pacific College

In Partial Fulfillment of the Requirements for

Introduction to Systems and Design for CS

SNTSDEV

By

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ASIA PACIFIC COLLEGE

Approval Sheet

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Prepared and submitted by

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In Partial Fulfillment of the Requirements for the Degree of

Bachelor of Science in Computer Science

Examined and Recommended for Acceptance and Approval for

Research/Capstone Presentation

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Acceptance and Approved in Partial Fulfillment of the Requirements for the Degree of

Bachelor of Science in Computer Science

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# Introduction

When the pandemic started, all activities outside had become restricted and everything we do is limited or done at home. Socialization has become digital, and people are afraid of going out because of the virus that can do to our body. Businesses are threatened because of this, but they must adapt quickly [1]. This is where social media platforms such as Facebook and e-commerce platforms come in by catering business owners to drive their activities to sell their products. Due to physical limitations, courier services became popular also [2], [3] . Business owners just books for a rider in their selected courier, and the customer just seamlessly waits for the package/delivery to come. At Fleeky Curtains, they have the same routine. They operate the business at the local household, and they just book a courier to pick up the item and deliver the item to the customer.

During SPOTLIGHT’s search for potential clients, the group managed to find a 1-year-old aspiring business called Fleeky Curtains, managed by Ms. Mitzi Garcia. Fleeky Curtains is an independent family business that provides curtain products. It is an online business shop providing top-notch service, products, and shopping experience to a wide range of customers with regards to their home needs. It was established in 2021, and currently residing their operations and manufacturing at their local household where expertise and experience comes hand in hand, to strengthen the business in offering services and products directly to the client’s need. Fleeky Curtains aims to grow their market share in the home product industry by observing and adapting to the behavior of the consumers. While the traits of Fleeky Curtains are reflected based on observable morale and qualities such as persistence, competitiveness, strong integrity, and versatility. Lastly, they also aim to strictly perform on such strong qualities by showing it on a product to be used by the consumers.

If the group members take the consideration to look at the staff, they are also occupied at their roles as a sewer, a packager who also takes charge of customer relations at Facebook, and an admin who also do assemble the packaging for the customer order. Even though they like to put enough human resources, still the company is running as a part-time of the family, not a full source of income of the family.

Having a small staff means they are limited to activities.

1. Lack of human resources – that affects the following:
   1. Production time – products will be produced in a small quantity
   2. Packaging time – when there is no assistant, the staff finishes the task at a slower pace.
   3. Encoding time – does not record daily since the staff is occupied
2. Inventory is not systematically listed and regularly checked when there are changes to the quantity of products or new products are added to the inventory room.
3. Redesigning publishing materials that will be used in advertising the products to Facebook and to regularly upload feedback from customers.
4. Contacting potential suppliers for new products and looking for small to medium clients that the business can cater to their services/products.

Moreover, when it comes to the staff, Fleeky Curtains mentioned that the people working there are family members. Meaning, that these people also have responsibilities in the day such as a student and an employee at a company. Due to time constraints, the staff just acknowledge customer orders on the day and create bookings and packaging at night, or when they are free. This is because the staff still have other agendas for the day, and yet they still fail to finish fast as everything ends late in the evening. Furthermore, Fleeky Curtains mentioned that handling and assembling the packaging of one customer order takes 25 minutes of their time, what more if they have an average of four customers per day?

Due to its duration, the staff dedicates their time and effort up until noon just to finish all the tasks. However, it is not likely to keep this dedication regularly, as the staff also have to cope with their sleep and roles at work or at school. It might seem that delaying the activity will do best for this situation, but upon checking the market, it made them adjust their pacing.

It is observable that the traits of Fleeky Curtains applies to their activities. At the inventory, they make sure that everything that is used, bought, or added is diligently listed so that they can directly lookup what are the materials that were used before or was stored in the inventory before. Raw materials such as fabrics, threads, grommet, and curtain rings are needed to build a finish product. Packaging materials such as bubble wrap are used to cover the products. Spending activities are traced and recorded within an Excel sheet, and customer data where states their demographics are one of the things that the encoder deals with. In a business, inventory is one of the things that should be looked at because you cannot sell if you do not have enough materials to make one.

With their indulgence of encoding, Fleeky Curtains generously mentioned that customer data helped them in profiling customer behavior and consumerism. Female, who are middle-aged, fancies products that are plain while young adults prefer products with designs. Interactions and creating rapport with people made Fleeky Curtains understand how demographically they are challenged when they are faced with complexity. User experience is most observed at Fleeky Curtains because they realized that when presented with convenience, it is more likely that they can radiate with positive dialogue and meaningful experience. Fleeky Curtains also mentioned that customers do not like accessing other sites just to purchase as they wanted to be safe from scammers so that is why Cash on Delivery (CoD) services or cashless transactions like GCash are popular nowadays.

With the background profile of the client, Spotlight interviewed one of the of Fleeky Curtains, Mr. Neil Albert Garcia. As they share their problem, progress, and execution when it comes to their general business operation, the group, along with Fleeky Curtains were able to discuss their pain points when it comes to handling their business. The following are some of the pain points emphasized by the client:

* Filling in the necessary fields when creating a booking takes six (6) minutes of the staff’s time before it is processed. The staff needs to find the specific zip code of the customer address at Google that takes two (2) minutes of their time finding the correct one. In total it takes eight (8) minutes to last.
* It takes three (3) minutes to encode the customer details and information of a buyer in Excel.
* On-hand stock quantity and raw materials is not written on a list that makes the customer relation staff frequently go to the inventory room routinely before confirming to the customer that the product is available to purchase.
* The receipts of the business spending are not regularly recorded and there are occurrences that these receipts are lost
* Orders for the day that needed to be handled are not filed in an organized matter

With these struggles and problems, it gives SPOTLIGHT an opportunity to create a solution that can improve their daily work. That is why the group aims to provide software that will help business owners, especially Fleeky Curtains, to have the ability to easily organize their operations. This way is also a big step for the clients as they embrace and adapt to modern technology tools. Having a tool that can give business owners a lot of access, control, and better configurations, will enable them to efficiently save time and have a better strategy to manage the business, and at the same time, give them a better understanding of how useful to have a tool that can assist them in their modern problems. Thus, Fleeky Curtains relentlessly interacts with the group members to cooperate their insights and activities which shapes the tool in improving to their business needs.

Project Akbay is a business management tool for business owners that can provide specific features for clients that experience difficulties just like Fleeky Curtains. The tool is not only focusing on one business as it can be for future clients, due to the inspiration and vision of team. SPOTLIGHT will manage to find a way to make Project Akbay adaptable, friendly, and accessible to any uprising and aspiring business owners.

In a business, challenges happen a lot. One day, the business may achieve success because of their solution and performance but there will be moments that are not what you are expecting. The content on this section will take you to the project context which will be stating all the information about the solution and the client. Leaning to the researchers that can improve their current system and help them carry the business efficiently. Thus, to effectively target their long-term strategic goals alongside with the development of features to be implemented on the project. With the current system of the business, they are challenged with the manual encoding and process on handling their orders and managing the performance of the sales when everything can be adaptable by technology.

The researchers’ role as a solutions provider is paved to bring importance on the client’s need. Alongside S.M.A.R.T. goals, the objective, and the limitation where the study will be covered is described in this section. The paper starts with the project context where the overview of the client is described and the role of the researchers as a solutions provider is defined. Under to the statement of the problem, the researchers tackle how the client is currently challenged on the business is being managed manually. To the records of customers up to the simple things when there is a lot of emerging technologies nowadays available to fully utilize. The researchers also laid their objective to the project to set their target on this project and plan to the client’s need. While the significance of the study shows how important it is to solve the client’s need and who are the people who will benefit from the system created. Although, there is always limitation where the project is bounded with, which is provided by the researchers in the scope and limitation section.

## Project Context

In an online business model, all the products are advertised digitally and published where people predominantly stay. Facebook and other social media have been always a place by Filipinos, and it is the best place of Fleeky Curtains to get their customers.

Fleeky Curtains always handles customer inquiries at Facebook and when a customer asks and inquires at Messenger, they leave their booking information at the chat. This is where the role of Fleeky Curtains enters as to cater the customer and create the courier booking for the customer so that the rider can pick up the parcel and deliver it to the customer. It is an easy process, the business has the product, there is an inquiry, customer orders the product, the business creates a booking, the courier picks up the parcel, the courier then delivers at the targeted address, and lastly the buyer receives and pay the item.

But after all this process, it does not stop because the staff also do encode the customer details at Excel and record the product that he/she purchased and its value, the quantity, and the type of product so that Fleeky Curtains would know which product is selling the most and how much did they sold in a month. This is also to aid Fleeky Curtains in their operations and decision making whether to control the units of curtains or implementing promotions to their products.

Managing the online business needs a robust digital tool that can efficiently lessen the staff’s role in the processes involved at encoding and operations. Not enough human resources and time constraints are still the things that burden the staff in finishing their tasks. However, implementing technology can resolve challenges quickly. Moreover, it will provide aid to the person to finish quickly at their role and enable them to finish other agendas as well.

## Statement of the Problem

As stated, the current staff in Fleeky Curtains are run by family members. These people also have their roles in the business. However certain delimitations make their activities short since they also have their agenda during the day, such as being a student and an employee in a company. Despite their agendas and responsibilities, they ensure that someone can still entertain the inquiries, requests, booking, and packaging, however, it puts them in a tough spot. Aside from the issues with their human resources, their inventory is not usually checked out. For them, going frequently into the stockroom to check the availability of the product puts the staff in a lot of work. Because this is also a way for Fleeky Curtains to confirm their raw materials are still sufficient or need to be replenished.

The nature of the problem is that the staff is not full-time in the business. The time they allocate during the weekdays is limited. They only work on their roles immediately in their free time, when there is an inquiry, or when it is important.

Usually, Fleeky Curtains faces these problems:

1. The lengthy and repetitive process of filling up all the necessary fields when booking for a courier because it takes eight (8) minutes of the staff’s time to confirm the booking for one (1) customer.
2. Tiresome frequent visitation of the staff to the stockroom to confirm if they have sufficient materials or on-hand products to offer to the customer.
3. The staff is drained when recording business transactions, receipts, and customer details at Excel daily since he/she needs to type the information from an external source before it is transferred to Excel. Which also leads the staff to occasionally do the task at all.
4. Staff are challenged when repurchasing their raw materials as they fail to document or profile the product code and classification of the item leading them to purchase an item different from their previous stock.
5. The staff are unaware of the products/items that need to be packed.
6. Fleeky Curtains does not always have an accurate business/performance report due to occasional recording of sales and expenses

With the current routine of manual encoding of customer information when there is a confirm order and filling all the necessary fields when booking, a lot of it is handled by the staff. Fleeky Curtains usually have four (4) customers, on average, who order daily. Aside from it, the staff’s role is flexible, meaning they also do packaging, sewing, answering customer inquiries, and encoding. Human resources remain minimal since Fleeky Curtains’ staff are also its family members.

## Objectives

Moving to the goal of this project. Our role is to deliver a solution to the challenges that Fleeky Curtains is facing. Guided from their user stories and day to day problems, Spotlight aims to address those issues, improve the productivity of the staff, and decrease the time it takes for them to do their activities which burdens their responsibilities as a student or an employee in an institution or company respectfully. Considering the business demands, Spotlight are pushing to implement the following:

1. Reducing the operating and encoding time of the staff so that they can deliver other tasks related to the business.
2. Creating an assistive functionality that will automatically fill in the necessary fields when booking at the courier as customer information is provided.
3. Spotlight is pushing an inventory management system that allows Fleeky Curtains to check real time count/quantity of products and update the raw materials and on-hand items easily.
4. To automatically insert a record in Excel once customer information is imported to the application.
5. Generate a data visualization of periodical sales and expense of the business. To track the business expenditures and define the products which sell the most.
6. Creating an order queue list for the staff to easily see the orders that need to be prepared and packed within the day.
7. Documenting all the transactions with regards to sales, expenses, transactions, and receipts at one place

The following objectives that will help attain the SPOTLIGHT’s goal are set to be deployed and implemented through Project Akbay (Easy Business Management System), by the end of the 2nd semester of the S.Y. 2022-2023.

## Significance of the Project

Facing the existing client’s challenge is the main reason we are working together. Adopting modern technologies and migrating to a better design enhances the current system that they are using. This will eliminate any hindrances from the staff’s workload and continue to do their agendas without hesitation.

Introducing a new system may need time to adapt on the features built on the application but since Akbay wants to open its door with other business clients that will be needing the solution will provide personalization on the application. Akbay wishes to adapt to other markets and businesses who is struggling with managing. Listed below are the things that will occur when the project is delivered to the client.

The following roles will benefit:

Business Owner/s:

Project Akbay’s deployment will give the business a utility tool that will assist the business owners on the challenges in the operations and encoding time of their staff. This tool will help the business owner when it comes to encoding and profiling customer’s data, checking of inventory system, viewing the pending customers queue list and many features provided by Akbay. With the help of Akbay’s features, this will lessen the process time of the client’s productivity by at least half of the average process time of the client and customer interaction. The business client can fully utilize the various features of Akbay that can help the business of the client run smoothly as possible.

Admin*:*

With project Akbay, administrators of businesses will be able to monitor operations, supply chain, activities, and generate reports to be done at a glance. The transparency Akbay wants to give business owners is the consistency of data recording and to adjust accordingly based on how their business is operating with no bias or manipulation for data. This results in overseeing becoming an ease for admins to know if there are any problems to be solved or teams to support inside the operations inside a business.

Staff (Encoder, Packager, Tailor Customer Relations)

For the staff, project Akbay will make them finish the tasks in an efficient way. This is by assisting them when booking a courier, knowing the things to be packed, the items to prepare, the available on-hand stocks, and encoding the customer information to Excel so that they lessen the time it takes to finish the job. With project Akbay, it aims to eliminate, or at the very least makes the window for error minimal for anyone operating the application at their best interest.

Aspiring Business Owners:

Aspiring Business Owners, especially small ones will be able to benefit from project Akbay’s features in terms of efficiency. It will take them less time to process orders and Akbay will give them the ability to overlook how their businesses are currently doing. Monitoring their business will let business owners know what and what not to do inside of their businesses.

Developers

As for the developers, the project significance will give them a wider idea of how to implement a solution that can benefit many clients despite the complex algorithms and challenges SPOTLIGHT faced through their journey. The aspiring developers will have a better understanding on how to build, enhance, and implement a better foundation for their product.

Future researchers

The study would help the future researchers to have the knowledge and awareness when it comes to the process that may help online business or firms in maximizing its yield or profit. It would also provide new insights and help the student researchers to have a better analysis for projects similar to these, as this can serve as a reference or basis where new learning may arise for more studies in the future.

Sustainable Development Goals

The SDG that supports the project are:

* SDG No. 8 to achieve higher levels of economic productivity through diversification, technological upgrading, and innovation including through a focus on high value added and labor-intensive sectors
* SDG No. 9 to introduce and promote modern technologies, facilitating international trade and enabling the efficient use of resources and (UN.org)

The implementation of the product and documentation of the paper will serve as a guide to the people who are connected to this project for their specific studies. It will be a new source of information for future researchers that may also provide a better solution for the people in need when it comes to digital modernization. As Spotlight’s research sets foundation for the aspiring developers and future researchers, this will help them attain a better related literature/systems for their study. For the business owners, admin, and staff, this only highlights how the said people are important to the product deployment since they are one (1) of the instruments of how project Akbay created.

## Scope and Limitations

* Scope

Project Akbay’s main scope is for businesses to be able to address staff’s challenges at their tasks. This is also a way for them to cater to their customers in an efficient way and transform their current system with newer design through technology. The project also includes aiming to aid the efficiency for businesses that do their ordering systems manually. The project also aims to increase the business’ efficiency in handling larger sized orders that would otherwise take the owner or their staff a lot of time doing manually and will be looking to become a Software as a Service (SaaS) when the project expands out of a currently single client.

* Limitations

The paper, however, is delimited to the context of a currently single client and further expansions into a SaaS venture will not be covered in the paper. Additionally, the project would not be able to have management for tangible assets as the project will only stay within the scope of data aggregation and where no actual customer interaction will happen for the program but tech support for the client will be available at meetings. While some project features will need a future expense since those product features will use clouds, API and servers that will aid project Akbay to run smoothly.

In addition, another constraint the project faces are that the client only wants to spend little to no financial resources on the project. This means that currently no funding will be able to go through in the initial stages of development for the project. Since subscribing unto the UiPath software would cost the client a fortune and besides, the client as well as the researchers feared that the whole service of UiPath would be underutilized by project AKBAY. Though it would not be much of a problem since the researchers will be using open-source development tools at their disposal for the development of the project.

# Review of Related Literature / Systems

In this chapter, it shows the related literature or systems that are similar or related to the SPOTLIGHT’s project proposal, which is made to give readers a better understanding of how and why it is important to implement such software that assists a client’s business needs. Some of the literature overviews provided in this section show the effectiveness of how the adaptation of technology on businesses can assist local and even international clients.

***2.1 Factors for Online Business Success***

With the study conducted in 2019 by Phonthanukitithaworn, et al. [4], about the relevant factors for success as an online entrepreneur, the authors stated that the need for investigation when it comes to things that pertain to business strategies are dire, as there is a rapid growth when it comes to the online market for various goods and services. Here, the study or research concluded that one of the many relevant factors for attaining such success are logistics and transportation, product and service quality, advertising, and reliability, in which all relevant factors mentioned are aimed to be supported and given priority through the project Akbay created by SPOTLIGHT.

***2.2 Marketing technology for adoption by small business***

According tothe study many business owners are adapting modern technologies, and it is becoming essential for the business owners to adopt and utilize this tool. Based on the given study [5] It was found that many business owners are adopting technology to create a greater marketing strategy for the client. Since the internet and technology has a vast potential of displaying the different businesses through web and using ecommerce website many people consider adopting to this said technologies, this will help them to have a greater return of investment revenue. Based on the research gathered [5] having an analytic tool will help business owners to analyze the customers' behaviors and understand what the best strategy could be to implement based on the gathered data. In this way it will help the marketing heads to implement a better strategy for when, what, and why they will sell their specific product at any given time.

***2.3 Shopee in the pandemic: Helping Filipino entrepreneurs and communities***

According to Rappler there has been a significant increase in terms of small business owners starting their businesses online, yet there are some owners that have issues with starting their own businesses since there are some business owners that are not that knowledgeable on how technology works, especially when you are not tech-savvy or a first-time entrepreneur. [6] From small company owners to individual employees, the pandemic had a direct impact on the lives of Filipinos. The Philippines' unemployment rate reached an all-time high of 17.7% in April, equating to 7.3 million people. With over 75,000 internet businesses registered during the outbreak, one of the ways Filipinos coped was to turn to online selling.

With all the related literature and reviews provided, most of the things that was given emphasis in this chapter was about the factors involved for success in online businesses and how impactful online e-commerce platforms and technology are (e.g.: Lazada, Shopee, and Facebook Marketplace) to people or consumers as those became the way for people to start their own businesses during the pandemic where a lot of people are staying in the comfort of their homes. Also, all the related studies in this chapter provide additional insights to readers when it comes to the overall purpose of the project as the studies can provide justification as to why project Akbay is necessary.

* 1. ***Robot Process Automation (RPA): Making processes easier and convenient***

With the increasing number of business owners utilizing technology making systems faster has brought an incremental step in development and efficiency. This has also made systems incredible in today’s generation and has been favorable by many manufacturing companies. A study made by Herm [7] that analyzed 35 real life Robot Process Automation (RPA) projects says that there is a need for an in-depth analysis for long term economic viability and transitioning of RPA system. Companies usually use non generic frameworks for their RPA projects as businesses have their own processes implemented in the institution.

Furthermore, there are more to come when there are repeated processes that can be done autonomously. On Fung [8], RPA are suitable on the following criteria:

* + Low cognitive requirements: processes with a lot of repetitive tasks are ideal candidate for RPA application, while complex processes with a lot of different, complex tasks are harder (or impossible) to be handle by RPA.
  + Access to multiple systems is not required: RPA is applied on top of existing applications, but it typically automatizes tasks or operations within a single application or information system.
  + High volume: processes and tasks that are performed relatively frequently are good candidates for RPA application.
  + High probability of a human error: processes and tasks that are typically performed by operators, and where a possibility of a human error is high (as evidenced from historical data records), should be the first choice in selecting processes for RPA implementation.
  + Limited exception handling: processes which do not have a lot of possibilities for some exceptions are the potential candidates to be automatized by for RPA application.

Capgemini Consulting [9] mentions that RPA tools converts it an average of 1/3 full-time employee, and replaces tasks showed that with license price of RPA tool is an ideal option to replace the human process in the following tasks:

* + Performed about 50-60 times per day
  + Performing storage of files
  + Doing back-office ERP transactions
  + Generating enormous number of emails
  + Performing conversion of data.

The potential of RPA is large. It can adapt at one company and covers all the workflow one employee or staff can do. Basic tasks are one of them that can be automated through a guided framework. Although Jovanovic et al. [10] mentioned that it is not used for complex processing instructions that manipulate unstructured data. It is best used for scenario-based tasks.

As technology dominates business efficiency, many companies saw its benefit and a candidate where to invest so they can reduce the workloads of their staff and efficiently strive for a sustainable process.

* 1. ***Integrated Marketing Communication as a Business Management Tool in the Context of Sustainable Development***

The features of Akbay will provide an analysis tool where you can see the business performance for the whole month or year, Integrated Marketing Communication (IMC) is all about how businesses endorse or advertise their product [11], [12]. With the help of project Akbay’s feature this will help the client (Fleeky Curtains) to implement a better strategy for how they will market their product. Since project Akbay is a utility tool that supports the business client’s business through analysis, automations, inventory systems and more features of Akbay. With the supported study of Integrated Marketing Communication as a Business Management Tool in the Context of Sustainable Development project Akbay can help the needs of clients when it comes to advertising, personal selling, sales promoting, direct marketing, public relation activities and especially the social media marketing.

* 1. ***Blockchain Technology in Business and Information Systems Research***

With the promise of blockchain technology as a very secure database or system of recording information in a way that makes it impossible to change or hack, the use of such technology may be extremely useful when it comes to Business and Information Systems (IS) Research as blockchain can deliver information in immediately with outright transparency in an immutable ledger which makes it secure and valuable [14] [15]. As of now, the use of blockchain technology is not as vast due to its technology being new and complex, but with its enormous potential [16], along with the fact that it is making headway in business and society, now is a wonderful time to start IS research programs on the implications and possibilities of this groundbreaking technology [15]. Also, the application of such technology or platform for the client (Fleeky Curtains) is crucial as the business runs on information to be able to operate and generate profit.

* 1. ***Construction Developer’s Responsibilities***

The correlation of the project to the study of construction developer’s responsibilities is it gives the proponents insights on what are the responsibilities of the researchers during and after the project and according to FindLaw's team of legal writers and editors [17], it states that there are developers that own the project and there are some developers that are exclusively developing for a specific client, and this would be beneficial to the proponents in order to know the responsibility in terms of the decision-making process. According to FindLaw’s [17], in a construction project, a developer can wear one or two hats. A successful construction contract aims to spell out the parties' rights and responsibilities from the start. A project can be completed efficiently and successfully in this manner, and unnecessary conflict can be avoided. In each specific project, an expert construction law attorney can ensure that the developer's rights and responsibilities are properly defined and understood.

* 1. ***Software Development Contracts: Everything You Need to Know***

The importance of software development contracts to project AKBAY is that it gives proponents the grant of owning the code that was created by the researchers and according to UpCounsel, [18] the description of software development contracts is Contracts for software development are legally binding agreements that control the provision of software development services. A contract like this binds a software developer and a client to complete certain tasks within a certain time range. There are various sorts of software development contracts to meet various requirements. This literature will be helpful for the development process since it gives the proponents a patent for the source code in which the researchers can use for future iterations for AKBAY.

* 1. ***Role of Social Media Marketing in the Successful Implementation of Business Management***

As the current markets are taking a step forward with their different businesses, digital transformation shows a widespread increase. Based on the given study [19], the paper focused on three things. First is how Information Technology shows a large demand both for its technology and for the labor it needs. Second is how the Information Technology (I.T.) infrastructure disrupts the issue for human labor. This states that with the advancement of technology, issues for employment and salary will perish. The future of education is also discussed as how technology slowly molds how students learn. Lastly, while companies are shifting their upgrades to their technological side, there also comes the constant pressure from the ever-changing market environment and the fast-rising competitors that go under their radars [19].

The paper provided emphasis on how the market provides an ever-changing environment and how different issues, though differ from each other, can provide the same solution for them both. This resulted in project AKBAY giving light to the possible pros and cons the project will give to the clients when shifting into an automated order system.

* 1. ***The Impact of Digital Transformation on Strategic Business Management***

Digital Transformation Strategies from the business perspective are necessary to be able to deliver the current needs or requirement of the business and its clients as modernization and online business trends continue to rise [20]. However, application of such transformation varies from one another depending on the regulatory environment and economic sophistication making it more difficult to apply and take advantage of. With the introduction of digital transformation strategy framework, it aims to address those challenges and promote more research in the field [20]. Framework strategies may apply the same for the client (Fleeky Curtains), as there are varied factors when it comes to how the business owner will be able to market its business and deliver its products and services more effectively according to its economic requirements for a more substantial yield.

The study's related literature will provide support for the basis of the paper and the Spotlight product. It will support the business client's pain points and statement of the problem. It will also help with the future production of Project Akbay's feature. When it comes to policies, the researcher additionally supplied studies that can protect the client and developers. In the whole context, businesses nowadays utilize the power of technology to upbring the efficiency and reduce the workload of the staff to complete their tasks. The works cited above are some examples that relate to their strategy and success through implementing the solution to the business problem. It does not explicitly state that their revenue increase, but one was, and it was the reduction of time of the laborers at their tasks. This is all not just to save the business or do cost cutting, but to let technology work and seek the time available to be used at other deliverables.

# Current System

## Technical Background

Hardware side, the business uses a proprietary mobile device, a thermal printer and a personal computer running on Windows 10 to operate their business. The mobile device is used based on the following:

* + - 1. Answering customer inquiries and contacting couriers and other personnel.
      2. Used for product photography (pictorial)
      3. Posting publishing materials on Facebook and Instagram.
      4. Perform arrangements for booking and schedule for a courier pick-up/drop-off
      5. Staff occasionally use mobile devices to lookup customer orders.

The thermal printer is used to print the waybill for each confirmed processed order. The personal computer is used frequently throughout the business hours since it is always involved in making transactions, recording the sales and expenses, listing customer orders, making schedule pickups for courier booking, encoding customer information at Excel, and editing photographic materials that will be uploaded on their social media platform.

On the business, they use tools such as Excel to input all the sales, customer information, orders, price breakdown or computation, the expenses of the business, and anything accounting and auditing related is recorded at this program. This is manually encoded by the admin or encoder at one shared spreadsheet file.

In customer relations, it is done through Facebook Messenger where the buyer’s information is sent via chat and these details are carried over manually by a staff to fill-up all the necessary fields (receiver’s information) when arranging the courier booking, so that the staff who is in-charge can already pack the orders once confirmed.

For online transactions and bank transfers, the business is available at GCash, UnionBank, or at BPI. Otherwise, cash on delivery service is a default gateway of payment for customers.

The couriers such as LBC, JNT, GogoXpress, and Lalamove are used by Fleeky Curtains to create a booking and organize for scheduled pick-up or scheduled drop-off at their logistics hub.

After interviewing the business client, SPOTLIGHT asked what the average customer of the client is, Fleeky Curtains average customer per day is four (4). The client also provided the minutes of work when it comes to processing the client’s customer’s order. You can see below the detailed minutes and total hours of the rendered process of the customer on an average basis.

Table I  
Minutes of Business Operation

|  |  |  |  |
| --- | --- | --- | --- |
| May be an image of text that says 'FLEEKY CURTAINS' | A picture containing text, vector graphics  Description automatically generated | May be an image of text | A person holding a computer  Description automatically generated with low confidence |
| *Item Preparation* | *Courier Booking* | *Item Packaging* | *Encoding* |
| *5 minutes* | *8 minutes* | *9 minutes* | *3 minutes* |

Table II  
Business Process Duration

|  |  |  |
| --- | --- | --- |
| Variable | Process Description | Unit |
| A | Average customer per day | 4 customers |
| W | Preparing the curtains to be packed (Pre-Packaging) | 5 minutes |
| X | Arranging a courier booking for schedule pick-up | 8 minutes |
| Y | Packaging | 9 minutes |
| Z | Encoding customer information to Excel (Recording) | 3 minutes |

\*Assume that the customer has already made confirmation on his/her order.

Fig. 1 Elapsed Time Equation per customer

Fig. 1. Transaction Time Equation (per customer)

Fig. 2 Elapsed Time Equation in a day

Fig. 2. Transaction Time Equation (per day)

Table l and II highlight the process minutes of the business client’s staff when it comes to staff and customer interaction. By giving the average of the process time interacted with the client’s customer. The group has provided an equation to get the average elapsed time per customer of Fleeky Curtains and the minutes spent on one day if they have four (4) customer orders.

Figure 1 denotes how long it takes for a staff to handle one customer order. At Figure 2, it shows the total time elapsed in an entire day. Take note that Fleeky Curtains has four (4) customer orders on average.

On Figure 2, it presents the total elapsed time per day. The staff handles four (4) customer orders, and each customer takes twenty-five (25) minutes to finish for one customer. Multiply it by four customers and it sums up for an average of one hour and forty minutes (1 hour and 40 minutes) and this scopes on minutes of process time at pre-packaging phase, booking phase, packaging phase, and lastly encoding the information of the customer.

Fig 3. Fleeky Curtains' Monthly Profit

In Fig 3, it shows the monthly profit of Fleeky Curtains in 2022 starting from January up to May. As you can see for the month of February, the profit made by the business rises to a whopping sixty thousand (60,000) Pesos. Since the record given by the client is half of the year in 2022, the records for May are still missing. But it only shows how the business products are marketable to the people. The record and customers for this Figure are all from Facebook platform.

## List of Processes

Table III.   
List of Current System Processes

|  |  |  |
| --- | --- | --- |
| Process ID | Process  Name | Process Details |
| P001 | Buy Item or Confirmation Phase | 1. Customer initializes inquiry 2. Customer sends details on his/her order 3. Seller checks the product inventory 4. Customer sends home address 5. Seller responses by giving the shipping amount based on their address 6. Customer selects mode of transaction 7. Customer sends their confirmation of the order 8. The seller provides the purchase receipt and the tracking number of the order |
| P002 | Prepare Item | 1. Staff acknowledge the customer order 2. Staff grab the product and verify if the customer request is correct 3. Staff further checks for quality assurance 4. Staff take photographs of the order 5. Staff places the order in a packaging and lastly seals everything with bubble wrap. |
| P003 | Booking the order | 1. The address information provided by the customer is handled by the staff 2. Staff logs-in to the courier booking site 3. Staff adds the customer information in the address book 4. Address fields of the courier are filled by the staff 5. Staff double checks if the customer information and declared value matches from the order. 6. Staff confirms the scheduled pick-up/drop-off of courier. 7. A waybill is generated and stuck on to the parcel. |
| P004 | Courier Pickup and Update | 1. The courier collects the item and brings it to its respective area 2. The photo of the order is sent to the customer 3. Status of the parcel is monitored by the admin 4. The admin notifies the customer if the item is out for delivery 5. Record the customer information |

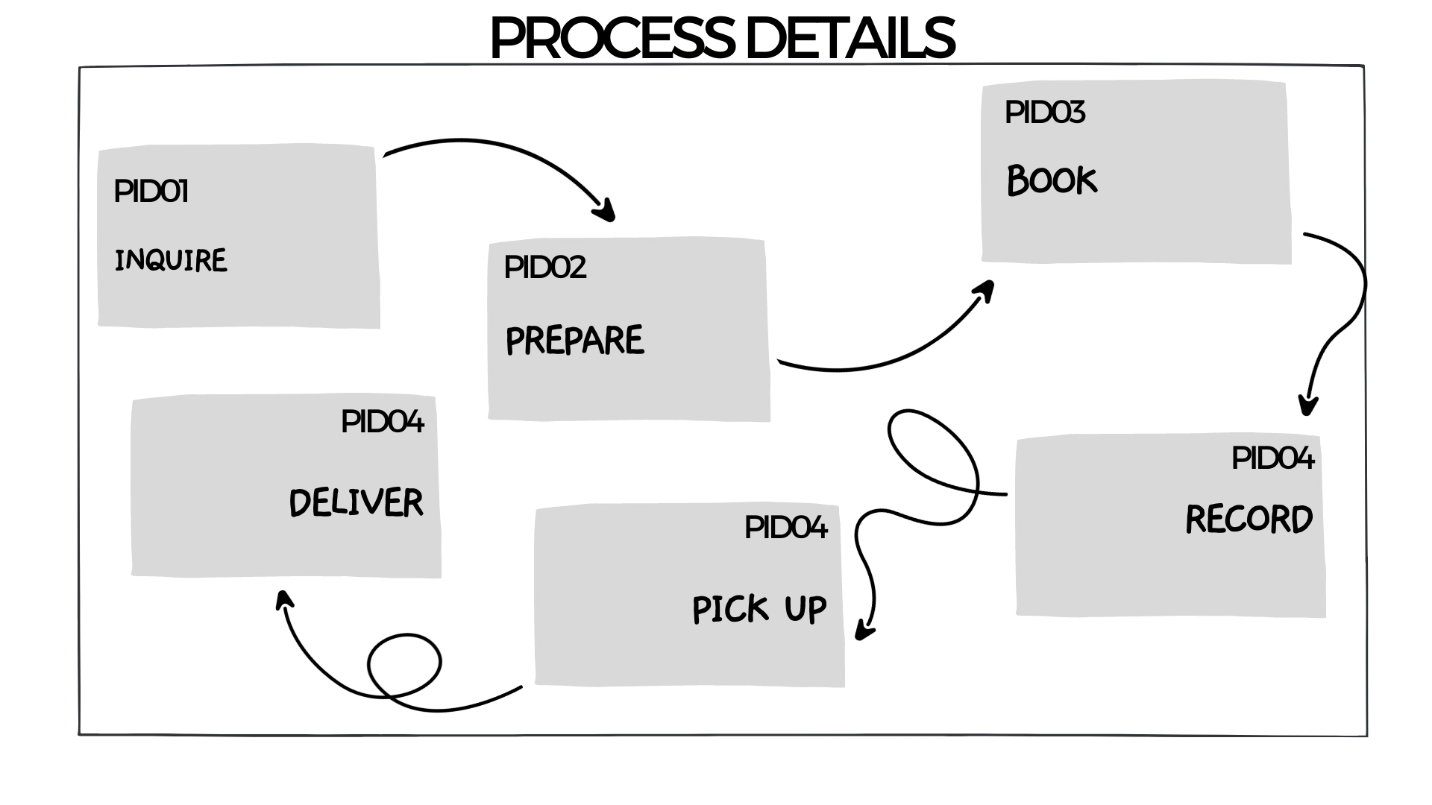


Fig. 4 Business Process Details

Fig 4 shows the straightforward process of Table lll, in which the client’s customer makes some inquiry and then the client prepares the product after the customer confirms the order. Now, the staff will make a booking at the courier to schedule its pick-up. While waiting for the courier to arrive to pick up the parcel, the staff records all the customer’s information, order, and receipt through Excel sheet. When the rider arrives, the staff takes a picture to seal as proof that it is on its way to the recipient's location. Finally, when the parcel arrives with the buyer, he/she pays first to the courier before he/she claims the item.

Fig. 5 Akbay’s role in the business

A K B A Y

In Table lll, the current system of the business is listed above. They have four main processes which are buy item, prepare item, booking the order, and courier pickup and update. Stated for each main process are its details and its whereabouts when the activity of the business is currently at that stage. It starts with the buy item or the confirmation phase where a customer confirms their purchase with the business and the staff will start to gather the items on their inventory to wrap in a packaging to tightly secure the item. Afterwards, the staff carry over computer tasks which involve handling the customer information and filling in necessary information when booking the order from couriers or to the e-commerce platform. Later, the admin will arrange the pickup schedule on Shopee and print out its corresponding waybill that needs to be sticked on to the parcel. Soon after, the courier will get the items from the business that will be brought to its respectful location.

Figure 5 shows where Akbay steps into the business pillar. The involvement of Akbay interest only regarding sales, auditing, and analytics. While certain functionalities were developed inside the app to solve the client’s pain point and strengthen the capability of the application.

Fig. 6 Akbay's workflow

Figure 6 shows the process when Akbay works for the business. First is it do data gathering from a source. This source, a picture of customer details, is extracted and converted into a text. From that text, it is validated by the staff and continues to add more information through selecting the products which the buyer wishes to purchase. Afterwards, all that information is now registered or recorded into Excel so that Fleeky Curtains is aware of which products are selling the most and reuses the recorded customer detail again when he/she wishes to repurchase again. Furthermore, once done Akbay will prompt to the order queue list that will display all the current orders that need to be given attention to so that the staff can start booking at the courier and do the packaging as well.

## SWOT Analysis

|  |  |
| --- | --- |
| **Strengths** | **Weaknesses** |
| * Known for providing quality products and services * Offers a low-cost shipping rate * Products are in safe packaging * Robust quality checking and assessment | * Limited tools and resources * There is no technology that can efficiently finish the staff’s work * Manual encoding and recording that takes a lot of staff’s time * Staff are limited and occupied in working hours. * Limited human resources * Time constraints of the staff * Staff have other agendas and responsibilities at work and home |
| **Opportunities** | **Threats** |
| * Touching other products in the growing market demand * Expand and scale up the business * Opening partnerships with other businesses * Provide sustainable packaging for products * Diversify in other online business platforms * Plan for future business trends * Be recognized in the local industry sector * Hire a Facebook advertising strategist | * Similar businesses (competitors) * Established Malls and Department Stores * Lifted lockdowns and restrictions * Natural calamities |

Fig. 7 Fleeky Curtains S.W.O.T. Analysis

# Proposed Solution

## Technical Background

Project Akbay will be used as a utility software tool that focuses only on the local business owner’s needs. In SPOTLIGHT’s future productions, project Akbay will have new sets of features that can solve the issues regarding organizing and managing their business. Through Akbay and with the help of the clients feedback it will further and hopefully enhance the feature’s software. But for now, SPOTLIGHT focuses only on the main problem of the customer (Fleeky Curtains) which is the customer’s handling management, customer’s profile data and inventory checking by using Python, Database, MySQL, Access, Excel, and other software that can further provide a better enhancement for the project. The product will provide a functional queue list of the orders, a descriptive data visualization, management tool for list of orders and sales, accounting, and processing updates, Database will be created using MySQL. Azure for cloud services.

In future production, Spotlight will provide a feature that can be managed using a smartphone to check the inventory and make updates on the status of the business whether there’s changes on the quantity/count of the products or in ordering queue list. This is also to provide portability for the staff to carry around their phone to check the updates and will not be needing the traditional checking via pen-and-paper to make changes to the system. A database will be used to populate the list with the customer information and the corresponding orders. Customer information will be scrapped using a Python code to address the problem of the client. This extracted information is saved to the application, to the database, and to the clipboard that will be used to help the user to fill the information in the address book efficiently.

## Feasibility

### Technical Feasibility

Akbay will be implemented with the help of certain tools that can boost the productivity of the product. SPOTLIGHT compiler will be Visual Studio Code and the language of the code will be Python. With Python there will be a lot of packages/tools that SPOTLIGHT can use e.g. (pyTesseract, OpenCV, pandas, matplotlib, image grab…etc.) with the python packages provided Akbay’s features will be implemented at ease since some of the tools will be used can be easily implemented.

### Market Feasibility

I. Project Akbay

SPOTLIGHT aims to provide a better quality of software so that it can be used by other aspiring business owners. Spotlights clients are free to market project Akbay to people so that it can provide better solutions and provide a better quality of software that can help business owners to assist their modern problems. Through Akbay and SPOTLIGHT the team aims to display this project as a milestone for the team. As project Akbay progresses SPOTLIGHT hopes to build a better foundation for the project and for the software as well, as the time project Akbay has been deployed. SPOTLIGHT and Fleeky curtains will try to advertise or refer the project to the local business owners. In this way it can reach out to potential investors.

ll. Business Client (Fleeky Curtains)

With the given equation of the elapsed minutes for an activity, it shows that time is a concern. With Akbay it will lessen its process time when it comes to encoding and booking of the clients’ customer orders. The marketable feasibility for the project, it will become less time-consuming for the client. So that it will focus more on the product advertisement to accommodate more customers than the usual average of the client and customer interaction time.

### Operational Feasibility

Project Akbay will be friendly as possible to the clients in this way, this will be less complicated for them to use project Akbay. Team SPOTLIGHT will be open as much as possible to the clients and will give them a session of how they will use the product. Akbay will provide a guide feature so that it can be operational and accessible to all users. The business can also exert their working hours in other activities related to the business to support one another’s task and finishes at an earlier day.

At the operations, they can use the mobile version to browse the status of the order queue list. This is also to check easily for the staff to roam around in the inventory room and just check on their mobile device the things needed to get and to be prepared for packaging so that everyone is aware of the items to be sold. Once the packager is done, he/she can do update the status of the list to done to verify that it is ready for delivery.

For the tailor/sewer, he/she can check under the inventory management the quantity of the raw materials if there are enough resources to create a product. Another thing is that he/she can also check the order queue list to know if there is a custom fit size that needs to be sewed.

In other technicalities of the product, Akbay GUI and icons will have a minimalist look and feel. The developers can also provide a manual or guide as to how the product can be used.

Project Akbay will have a help feature so that the user can fully understand and utilize all the features of the product. Before deployment, SPOTLIGHT will also provide a tutorial for the client. Since the client has a background when it comes to using technologies, Project Akbay’s features are expected to be fully utilized by Fleeky Curtains when they start to use it.

## Requirements Analysis

### Product Vision

Strive to provide access on business management and open more possibilities for every consumer-centric firm to improve their products and services, all within a click through Project Akbay. Along with the opportunities that Project Akbay offers its clients, it will exhibit adaptability with regards to its features and capabilities to continuously fulfill its clients’ requirements.

Table IV   
Project Vision Statement

|  |  |
| --- | --- |
| For | Business Owners |
| Who | Seeks to solve the repetitive process of encoding, booking, evaluation of stocks, and recording of transactions. |
| The | Project Akbay is a utility tool that will be used by the business staff to guide them at finishing their activities |
| That | Will increase productivity and reduce the time taken in finishing tasks |
| Unlike | The traditional method where the staff puts a lot of effort into doing their job |
| Our Project | Will help everyone in the business to ease their operations and encoding |
|  |  |

### User Classes and Characteristics

#### User Stories

This section displays the user stories of the interviewed client staff. It will be organized through user story pointing system that identify the priority of the development of project Akbay. This will help the developers decide what features will focus on designing the software.

User story point:

1 = Top Priority

2 = Less Priority

3 = Low Priority

Table V  
User Stories organized from top to low priority

|  |  |  |
| --- | --- | --- |
| # | User Story | User Story Point |
| 1 | “As a person who communicates with the customer, there are certain orders that are customized” | 1 |
| 2 | “As a person who makes the booking, I need to verify and double check if the details from the customer are correct on the system of courier/e-commerce platform.” | 1 |
| 3 | “As a person who takes the packaging, we need to take the waybill early to reduce the load/queuing.” | 2 |
| 4 | “As a manager, I want to check and update the records of our customers and also to analyze the performance of sales, the forecast of the business, and an organized list of orders.” | 3 |
| 5 | “As a manager, I want to check the statuses of the working activity of the business” | 3 |

#### User Classes and Characteristics

Table VI  
Roles and Description

|  |  |
| --- | --- |
| *Roles* | *Description* |
| Administrator | An administrator is a user that sees the overall activity of the business. Handles the status of the business and looks over to the performance of the business and ensures parcels are monitored. Controls the accounting and records on the database. |
| Staff | This user handles the customer request, ***customer relations,*** ***packaging/packager***, ***tailor/sewer,*** and the ***encoder*** *that* manages the order queue list. This user also updates when there are changes made to their business activity. |

### Product Backlog

Table VII  
Project Akbay Product Backlog

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **PROJECT AKBAY PRODUCT BACKLOG** | | | | | |
| ID | As a… | I want to be able to... | So that… | Priority | Status |
| 1 | Admin | see the report on sales, expenses, and the inventory | I can monitor the business performance and seek if there are products that need to be given attention | Must | Work in progress |
| 2 | Encoder | cross reference if the details of the customers are correct from, I am encoding | I will not be able to create a booking with the wrong billing address | Should | Work in progress |
| 3 | Encoder | store customer information in Excel or in a database once I am done creating a courier booking | I will not repeat the process of copying all the information or retype it once I booked the order | Must | Work in progress |
| 4 | Admin | check the current activities of my employees | I can know of what I can do to help their work | Could | To be started |
| 5 | Admin | see the customer data in a log sheet where I can check their information | I can reuse this data when creating a booking again when he/she reorders | Musto be started |  |
| 6 | Encoder | easily transfer customer information when creating a booking at courier | I can handle customer orders more efficiently and help other members at their work | Must | To be started |
| 7 | Encoder | get the corresponding zip code of the customer address | I can finish creating a booking | Should | To be started |
| 8 | Customer Relations | see the on-hand stocks at the inventory in real time | I can confirm to the customer if the product is available, and I will not be going to the inventory room to seek if the product is on-hand | Must | To be started |
| 9 | Customer Relations | check the available fabric in the inventory in real time | I can confirm to the customer that we can do his/her custom length request | Must | To be started |
| 10 | Staff | see if there's customer orders that need to be handled in the day | The staff will be aware that there is an order and products that need to get in the inventory | Must | To be started |
| 11 | Staff | adjust the stock quantity at the inventory list and add new products | The whole business staff knows what the available items in the inventory are |  | To be started |
| 12 | Tailor / Sewer | see the available raw material in the inventory | I can sew continuously and increase the on-hand products in the inventory | Must | To be started |
| 13 | Tailor / Sewer | see if there is an order that requires special cut and sew | I can visually see the request of the customer for his/her customer length order |  | To be started |
| 14 | Packager | See the customer's order and credentials on the queue list | Before sticking the waybill, I can identify the parcel if the buyer and the package is correct | Must | To be started |
| 15 | Packager | notify the staff that the items are already packed and ready to ship out | It will not confuse the staff that there is a pending for packaging | Must | To be started |

### Prototype

#### Screens

This will be the illustrations and design of Akbay in future production it will display more the features and will provide a better UI/UX in future development. The overall pain points of the client will be the top priority of the project.

A picture containing graphical user interface

Description automatically generated

Fig. 8 Akbay Welcome Page

Diagram

Description automatically generated

Fig. 9 Log-in page

Table

Description automatically generated

Fig. 10 Illustration of the Order Queue List

Figure 10 shows the concept that the researchers propose to deploy for the client. It is also to give focus on the simplicity of the application by going a minimalistic design. The window on the left has its own corresponding information and at the right side hovers the customer’s detail. At the bottom, these are actionable buttons that can function based on their respectful usage.

Graphical user interface

Description automatically generated

Fig. 11 Sample Capture and Extract Feature

Graphical user interface, application

Description automatically generated

Graphical user interface, application

Description automatically generatedFig. 12 Capture and Extract Feature (with Theme)

Fig. 13 Illustration of Capture and Extract Feature

Graphical user interface, application, Word

Description automatically generatedFigures 11, 12, and 13 are a sample of what happens if the staff adds a new record to the order queue list or if there is a new customer order. The above illustration prompts when the staff already captures of import a photo to extract; the application is guided first by the user to target where to extract information. Afterwards, the figure above will display the necessary information for the user. A reference photo is also included to double check if there is any adjustment needed to change.

Fig. 14 Adding Information from The Customer Order'

Figure 14 shows up after the previous figure confirmed its details, this window appears and makes the user select what the customer will order. This is also to integrate the database to quickly populate the record once it is added to the list.

### Product Roadmap

Table

Description automatically generated

Fig. 15 Product Roadmap

### Release Plan

**Target Group**: Local Business Owners (Fleeky Curtains)

**Goal**: To digitize the business process of the business when it comes to recording information, viewing (materials and product) in inventory. Optimize and automize the work activity of the staff and efficiently finish the tasks quickly.

**Needs:** Software that can optimize the working time of the staff and assist in completing the activity.

**Value:** Centralized and organize customer/business management.

**Key features:**

* + - Record the customer information and order
    - View business performance through descriptive data visualization
    - View and edit the stocks at the inventory in real time and add new profile of the product if there is a new product to be added
    - Automate the repetition of filling the customer information fields when creating a booking
    - View the pending task of the staff
    - View the pending customer orders
    - View the past transaction records

The comments and suggestions from the Spotlight’s panelist and adviser gave the researchers a clearer idea of how project Akbay can be implemented. Phase one (1) of the production and documentation have been completed. For now, this phase will be named phase 1.5 since Spotlight is still waiting for the approval, suggestions, and comments of the panelist regarding the newer version of the product and paper documentation. As you can see under the product roadmap, there will be three (3) milestones and two (2) roadmap goals which are the paper documentation and product deployment. The exact release plan of the product will depend on the road map goals that have been implemented by team Spotlight.

Release Plan

Release 1

* Product blueprint implementation
* Product Illustrations
* Paper Documentation
* User Stories
* Feature Blueprint
* Product Vision
* Product Prototype

Release 2

* Wireframes
* UI/UX Design
* Database system planning
* Algorithm research and implementation
* Version 1 Prototype with 2 features (Screen capture to text and storing the data to the database/excel sheet)
* Version 2 Prototype with design and better UI/UX
* QA report of the prototype

Release 3

* QA report for the newest version of prototype
* BUG Hunt report
* Version 2.5 with complete features
  + Screen capture convert to text
  + Inventory system management tools
  + Customer management tools (order queue list)
  + Basic open-source code of automation when booking to a courier and encoding the customer data.
  + Business performance visualization
* Version 3 with minor bug issues
* Version 4 exclusive access to the client
* Clients feedback report
* Version V. Project Deployment
* Final Documentation.

# Conclusion

Project Akbay can be a utility tool for anybody who wants to use it, once it is functional. After the deployment of the project, the developer hopes that many aspiring business owners can use it. As the paper and the software progresses. There will be changes of the foundation, with the help of advisers and panelists. The comments of the panelist will provide a better insight for the researchers.

In future implementation of team Spotlight, it will provide and execute the following:

* System Design
* Akbay Prototype
* New Content of the paper
* Stronger content of the paper

As the idea is getting richer and the vision is becoming clearer for the team Spotlight, with the help of the panelist and advisers. Team Spotlight foundation of the paper as well as the product will become easy to understand by the business client and readers of the paper. Project Akbay’s deployment will become a significant help for the business client when introduced by new challenges and progresses as it will create room for a better and stronger foundation for the team and for the product itself. The team Spotlight extends their gratitude to Ms. Roselle Wednesday Gardon and Mr. Jojo F. Castillo for their advice that helped Spotlight to provide a better product and paper for this term. Also, we highly acknowledge Spotlight’s business client, Fleeky Curtains, and panelist that provided their insights, vision, and comments to the project. This will give a better idea and implement a newer strategy for the team.

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|  |  |
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# Appendices

## Appendix A: Roles and Responsibilities

Bryan Gel Fabellore

* Content Manager
* Meeting organizer
* Developer

Pallas Dale Fontiveros

* Developer
* Design Thinker
* Software/code researcher

Neil Albert Garcia

* Product Manager
* Developer
* Content Creation
* Content Checker
* Business flow implementation

Gabriel Perez

* Content Creation
* Content Checker
* Developer

Joshua Roxas

* Video Editor
* Developer
* Content Analysis

## Appendix B: Minutes of the Meetings

Table A.1  
Minutes of the Meeting

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| MOTM | | | | | | | |
| Meet # | What went well? | What went wrong? | Recommendation | Learning and realization | What did this meeting contribute to the group? | | Updates |
| 1 | -The flow of the meeting | -Website hosting will be delayed due to its costs for the client; still does not need it now | -N/A | The group and expand a simple idea to have it shift into a better, more efficient form of solution for the client’s needs | Help us plan for the upcoming days for the project -Planned how the flow will go and how each of us can contribute to the project-Trello card setup for monitoring our progress. | | -Discussed how the ordering system will go around customers and orders.  -Laying out workable solutions for the client’s current ordering system’s efficiency-Can use autofill for faster transfer of customer information unto courier’s requirements. -Create preventive measures for client’s history for problem customers -Found a collaborative IDE to use for the group -Discussed how the group can contribute to the project to provide maximum or higher efficiency for their upcoming project |
| 2 | -Project rubric discussion | -Adviser might have misunderstood the project OR would have wanted a complete re-haul of the project idea itself. | N/A | -The group is flexible enough to shift and rework some ideas that they think would not be feasible enough for the client’s needs. | -Post-mortem for the advisory session with Sir. JoJo-Distribution for Paper Category requirements-Project Clarification-Wireframe idea planning -Courier discussion | N/A | |
| 3 | N/A | -must clarify the project description better. | step-by-step plan implementation as suggested by the adviser | revision for SOP paper comments/feedback/insights | focus first on inventory and customer management | go into the core aspects of the application first before the features | |

## Appendix C: Methodology

This portion of the document focuses on the group's procedures and strategies for achieving the project's objectives while also meeting the criteria of the chosen customer. Since Akbay is still in phase 1.5, some of the illustrations are still in the works. This visual will assist readers in understanding how project Akbay was implemented. This will serve as a guide for the readers as well for team Spotlight, ensuring that the team's goals are matched with Akbay's aims and product vision. The approaches utilized to develop project Akbay will be displayed in future implementations of the paper.

Diagram

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Fig. C.1 Pre-processing planning

Graphical user interface, application

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Fig. C.2 Project implementation of Akbay

Diagram

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Fig. C.3 Spotlight's workflow

Diagram

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Fig. C.4 Project Timeline