

PENNANT HILLS HIGH SCHOOL



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Information Processes and Technology

Year 12 – HSC Major Project – Assignment 2021/22
FEASIBILITY STUDY

“Corentin”

Clothing store



35186883

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Introduction

System Purpose

“Corentin,” is an emerging small clothing store based in Seven hills plaza, Sydney with the intention to sell original clothing designs to clients. James Corentin, the owner of the business, formulated this organisation from his previous designer experience.

Established only 2 years ago, the business found a quick surge in popularity for its perfect mix of contemporary and vintage clothing. Many customers travel large distances just to visit the branch from afar. Passionate staff who are interested in fashion, design and selling men’s and women’s clothing. The store sustains to suggest that their products are always worth every dollar.

Corentin has hired system analysts/designers to evaluate their system and find the most feasible options to solve the problems with the existing system within a specific time frame and schedule. Requirements of the new system will also be specified by the participants of the system. As a growing company, Corentin had gained the inventory to expand their business and therefore took the incentive to complete a long-planned business upgrade. The main component of this business project is to expand their business online. Economic projections prove this a good time to upgrade the existing system. With the online expansion, technology upgrades will be made allowing for the automation of systematic processes.

Programmers will be hired to create either the database or the website that is being used in the new information system. Each solution requires the software developers to program a part of the system. The software developers have a crucial role in the completion of the new system as the website and database will be the primary upgrade to Corentin.

Problem Definition

The store has recently discovered a large increase in profit with the rollout of new products. Furthermore, the recent global pandemic has called for a revamp of the system to suit new conditions. Corentin needs to match local competition and expand business online and in-store. It is likely that an online website will be created in response to this problem. Employees complain that the existing systems software and hardware is fairly outdated and not capable of supporting a more advanced system. Thereby, the clothing store will require a noticeable increase in production.

Additionally, the store's affordable prices attract many customers, however, it also creates too much customer traffic. At times Corentin customers and staff found the store stuffy and hard to traverse. A redesign of the store's floor plan is desired to allow for more shopping space.

Over the past two years, Corentin has collected an overall revenue of around \$210,000. Through a combination of collected profit and funding by participants and investors, the store owner has set aside a lightly flexible budget of \$60,000 for the project. The systems analyst/designer has been trusted with the responsibility of creating an opportunity for this business to expand greatly in profit and expand as an organisation.

With such a budget the system can afford an upgrade to all organisational processes. Existing processes are manually completed and require excessive time and effort. The new system should systematically automate these processes through the use of information technology, and databases.

The new information system will take a great amount of time to complete as the project is a substantial upgrade. The process should begin shortly and be fit into approximately 15 weeks with an extension if needed. Produce should not deplete during this period of time, however, a small decrease in manufacturing is expected. The schedule is roughly divided into 5 categories with individual timeframes.

- System design - 3-4 weeks
- Purchase and installation - 2-3 weeks
- Training - 1-week
- Implementation - 4 weeks
- Testing - 3 weeks

This basic schedule for the project is particularly flexible and depends greatly on the conversion method that is selected.

The Needs of the Users

System analysts have evaluated the existing system to find solutions for the new system. When investigating the existing system, the users of the system were interviewed to retrieve feedback and develop ideas for the new system. This has been combined with previous feedback received from users to formulate the following list of the needs of users:

- User information privacy and encryption.

- Data should be encrypted in order to reduce the risk of data being stolen in the case of a breach.
 - If a security breach has occurred, users should be notified immediately.
 - Participants of the system should not have direct access to users personal information.
- Comprehensive product details.
 - Size e.g. XS, S, M etc.
 - Materials e.g. 45% cotton, 30% polyester etc.
 - Washing instructions e.g. Hand Wash to avoid print deterioration etc.
 - Designer details e.g. designed by Rida Patel etc.
- Fully functioning website supporting online payment and shipping for all products.
 - Payment methods supported - Eftpos, PayPal, credit/debit card.
 - Account database storing details like Name, Number, shipping address etc.
 - Personalised shopping based on personal information and order history.
 - Product reviews include customer taken photos, text and ratings.
- Phone service throughout the building to allow for calls with clients and other organisations.
 - Call times should be available throughout open hours.
 - The number should be specified on the website.
- Store layout redesign, relocation or expansion for a more organised and spacious blueprint.
 - Clothing hung on multiple levels around the store.
 - Reduction of standing stalls throughout the store.
 - Better placement of the cashier's desk.
- More discounts
 - User exclusive discounts.
 - Event discounts.
- Stock notifications
 - Email/text notifications when stock is replaced
 - Email/text notifications of new products
- Refundability -
 - Allow products to be refunded after purchase online
 - Allow products to be refunded after purchase in-store
- Change rooms in-store
 - Add change rooms to the layout of the store

These needs will be greatly considered in the new system as Corentin likes to maintain good customer communication. The budget, time etc. provided, may not be adequate to support all of these needs, yet, the system designers will attempt to meet as many needs as possible.

System Scope

This project was initiated with the purpose of expanding the business online, in order to increase system performance and ultimately increase revenue. Corentin has gained a fair amount of revenue over the past 2 years and therefore, with this expansion, also decided to make basic upgrades to the existing parts of the system too. This expansion is a crucial step in the development of Corentin allowing the business to grow to its full potential. To complete such an upgrade with the budget and schedule provided, Corentin has made the executive decision to expand online while also upgrading the existing system.

The new system will be replacing this existing system to improve upon multiple areas. The new system will provide more of an expansion than an upgrade, however, upgrades will still be made to parts of the system. The main outline of the existing system is detailed below.

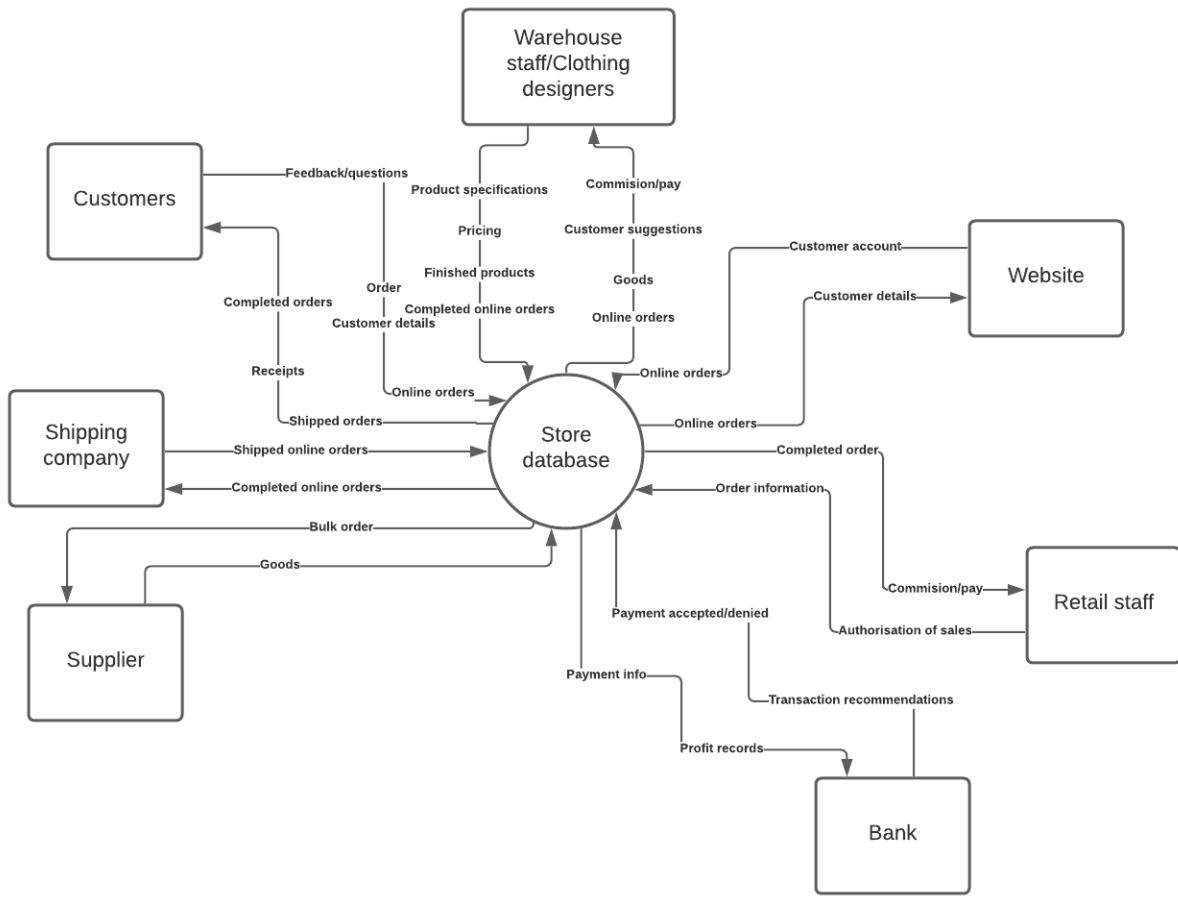
The existing system is fairly outdated and does not utilise online and technology-based processes. The database is recorded in paper form tables and stored in the garage/warehouse storeroom. Corentin is a fairly small business consisting of 4 permanent staff members based in the design department who also hand make the clothing. Specifically, 2 of these members specialise in textile composition and the other two in printing and embroidery. Most base clothing is purchased from bulk suppliers. Furthermore, 2 permanent and 2 casual staff working in retail. The permanent staff rotate as retail store managers throughout the week to maintain a low-stress environment. This system has been able to operate without substantial difficulties, however, has not been able to achieve near its maximum potential.

General System Description

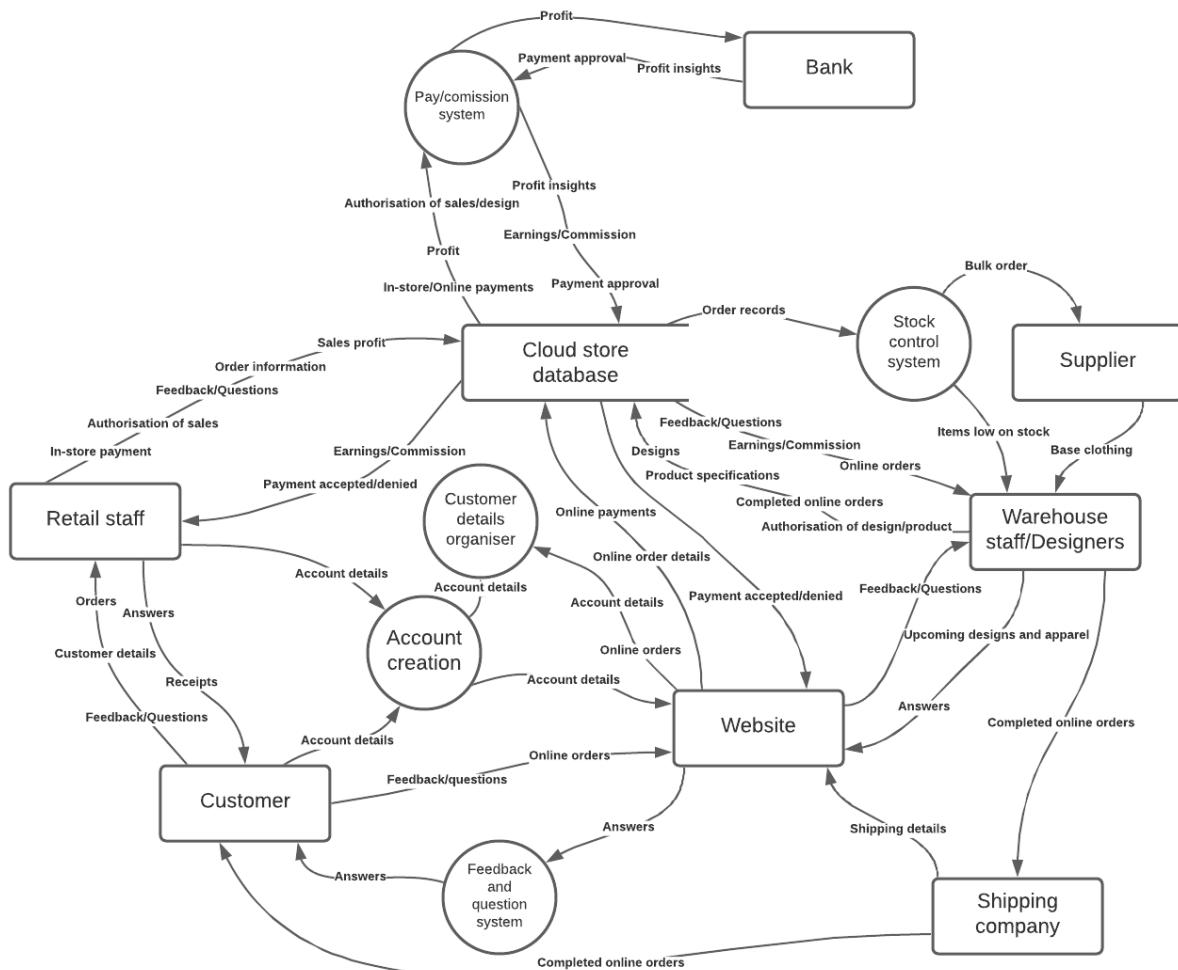
System Context using context and data-flow diagrams

The following context diagram displays the system context and the base external entities that interact with the system. The external entities that interact with the system are:

- **Warehouse staff** - The warehouse staff play an important role in this information system taking care of the design and manufacture of products. They receive goods from suppliers of which they then create designs and modify. Often, customer suggestions are included in designs to maintain a strong client communication system. Commission and pay that is calculated through the store database are granted to the warehouse staff. The warehouse staff return product specifications and pricing along with finished products to the store database ready for purchase by customers.
- **Retail Staff** - The retail staff take part in a simpler role than the warehouse staff. Similar to the warehouse staff, they earn commission and pay in respect to the number of sales each individual makes. The authorisation of sales is sent to the store database and determines the commission owed to each staff member. Furthermore, the retail staff receive in-store orders from customers and return the completed order.
- **Bank** - The bank has a very simple part of the system. The bank simply receives payments through a payment terminal and accepts or denies them. The bank can also provide sales records and analytical reports to the store.
- **Supplier** - The supplier simply supplies the base clothing that is then modified by the warehouse staff.
- **Customers** - The customers are crucial users of the information system as they are clients to the business. Feedback and questions are submitted by customers which are recorded and answered by the staff. Customers provide personal details/information which is recorded and stored in the store database. Orders in-store and online will be completed and eventually returned to customers. Payments through orders are made to the store and the staff return receipts to customers.
- **Website** - The website is the main new component in the future system. It will intake customer details and online orders. And output customer accounts that are stored in the database. Also, output online orders to be completed by warehouse staff.
- **Shipping company** - The shipping company will simply receive completed online orders and deliver them to customers as shipped orders.



The data flow diagram displayed below exhibits the flow of data through the system and the process and base external entities involved. All external entities and processes interact with each other surrounding the online store database which holds the system's data and information. The external entities involved have been described above in the context diagram.



Major System Requirements

A detailed description of all of the system requirements in the new system should be provided in order to create a system that meets the expected standards. As explained earlier the primary upgrade in the system will be an expansion of business to an online website. With this upgrade, many organisational processes will be automated and upgraded to improve the performance and efficiency of the information system. An outline of the fundamental system requirements are outlined below:

- Store database stored in the cloud
 - Data and information encryption
 - Automatic processes

- Fully functioning online store in a website/web application
 - Supports online payment and shipping for all products. (PayPal, credit/debit card etc.)
 - Account database storing details like Name, Number, shipping address etc.
 - Artificial intelligence that creates personalised shopping based on personal information and order history.
 - Product reviews including customer taken photos, text and ratings.
- Phone service throughout the building to allow for calls with clients and other organisations.
 - Present in both buildings and
- Store layout redesign, relocation or expansion for a more organised and spacious blueprint.
 - Clothing hung on multiple levels around the store.
 - Reduction of standing stalls throughout the store.
 - Better placement of the cashier's desk.
- Automation of systematic processes
 - Stock moderation and control
 - User product recommendations
 - Authorisation of sales
 - Customer details organisation
 - Orders made (Through the website)
 - Pay/commission calculation
 - Discount system for loyal customers
- Addition of new participant (Store owner)
 - Provided with a separate office
 - Regular inspections of business
 - Controls finances and business opportunities

These are the major requirements and differences of the new system. These requirements can be extended upon if feasible within the resources provided. System designers will create a base design for the system and evaluate and decide what improvements can then be made.

Participant Characteristics

The following participants of the system interact directly with this information system each having their own influences and tasks. The characteristics of the required participants are detailed below:

- **Store owner** - The store owner ("James Corentin") is currently working as a warehouse staff with specific responsibilities. These responsibilities consist of

control of finances and business opportunities. They will have access to the entire business, their office, systems, all records and the entire inventory. The individual processes that the store owner will partake in are:

- Moderation of entire system
- Periodic inspections
- Viewing and evaluation of any business opportunities
- Control of business' advertising
- **Warehouse staff** - The warehouse staff, as stated above, play a pivotal role in this system. Taking care of all design, manufacturing and product specification. The warehouse staff will have access to the storeroom, warehouse and direct access to the database through the cloud. The primary organisational processes that warehouse staff are involved in are:
 - Respond to feedback and questions from customers.
 - Design products using creative thinking and suggestions from customers.
 - Construct apparel through textile processes.
 - Specify details for products e.g. Washing instructions, size, material etc.
 - Receive information from the database specifying stock requirements and re-supply stock respectively.
 - Moderate stock control system and order bulk supply when needed.
 - Maintain machines used to construct clothing.
- **Retail staff** - The retail staff of the store have a simpler job than the warehouse staff. They operate the store allowing for customers to visit and physically purchase goods rather than online. Retail staff will have access to the retail store and the database through the cloud to update the database. The retail staff are involved in the following processes:
 - Assist customers kindly with any questions/help needed e.g. store navigation, product selection etc.
 - Supervise the store and users in case of a problem.
 - Complete customer product purchases in-store.
 - Update store database when a purchase is made, entering details like customer server name, product details, customer account etc.
- **Retail store manager** - The retail store manager has a very similar role to the retail staff of the store. They will take part in similar activities as the retail staff as well as superior tasks too. The retail store manager will have access to the retail store with the responsibility of locking the store when closing and will also have direct access to the database. These processes consist of:
 - Assist customers and staff kindly with any questions/help needed e.g. store navigation, product selection etc.
 - Supervise the store's participants and users in case of a problem.
 - Complete customer product purchases in-store.

- Update store database when a purchase is made, entering details like customer server name, product details, customer account etc.
- Overlooking database updates and analysing results.

The following participants are not required in the new system but may be included if needed. The characteristics of these participants are as follows:

- **Clothing designers** - The new system has the possibility of adding a new participant. This participant is already present in the existing system, although it is combined with the job of warehouse staff. This separation will allow participants to focus more on specific tasks, ultimately, improving quality control and performance. The separate processes that the clothing designer will partake in are:
 - Design products using creative thinking and suggestions from customers.
 - Specify details for products e.g. Washing instructions, size, material etc.
 - Receive information from the database specifying product popularity and design products respectively.
 - Moderate stock control system and order bulk supply when needed.
- **Phone customer service member** - This participant is also not present in the existing system. Telephone customer service staff will work in a disclosed room containing phones and have the main purpose of making and returning calls. The processes that these staff will complete are:
 - Calls are made and returned to users and other organisations
 - Phone is redirected to superior staff if needed.

System Requirements

Physical

This system is composed of two structures at this instant which provides the necessary space for the existing system. However, the new system may require expansion or relocation of either building. Although, with the budget provided this may not be possible. The main objective of the new system is to expand the business online and therefore a significant amount of the budget will be used to support the expansion.

The two current buildings are:

- The store - The store, as stated earlier, is based in the Seven Hills Plaza. The Seven Hills Plaza is a busy location for locals, thus the store's quick surge of popularity. The retail property provides 98 square metres of space at the price of \$26,000 per annum. Users and participants of the system have both complained about the store being too stuffy and hard to navigate. The new system will require a redesign of the layout or even a relocation of the business
- Garage/warehouse - The warehouse is stored in the garage of the store owner coming at no extra cost. Equipment has been predominantly provided by his passion for creating handmade, authentic apparel. As the business expands online, more production is required. For this reason, a warehouse upgrade or expansion could help to provide extra space for production and goods.

The information technology of the system will operate jointly with each other contributing to the system's functionality. Some of the technology components of the previous system should be upgraded with the new system as they will not work effectively in the new system. The hardware requirements of the new system consist of:

- **Computer network system** - This system requires a comprehensive computer network system that can operate the database program and website being built. Recommended specifications should be set to ensure that the new system will be able to support this change. The retail department may not require computer upgrades yet as their computers can provide the necessary power for processes in which they will take part.
- **Phone system** - A phone system to allow for communication between clients and other organisations will be implemented in the new system. Although, this system is of less importance to other hardware systems. This system should consist of at least two phone lines that can be stored in either the warehouse or store depending on space available.

- **Internet routers and wiring** - With the new website being implemented into the new system and the database application being programmed and stored on the cloud, internet connectivity and speed should be strong. An upgrade to the previous wifi in both warehouse and retail departments needs to be made to maintain a high-performance rate.
- **Point of sales cash register system** - The existing system contains a previously installed point of sales cash register system. This should work well with the new system as long as a connection to the internet is provided by the wifi network system. If an upgrade is made to this system, the system's performance may improve very slightly, however, not enough to require this upgrade as it will add extra costs and installation time etc. However, an upgrade to the payment terminal will be required as the existing terminal does not permit new methods of payment.

Small factors, for example, temperature, volume and more can greatly affect an information system. Key requirements should be made to ensure that the new system maintains a good system environment. Complete air conditioning and climate control should be installed to sustain the desired temperature of 25-27° in the system. Climate conditions can greatly affect the performance rate of staff. This climate will maintain a high-performance rate and should be present in both buildings.

Furthermore, furniture options and equipment should be chosen with consideration of ergonomics, sizing, cost, installation time etc. There will be no specific furniture requirements in this system, however, furniture to be used should be determined feasibly. The required and recommended furniture/equipment of the new system are:

- **Warehouse**
 - **Draft tables** - Draft tables are used to allow for designers to sketch clothing designs with ease. The importance of this item in the new system is fairly low as most designers design through graphic design. Although, this may slightly increase the performance of participants and therefore may be included in the new system.
 - **Male and female mannequins** - A male and female mannequin has been requested by the warehouse staff to be able to work with clothing drapery. If possible, one of each should be installed into the new system.
 - **Chairs** - Chairs should be replaced within the new system as existing chairs are not ergonomically correct. All chairs should be replaced in the new system to provide an ergonomic workspace for the new system.

- **Handheld textiles instruments** - Existing handheld textiles instruments will not withstand the magnitude of the new system. For this reason, additional textiles equipment should be purchased in the new system.
- **Storage units for this equipment** - With the increase of handheld textiles instruments, storage will require an increase to hold all of the equipment. The amount of equipment purchased will determine the amount of storage that is required.
- Retail
 - **Cashier's desk** - The cashier's desk is already present within the existing system, however, may need relocation in the new system and maybe upgraded while relocating. There are no specific requirements for the cashier's desk, although it should exhibit similar specifications to the previous desk.
 - **Clothes rack hanger** - A new layout design may require clothes rack hangers. Clothes rack hangers are installed on walls with the purpose of holding multiple hangers. This may not be necessary within the future system, however, will be a great insertion as it will save store space and ultimately provide the retail store with a more spacious layout

The system should also be sustainable to achieve maximum return on investment. To attain sustainability the system must purchase hardware and software that will last long into the future. Products that maintain high sustainability generally come at high costs and therefore may not be economically possible within the budget. Although, highly sustainable products can still be bought at a fair price at different companies.

Furthermore, James Corentin, the business owner, complains of having a heavy workload as he takes care of the entire business while working as a full time employee in warehouse staff. In the new system, he hopes to be provided with a separate office with the necessary resources provided. This office will be constructed within the warehouse and should contain climate control, desks, chairs, storage, room lighting, a locked door and a desktop computer within roughly 12 square metres.

Performance

The performance of a system is very important to acknowledge when composing a system because it determines the speed and efficiency that the system works at. The performance of the system has to be improved when changes are made to the system as the previous system worked at a fairly low-performance rate. To improve performance in the information system's organisational process efficiency should be

improved. There are numerous ways that the performance of an information system can be improved. Some of which are:

- **Simplifying or upgrading the store database** - A simple redesign, organisation or upgrade of the store database will apply significant improvements to the efficiency that it runs at. The most effective strategies that will improve the store database are:
 - Periodic automatic organisation of data (also aids in data validation)
 - Increase random access memory
 - Strengthen CPU
- **Automation of processes** - The store completes multiple tasks that require human operation. Often, these tasks can easily be replaced by machines and programs. The new system will reduce the number of organisational processes completed by participants to increase the efficiency of the system. Automating these processes will be fairly expensive, however, the return on investment will cover the cost quickly. The main processes to be automated in the new system were detailed earlier in the major system requirements. As detailed earlier the processes that will be automated in the new system are:
 - Stock moderation and control
 - User product recommendations
 - Authorisation of sales
 - Customer details organisation
 - Orders made (Through the website)
 - Pay/commission calculation
 - Discount system for loyal customers

The computer network in the new system should be able to function at a certain performance rate to complete computer tasks efficiently. Recommended hardware specifications of the retail department of the new system are as follows:

- Operating system: Windows 10
 - 1 Gigahertz 34-bit processor
 - 4 Gigabytes ram
 - 32 GB free storage
 - 720*480 screen display

These specifications should provide the necessary processing speed and power required as the main purpose of these computers is to run point of sales software which does not require much processing speed or power. On the contrary, it is apparent that computers used for graphics processing and clothing design require more processing

power to run efficiently. Therefore the recommended specifications for these computers are as follows:

- Operating system: Windows 11
 - 2 Gigahertz 64-bit dual-core processor
 - 8-16 Gigabytes Ram
 - Integrated GPU
 - 512 GB free storage
 - 1920*1080 - 3840*2160 screen display

The existing system contains computers that exhibit the performance required in the retail department, however, the graphics design desktops will need to be upgraded with the new system to improve performance.

Security

Security is an important factor that should be considered when creating new systems. This applies particularly in this specific information system as the stored information in the account database is private to the user and should not be breached. This system has the responsibility of maintaining this privacy. There are two possible ways that this system's security can be violated. Physical breach of security and cyber breach of security. The new system should consider both of these security threats and involve a strong and sustainable security infrastructure in both areas.

A system that exhibits technology with a connection to the internet has a higher chance of a data breach. Hacking is a growing offence that develops with the development of new technologies. As hackers develop so should cyber security techniques that negate cyber attacks. The main concern for this system is vulnerability to hacking as the new system requires an online database and website which is prone to such an attack. The sensitive data that hackers could retrieve are customers personal details, store records, bank account details etc. Some cyber security defence mechanisms that could be included in this system are:

- **Data encryption** - Data encryption is a security method that encrypts data and information into a specific code that can only be accessed by participants with access to the encryption key. This security method is considerably helpful with data security, however, is fairly costly. Therefore, with the budget provided, this may not be economically feasible.
- **Two-factor authentication** - Two-factor authentication is a growing security technique used by many organisations. Compared to data encryption, two-factor authentication is a much cheaper method. Two-factor authentication requires

more than just a password to access an account. Often, a different form of communication is used to send a temporary passcode to be used when logging in to new devices. Although it may not provide as much security as data encryption, it will still supply a similar amount of security.

- **Report of breach and incidents** - The simple addition of user/participant notification when a data breach or incident occurs will benefit the cyber security of the system greatly. This security method should not be as hard to implement into the system as it is an uncomplicated addition.

As this store holds goods, it is vulnerable to store theft. Corentin has had experience with previous store theft incidents and needs a more secure system to avoid such events. This will be improved mainly with an upgrade to the physical security of the system. A physically secure system will also benefit in the case of other physical crimes committed within the store, ultimately, meaning that users may feel safer within the property. A physical violation of security could even lead to a cyber breach as technological devices in-store will be linked directly to the stores database holding sensitive information. A more physically secure store will ultimately lead to less loss of product to store theft and similar events. Some physical security items to be considered are:

- **Electronic intrusion detection and surveillance** - Electronic intrusion detection and surveillance systems are a strong physical security methods. Cameras are set up to detect movement, record activity and display on an external device to keep video records on the store. Occasionally cameras are set up and monitored by an individual, however, this method is losing popularity as it is more expensive and not required in similar systems. Instead, new technologies have enabled cameras to automatically detect and record any movement through night or day.
- **Access control** - Access control is the most important addition in physical security to prevent store break-ins or theft. The businesses private property and important rooms are locked through some form of security. Usually locked by a key, keycard, pin etc. An access control system would be easy to install and should be installed to greatly improve the physical security of the organisation.
- **Security personnel** - Security personnel is one of the strongest and most effective forms of physical security. However, the implementation of security personnel requires the hiring of the personnel which comes at a price of high magnitude. Although security guards may provide sturdy security, it is not economically feasible as cheaper alternatives are available.

The security methods detailed above for both physical and cyber security may not all be implemented into the new system as the provided resources may not cover all of them.

The system designers should consider all these systems and combine both physical and cyber security methods systematically to create a powerful security system.

Data/Information using data dictionaries

Data item	Type/Format	Description	Example
Username	Text	Unique username to separate accounts of users	John.Appleseed
Password	Text	Private code to access different accounts. To keep accounts secure and private to each user.	4nv^~%^k3hX+SQe-
First Name	Text	First name of the user. To address the user.	Nathan
Surname	Text	The surname of the user. To address the user.	Samuel
Date of birth	Date/Time	The date of birth of a user. Used to recommend products, collect data etc.	14/04/1978
Phone number	Integer	The phone number of a user for contact if needed.	0431 753 981
Email	Text	The email of the user used for contacting. Emails sent include promotions and shipping updates etc.	John.Appleseed@gmail.com
Credit card details	Integer	Payment information of the user. Details used if an order is made online	311700
Shipping address	Text	The home address of the user. Used online when shipping	197 Gover St, North Adelaide, SA 5006
Gender	Text	The gender of the patient.	Male/Female/Other

		Used for product recommendations, data collection etc.	
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System Operations

The new system will need to maintain and improve on any existing procedures. To complete these operations as effectively as feasible, the system will require technological enhancements. Because the system will not be totally automated, participants will still be required to complete tasks. For example, warehouse staff are still required to produce clothing through manual methods.

Summary of investigation of the existing system

How it works.

The existing system works as a general small clothing store using a paper based information system. The database is stored completely on paper records including details like, name, payment records etc. The existing database is not efficient and limits the system potential greatly. Although, for the past 2 years, this system has been functioning correctly without much mistake. Reports of data loss and invalid data have been recorded as participants are prone to the casual mistake. The only system that worked through an automatic process is the point of sales cash register system. This system operated by storing all customer payments in the computers installed at the cash register. Data from this system is printed in tables and stored in the storeroom to use relatively with other data. Other systems are all paper based and filled out by the staff. The database is categorised into individual systematic tables that are filled out by the participants of the system.

These database tables are detailed below:

- Stock control system - Includes data like stock updates, supplier stock, available funds etc.
- User details database - Includes data like name, surname, phone number, email, payment details etc.
- Pay/commission table - Includes data like profit insights, authorisation of sales, payments etc.

- Order details database - Includes data like products purchased, pricing, user details etc.

What it does

The primary function of the existing system is to support a fully functional retail store and warehouse with the purpose of selling original handmade apparel. The purpose of this system is to sell items to customers for a price, generally higher than produce costs, to make a profit. A great amount of profit has been achieved with the existing system over the past 2 years as described in the problem definition. A combination of paper databases and participant driven processes have provided Corentin with a functioning business and such profit.

The system is able to complete basic organisational processes through paper databases. These databases are updated and calculated manually. As stated earlier, this process is time consuming and therefore has a low performance rate. For the past couple of years, this system has been able to function as described.

Who uses it

The participants present in the existing system consist of:

- **Warehouse staff** - The warehouse staff have the toughest job of all current participants, taking part in the design and production of clothing.
- **Retail staff** - Retail staff work in the retail department and have the responsibility of initiating and completing orders from customers of Corentin.
- **Retail staff manager** - The retail staff manager has a similar role to the retail staff, however, has the additional responsibility of overseeing retail staff and operating the store.
- **Store owner** - James Corentin, the store owner works as warehouse staff but also takes part in the highest responsibility of maintaining the entire organisation.

Customers are the only present users in the current system. They buy products from Corentin and support all profits and revenue made.

Impact of changing the system

Changing/planning information systems is a complex process with several organisational and environmental implications. If the current system is modified, the bulk

of the effects within the organisation and in Corentin's surroundings will be effective. Examples of impacts of changing the system are as follows:

- The present information of the system will need to be retyped, meaning that two years of paper records will be disposed of. This disposal of paper is environmentally unfriendly and should instead be recycled either internally or externally.
- Participants of the system will be impacted during change as implementation of a new system can be risky. Hence, a feasibility study can be completed to plan a feasible solution to a problem.
- The introduction of a new system will allow the organisation to expand and function more efficiently and effectively to the organisation's potential. Again, a feasibility study would further benefit the effectiveness of a new system.

Nature of the the problem

Benefits

The current system is outdated and does not consist of many benefits. However, with the implementation of a new system, existing benefits of the current system may be lost. The major benefits of the current system are:

- Participants and users have extensive knowledge of the existing system as it has been operated for two years now.
- As the current system is run solely off paper records, there is no risk of cyber attacks.
- Minimal expenses are made as this system runs using hardware and software that is cheap to maintain.
- Tasks are not at all confusing to participants and users unfamiliar with information technology.

Although these benefits exist within the current system, a new system can substantially improve these benefits and add further benefits to the system too.

Costs

As mentioned previously, the costs associated with the existing system are inexpensive. The cost of creating this information system amounted to a small amount of \$25,000 as much of the needed software and hardware was previously owned by the participants.

The present system's yearly costs are likewise quite inexpensive, around \$1,000 per year. The main costs contributing to the annual cost are paper and stationery costs, bills, base goods purchase etc.

The implementation of a new information system will likely require an increase in both up-front costs and annual costs as purchase software and hardware will be required to make changes to an information system.

Risks

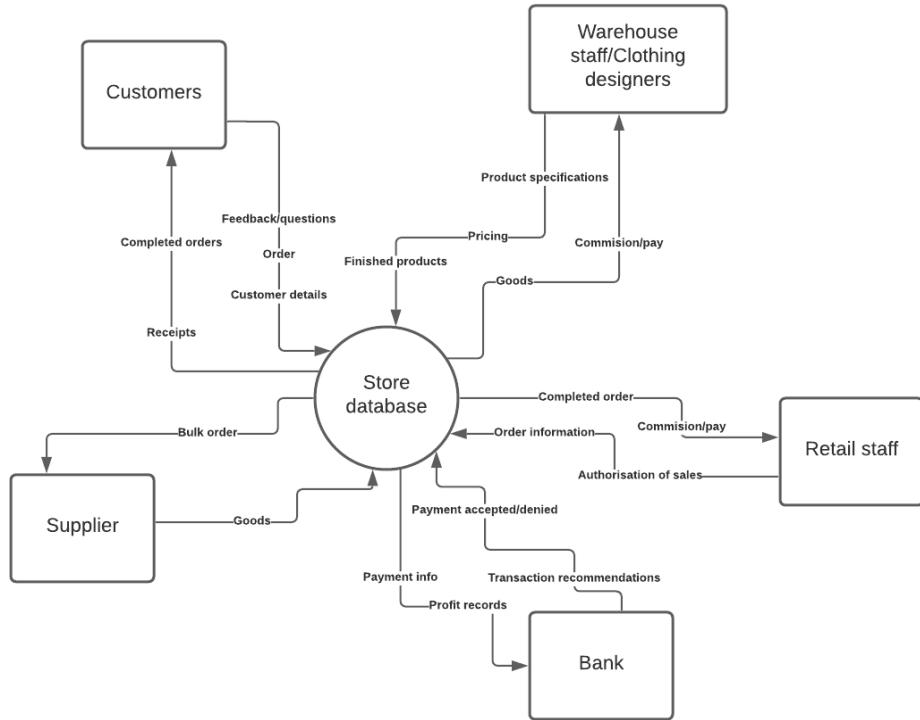
With benefit comes risks. The current information system consists of many risks. The risks associated with the present information system are manageable, but they can be enhanced. The following are the most significant of these dangers:

- Records that have been physically lost or stolen
 - This may be avoided by regularly backing up data and encrypting it.
- Inadequately stored data/information
 - This might be aided by data type checks.
- Work overload is a possibility.
 - Process automation will eliminate this potential by reducing the workload of participants.

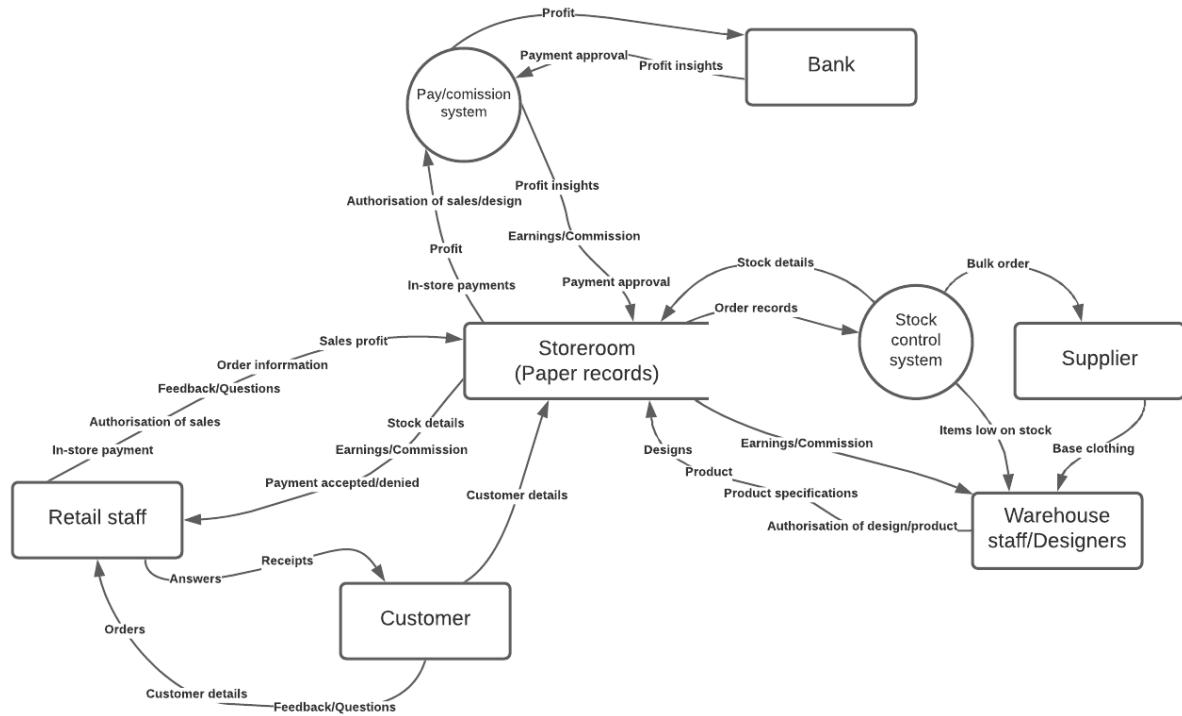
These solutions should be incorporated into the new system in order to lessen the likelihood of these dangers arising.

Existing system context

Context diagram



Data flow diagram



Alternative solutions

The budget provided does not provide enough money for Corentin to create both a custom website and a custom database, therefore, the two solutions each contain either the customised website or the custom database.

Alternative solution 1 - Custom, system unique website

Hardware

The following table describes the hardware that will be purchased within the new system. Already provided hardware consists of the Point of sales system: receipt printer, barcode scanner, keyboard, monitor and cash drawer. As detailed in the requirement report, a new payment terminal is required in the hardware of the new system. The computer systems installed in the warehouse consist of keyboards, mouses, monitors, printers and desktops. The new system requires an upgrade to the desktops. These desktops will be converted to laptops so that designers can easily bring work back home and complete in their spare time if needed. Installation costs will

Specifications	Description
<ul style="list-style-type: none">• 2K Resolution cameras with night vision capture more detail in crisp 2K clarity• 100% Wire-Free cameras with up to 180 Day Battery Life. 1 Charge = 6 months• Intelligent AI technology with Built-in AI technology can detect humans and reduce false alerts• Military grade encryption keeps your data safe and protects your privacy• Free Local 16GB Storage with No monthly fees• All data is saved locally to the Homebase with 16 GB built in storage• A built-in spotlight allows you to capture the whole picture in colour	 <p><u>eufy Security eufyCam 2C Pro 2K Wireless Home Security System (4 Pack)</u></p> <p>As required as part of the new system, a set of security cameras will be installed in both departments of the business. Eufy security cameras provide a strong layer of physical security to the business through networked, AI powered and wireless cameras. A set of four cameras including a eufy hub rounds up to \$749 which is a great price considering all the features it contains. The only downsides to purchasing this unit is that it can be costly to maintain and will not sustain complete privacy of users and participants. Although, the security that a surveillance system can provide greatly overrides these concerns. The combination of these security cameras, combination locks and key locks will provide a powerful security structure to protect the system physically.</p>



<ul style="list-style-type: none"> • Weather resistant - IP44 • Suitable for door thickness 35mm to 65mm • Suits a 60mm Backset • Resettable Combination • Installation instructions included 	<p><u>Ikonic Satin Chrome Digital Entry Lock</u></p> <p>As stated above, combination locks will be used in the new system so that access to rooms can be secluded to specific people. The advantage of using a combination lock rather than a key lock is that entities with access only will require the code to unlock the door rather than a physical key. These entry locks will be installed in particular doors that require access from multiple people. The retail store-room door, warehouse front door and its store-room door will be installed with combination locks and therefore costing \$150 at \$50 per combination lock.</p>
<ul style="list-style-type: none"> • Brushed nickel finish / stainless steel • Adjustable backset 60mm / 70mm • Installation instructions enclosed • Suitable for door thickness 35mm to 55mm 	<p><u>Syneco Brushed Nickel Ruby Entrance Set</u></p> <p>Key locks will be installed in a few doors in the new system to provide extra security. The advantage of using key locks in this case is that only people with access to the physical key can access this area. Combination locks are easier to break into or guess, whereas, key locks require a physical copy of the key to break into. Therefore, key locks will be installed into doors requiring extra security. These doors are:</p> <ul style="list-style-type: none"> • Store owner office • Retail store entrance <p>A singular entrance set will cost \$13.50, therefore, if two are purchased the price will rise to \$27.</p>
	<p><u>Netgear Nighthawk X4S AC2600</u></p> <p>It is important to power the network with a powerful router capable of providing high-speed internet throughout the business. This particular system requires a strong and powerful connection as its expansion pushes the business focus more online than physical. The existing system provides</p>

<ul style="list-style-type: none"> • 128-bit AES encryption with PSK) • Double firewall protection (SPI and NAT) • Denial-of-service (DoS) attack prevention • Processor : dual-core 1.7GHz processor • Memory : 128 MB flash and 512 MB RAM • IEEE® 802.11 b/g/n 2.4GHz-256 QAM support • IEEE® 802.11 a/n/ac 5.0GHz 	<p>an internet connection but not one capable of withstanding the new systems internet requirements. This can be provided with this router, the Netgear Nighthawk X4S AC2600 at a price of \$499. Two modems will be installed, one in each department of the business. The pricing of two modems will add up to \$998.</p>
	
<ul style="list-style-type: none"> • Built-in unified communications • Multiple call handling • Reporting, monitoring, and analytics • One-number service on any device, anywhere • Hot-desking • Multi-site functionality • Emergency features with offsite management 	<p><u>NBN Ready LG eMG80 Telephone System – 4 Phones</u></p> <p>This system will include a voice over internet protocol (VoIP) system. The system required a phone line to allow communication with users and other organisations. VoIP is a growing form of communication that does not require phone service. As more and more companies adopt this communication method it is worth the early conversion. Therefore the new system will exhibit the NBN ready LG eMG80 Telephone System at a cost of \$429.</p>
	
<ul style="list-style-type: none"> • Accept every payment — Process tapped, dipped or swiped cards, mobile wallets, MOTO payments. • Touchscreen display — Simplify checkout for your team and customers with a large touchscreen display. • Durable construction — Built to withstand constant real-world use, whether you're in-store or on the road. • Powerful battery — Accept payments all day and keep your counter clear of cables. • Simple refunds — Process transaction refunds instantly from Zeller Terminal with no additional fees or charges. 	<p><u>Zeller EFTPOS terminal</u></p> <p>The existing system does contain payment terminals which support EFTPOS payments however does not allow for newer methods of payment. The seller EFTPOS payment terminal is a new, sleeker, terminal which supports new methods of payment. The upfront cost of each terminal will be \$299. This system consists of 2 cash register systems at the moment increasing the upfront cost to \$598. The Zeller EFTPOS terminal also includes a 1.4% processing rate for each terminal. Projections have concluded that this will not make a major difference in profit over time.</p>
	

<ul style="list-style-type: none"> Processor - 11th Generation Intel® Core™ i5-11400H (12 MB cache, 6 cores, 12 threads, up to 4.50 GHz) Operating system - Windows 11 Home, English Video card - Intel® UHD Graphics Display - 15.6" FHD+ (1920 x 1200) InfinityEdge Non-Touch Anti-Glare 500-Nit Display Memory - 16GB DDR4 3200MHz Hard drive - 512 GB, M.2, PCIe NVMe, SSD 	<p><u>Dell XPS 15 laptop</u></p> <p>Dell's XPS 15 laptops will be a great addition to the new system. The requirements report outlines that the computers in the graphics design department required an upgrade in order to increase performance of the system. The Dell XPS 15 laptops will support this performance improvement. 4 laptops will be purchased for designers in the warehouse and implemented into the existing computer system. The price of 4 laptops will round up to \$9596. This will be a costly upgrade, however, feasible as it is a substantial upgrade to the performance of the system.</p>
<ul style="list-style-type: none"> Draft tables - 2 Male and female mannequins - One of each Chairs - 8 Handheld textiles instruments Storage units for this equipment - 4 Cashier's desk - 1 Clothes rack hanger - 16 Air conditioning - 3 Store owners office Changerooms - 2 	<p><u>Furniture/equipment of the new system</u></p> <p>The new system will require a small upgrade to the equipment/furniture of the system. The amount of each product is stated in the specifications column. The cost of all of these products required will amount to \$12,200. The largest of this cost being the air conditioning as this is a costly product. However, it is important for the system to maintain climate control at the desired climate as it can greatly affect the systems performance.</p>

Software

The following table describes the software that will be installed and used within the new information system. Each software used will greatly affect both the participants and users of the information system. This solution will include a database designing software subscription providing the business with many necessary resources. A database which stores the organisations data and information will be designed and programmed by the software developers hired. An entire website will be developed and programmed by the software developers from scratch and run through a web hosting company.

System requirements	Description
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knack*

<p><u>Operating System</u></p> <ul style="list-style-type: none"> • Windows 10 or greater • Windows Server 2016 or greater <p><u>Hardware</u></p> <ul style="list-style-type: none"> • Hard Disk - SQL Server requires a minimum of 6 GB of available hard-disk space. • Monitor - SQL Server requires Super-VGA (800x600) or higher resolution monitor. • Internet - Internet functionality requires Internet access (fees may apply). • Random Access Memory (RAM) - 2 GB or greater • Processor Speed - x64 Processor: 1.4 GHz or faster • Processor Type - x64 Processor: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support 	<p><u>Knack</u></p> <p>Knack is a cloud-based database portal that enables businesses to create online databases that can be viewed remotely. This means that Corentin can run their databases remotely through knacks servers rather than locally. They provide access to the software and additional business resources at a monthly cost. The subscription is fairly inexpensive and therefore will suit this system very well. The inclusions in these subscriptions are file storage, database records, system applications, detailed reports, API and e-commerce. This will cover many of the organisation's needs all within a smaller cost than if an entire custom system database was developed. This database will store all of the systems data and information and automate processes that were previously manually completed. Performance rates of the system will significantly increase with the use of Knack. Corentin will purchase the "Pro" subscription for knack which provides all features that knack provides at fair pricing. The cost for this subscription will be \$79/month. (\$948 annually)</p>
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<p><u>Operating Systems</u></p> <ul style="list-style-type: none"> • Microsoft Windows 7 (32-bit and 64-bit) with Service Pack 1 (SP 1) or later <p><u>Hardware</u></p> <ul style="list-style-type: none"> • Processor - For Windows 11/10/8/7: 1 GHz • Random Access Memory (RAM) - 2 GB (minimum of 512 MB RAM required for Recovery Tool) • Hard disk space - 300 MB of available hard disk space. • Graphics card - Nvidia/AMD cards with minimum of 6 GB of memory. 	<p><u>Norton security</u></p> <p>Norton security is an antivirus and protection application which keeps private and sensitive information secure. It is very important to ensure computers, networks and the server are secure. As part of the needs of the users and the system requirements, system data and information should be secure. This can be achieved with Norton security ultra costing \$239 annually.</p> <p>The package includes features like defenses against spyware, viruses, malware, and ransomware, VPN, firewall, password manager, SafeCam webcam protection and dark web monitoring.</p>
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<p><u>Operating system</u></p> <ul style="list-style-type: none">• Windows 10 64-bit (version 1909) or later; LTSC versions are not supported	<p><u>Adobe creative cloud</u></p> <p>Adobe creative cloud is a fundamental part of this business. All graphics and clothing design is created through adobe creative cloud applications. The primary applications used are Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Adobe MediaEncoder and Adobe Spark. All of these applications are included as part of Adobe creative cloud. These software applications are required in order to run the system at efficiency and quality as warehouse staff are skilled with these specific programs. Two enterprise subscriptions were available. The most feasible option was the "All apps" subscription as it incorporates all creative cloud applications at the price of \$1,391.94 annually. The alternate subscription only provided access to a singular application at the price of \$587.93 annually per application. As the warehouse staff require the use of multiple applications the "All apps" subscription will be purchased. Adobe creative cloud provides software of high quality and performance and is worth every dollar even though \$1,391.94 is fairly expensive pricing.</p>
<p><u>Hardware</u></p> <ul style="list-style-type: none">• Processor - Intel® or AMD processor with 64-bit support; 2 GHz or faster processor with SSE 4.2 or later• Random Access Memory (RAM) - 8 GB• Graphics card - GPU with DirectX 12 support; 1.5 GB of GPU memory• Monitor resolution - 1280 x 800 display at 100% UI scaling• Hard disk space - 4 GB of available hard-disk space; additional space is required for installation of applications.	



<p>This can be accessed through an internet browser. Therefore, the requirements are:</p> <p><u>Windows</u></p> <ul style="list-style-type: none">• Core i3 or equivalent• Windows Vista or later <p><u>Apple OSX</u></p> <ul style="list-style-type: none">• Macbook Pro 2010, Macbook Air 2011;• OS X 10.9 or above	<p><u>GoDaddy</u></p> <p>GoDaddy is a popular web hosting company providing domains and resources at low costs. Three different subscriptions are provided by this company. The most feasible option for this system is the "Standard" subscription. This package consists of:</p> <ul style="list-style-type: none">• Unlimited websites• Unlimited storage• Unmetered bandwidth• 25 MySQL databases (1GB each)• 2 MSSQL databases (200MB each)• 50 FTP users• 1 year free Microsoft 365 email• Free domain <p>This web hosting subscription suits the systems needs to create an online store through a website. This will be combined</p>
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	<p>with the custom website being built by the software developers to create a fully functioning website fulfilling the requirements of the online store. This subscription will cost Corentin \$117.18 annually.</p>
	 <p>Corentin</p>
<p>This can be accessed through an internet browser. Therefore, the requirements are:</p> <p><u>Windows</u></p> <ul style="list-style-type: none"> • Core i3 or equivalent • Windows Vista or later <p><u>Apple OSX</u></p> <ul style="list-style-type: none"> • Macbook Pro 2010, Macbook Air 2011; • OS X 10.9 or above 	<p><u>Custom website</u></p> <p>The custom website will be developed and programmed by the hired software developers. The website will be quite large and consist of multiple databases which will work directly with knack databases which can be easily embedded into the website. Online records will be transported into knack databases and organised so that the database can automatically calculate stock, pay/commision, customer suggestions etc. This means that software developers will need to create both knack databases and the online website. A job of such a degree will cost roughly \$25,000, being the largest cost of the new system.</p>
<p><u>Latest operating system</u></p> <p>Make sure you're running the latest version—either Windows 7 SP1 or Windows 8.1 Update.</p> <p><u>Hardware</u></p> <ul style="list-style-type: none"> • Required processor - 1 GHz or faster compatible processor • Required memory - 1 GB RAM for 32-bit; 2GB for 64-bit • Required hard disk space - Up to 20 GB available hard disk space • Required video card - 800 × 600 screen resolution or higher. DirectX 9 graphics processor with WDDM drive 	<p><u>Windows 10 pro (Operating system)</u></p> <p>Windows 10 pro is a powerful operating system installed in the best of computers today. This operating system will be used in the new system as it can run most software and systems present today. This operating system will need to be purchased and installed in all computers of the new system. Pricing to provide for this many downloads of the operating system will amount to an upfront cost of \$880. This price is fair for the amount of extra security that Windows 10 Pro provides.</p> <p>Though the Windows 11 operating system is available and may provide a stronger performance or security, the Windows 11 operating system has been reported to have compatibility issues and therefore will not be immediately implemented. As time proceeds and this issue is solved, computers will eventually be updated to the windows 11 operating system.</p>



<ul style="list-style-type: none">• No \$99 connection fee when you sign up online• Static IP address• Telstra Business Smart Modem with 4G mobile network backup• Phone line + unlimited calls to Australian standard lines.	<p><u>Internet service and phone bill</u></p> <p>A high-speed NBN internet service with unlimited data will be needed for this information system as the new system strives to convert the majority of the business online. A secure business plan from Telstra to support the needs of roughly 25 participants will cost \$110 monthly.</p>
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Cost of the new system

Pricing of the new system amounts to an upfront cost of \$50,627.00 and an annual cost of \$2,889.94. This will sit well within the system upgrade budget and include an economically feasible annual cost.

Impact on the staff and the business

The new information system will have a significant impact on the staff and the business. The new information system is a large upgrade to what is currently functioning and will alter the business' ways of working for years ahead. This solution will not adopt squares POS system and will instead create its own custom website which will be run from GoDaddy (website hosting). The new system will impact the business both positively and negatively but more positively. A small setback in profit may occur prior to the full implementation of the new system as the implementation process will be long and costly. This setback will quickly improve as the new system is projected to significantly increase Corentin's product and profit.

Corentin, as previously said, is a thriving small firm that is expanding. The new system strives to grow Corentin and increase revenue as part of the businesses growth. However, even if estimates imply otherwise, there is a small risk that Corentin may not obtain the promised return on investment. There are several ways for the system to be incorrectly implemented or to fail to work properly after implementation. The primary issues are listed below.

As detailed in the previous solution, as Corentin increases its size, the system will need to be upgraded to its full potential at the time being. The pricing of this system allows for adaptations to be made quickly. This feasibility study does not account for any further changes to be made, although system designers may need to improve the system after testing and evaluation. For example, If employees complain about being overworked, improvements can be made. The sole source of concern is the warehouse, which may be unable to meet the orders placed. Although predictions do not indicate that a physical improvement will be required, an increase in employees or a warehouse upgrade may be necessary.

The physical component of the system requirements outlined the new system's sustainability. Sustainability cannot be guaranteed because the development of information technology may accelerate dramatically in the future, necessitating the creation of a new information system. Other issues, such as Covid-19, might have a significant impact on the system's future since it may limit income generated from in-store transactions, among other things. The future of the new system could never be guaranteed, hence the use of the agile system development life cycle technique which allows for rapid modification.

The key difference in long-term implications between the solutions is that this solution has a custom database and the previous solution has a custom website. This solution is centred on creating a long term custom website to support an online store for Corentin. Implementing a custom website is advantageous as it will sustain throughout the next few to many years. Minor changes can easily be made to the website to update the system.

Testing

Because the two systems are so similar, testing for both solutions will be nearly identical. Unlike the other solution, testing for this system will concentrate on the website because it is the primary component of this solution. Changing the system so abruptly would create great fear of change, for this reason, the parallel conversion method will be used. Testing of the system should be conducted throughout the entire system's lifetime to ensure that the system is functioning properly and efficiently. This method will eliminate some of the risk of change of the existing system. Also explained in the project plan, it is costly to run both systems at the same time, however, this conversion method will allow for direct comparison and contrast to test and evaluate the new system before complete implementation. Within the implementation of the new system, surveys will be conducted to evaluate how the system is performing. Some questions that may be asked are:

- Participants
 - Do you feel that the new system is effective/efficient and why?
 - Is the new system easy to operate?
 - Is the system's database effective?
- Users
 - Is the website easy to use? If not, why?
 - Do you prefer shopping online or in-store? Why?
 - Has the store's layout improved?

New procedures to be followed by the staff

Again, both systems are quite similar and, therefore, will have very similar procedures to be followed by staff within the new information system. There are many new procedures to be followed by the staff of Corentin with the implementation of the new system. Although, many of the system's existing tasks will be also transferred to the new system. The new procedures to be implemented will primarily link to the website or new database. Many processes will be eliminated as they are to be automated within the computer based database of the new system.

The specific new features to be followed were mentioned earlier in the participant characteristic requirements of the new system. Both solutions are almost identical and therefore will follow similar procedures. The main difference in organisational processes will be that this system requires more maintenance of the website, whereas the other solution will require more focus on maintaining the database.

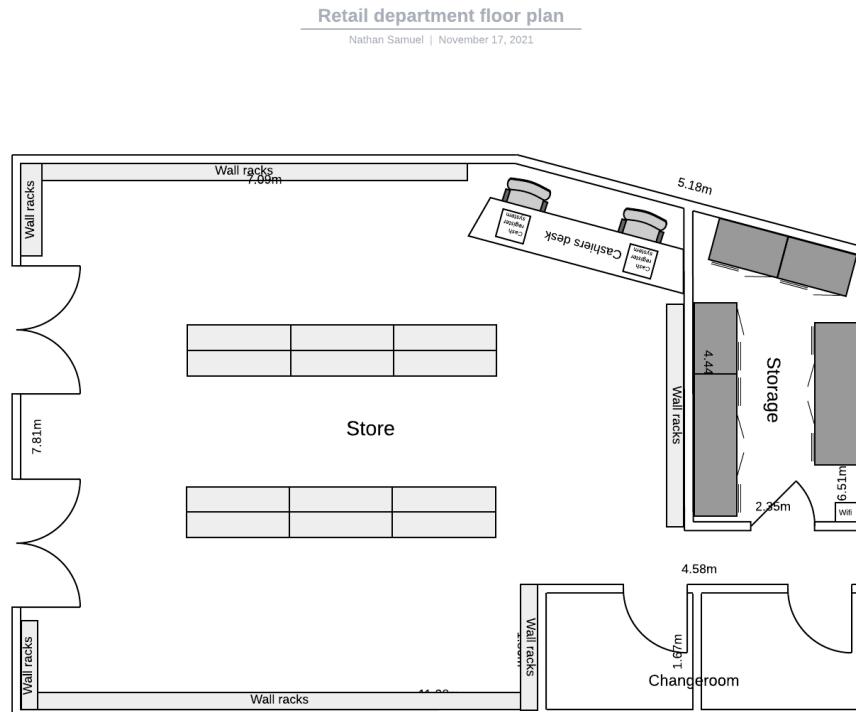
New participant roles will be implemented into the new system as described in the participant characteristics. These roles consist of:

- **Store owner** - The store owner will take charge of the businesses major processes, for example, moderation of the entire system, periodic inspections, viewing and evaluation of any business opportunities etc.
- **Clothing designer** - Warehouse employees who excel at apparel design will be isolated from warehouse employees in order to divide the effort and improve the system's overall performance and quality.
- **Phone customer service member** - Two warehouse members will be appointed to collecting phone calls on a daily basis as part of their warehouse duties.

Floorplans

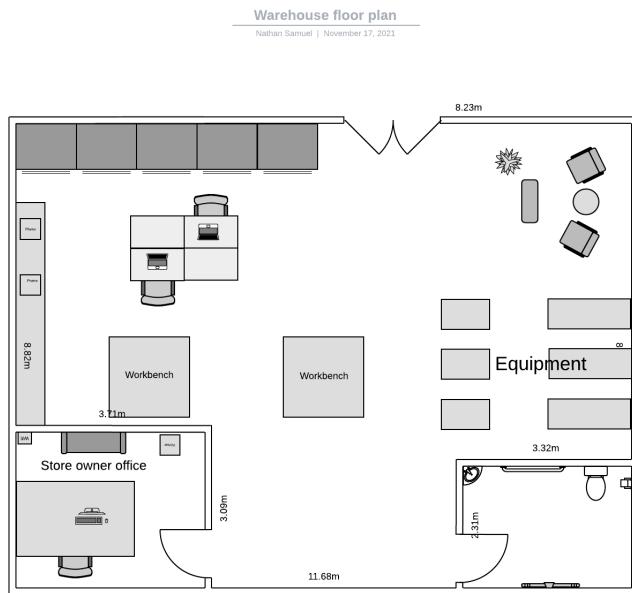
Retail store

Each retail store floor plan is not particular to each alternative solution. The difference between the two floorplans is that one includes change rooms and one doesn't. This floor plan can be implemented in either solution however will increase the pricing of the system upgrade.



Warehouse

Either warehouse department layout can be used in the final solution. Each design is not particular to each solution.



Alternative solution 2 - Custom, system unique database

Hardware

The hardware that will be acquired for the new system is detailed in the table below. The Point of Sale system includes the following items: a receipt printer, a barcode scanner, a keyboard, a monitor, and a cash drawer. The point of sale (POS) hardware of this system will be replaced by “square” hardware as part of their POS system. The hardware should be purchased from square as their hardware will function efficiently with the system. Keyboards, mice, monitors, printers and desktop computers are among the computer equipment placed at the warehouse. The new system necessitates a desktop update. These computers will be changed to laptops so that designers may simply take work home and finish it in their leisure time if necessary.

Specifications	Description
	
<ul style="list-style-type: none">• 2K Resolution cameras with night vision capture more detail in crisp 2K clarity	<u>eufy Security eufyCam 2C Pro 2K Wireless Home Security System (4 Pack)</u>

- 100% Wire-Free cameras with up to 180 Day Battery Life. 1 Charge = 6 months
- Intelligent AI technology with Built-in AI technology can detect humans and reduce false alerts
- Military grade encryption keeps your data safe and protects your privacy
- Free Local 16GB Storage with No monthly fees
- All data is saved locally to the Homebase with 16 GB built in storage
- A built-in spotlight allows you to capture the whole picture in colour

As required as part of the new system, a set of security cameras will be installed in both departments of the business. Eufy security cameras provide a strong layer of physical security to the business through networked, AI powered and wireless cameras. A set of four cameras including a eufy hub rounds up to \$749 which is a great price considering all the features it contains. The only downsides to purchasing this unit is that it can be costly to maintain and will not sustain complete privacy of users and participants. Although, the security that a surveillance system can provide greatly overrides these concerns. The combination of these security cameras, combination locks and key locks will provide a powerful security structure to protect the system physically.



- Weather resistant - IP44
- Suitable for door thickness 35mm to 65mm
- Suits a 60mm Backset
- Resettable Combination
- Installation instructions included

Ikonic Satin Chrome Digital Entry Lock

As stated above, combination locks will be used in the new system so that access to rooms can be secluded to specific people. The advantage of using a combination lock rather than a key lock is that entities with access only will require the code to unlock the door rather than a physical key. These entry locks will be installed in particular doors that require access from multiple people. The retail store-room door, warehouse front door and its store-room door will be installed with combination locks and therefore costing \$150 at \$50 per combination lock.



- Brushed nickel finish / stainless steel
- Adjustable backset 60mm / 70mm
- Installation instructions enclosed
- Suitable for door thickness 35mm to 55mm

Syneco Brushed Nickel Ruby Entrance Set

Key locks will be installed in a few doors in the new system to provide extra security. The advantage of using key locks in this case is that only people with access to the physical key can access this area. Combination locks are easier to break into or guess, whereas, key locks require a physical copy of the key to break into. Therefore, key locks will be installed into doors requiring extra security. These doors are:

- Store owner office
- Retail store entrance

	A singular entrance set will cost \$13.50, therefore, if two are purchased the price will rise to \$27.
	
<ul style="list-style-type: none"> • WiFi Technology : 802.11ac • WiFi Performance : AC2600 Mbps (800 + 1733)† • WiFi Range : Very large homes • WiFi Band : Simultaneous Dual Band WiFi - Tx/Rx 4x4 (2.4GHz)+ 4x4 (5GHz) • Standards-based WiFi Security (802.11i, 128-bit AES encryption with PSK) • Double firewall protection (SPI and NAT) • Denial-of-service (DoS) attack prevention • Processor : dual-core 1.7GHz processor • Memory : 128 MB flash and 512 MB RAM • IEEE® 802.11 b/g/n 2.4GHz-256 QAM support • IEEE® 802.11 a/n/ac 5.0GHz 	<p><u>Netgear Nighthawk X4S AC2600</u></p> <p>It is important to power the network with a powerful router capable of providing high-speed internet throughout the business. This particular system requires a strong and powerful connection as its expansion pushes the business focus more online than physical. The existing system provides an internet connection but not one capable of withstanding the new systems internet requirements. This can be provided with this router, the Netgear Nighthawk X4S AC2600 at a price of \$499. Two modems will be installed, one in each department of the business. The pricing of two modems will add up to \$998.</p>
	<ul style="list-style-type: none"> • Built-in unified communications • Multiple call handling • Reporting, monitoring, and analytics • One-number service on any device, anywhere • Hot-desking • Multi-site functionality • Emergency features with offsite management <p><u>NBN Ready LG eMG80 Telephone System – 4 Phones</u></p> <p>This system will include a voice over internet protocol (VoIP) system. The system required a phone line to allow communication with users and other organisations. VoIP is a growing form of communication that does not require phone service. As more and more companies adopt this communication method it is worth the early conversion. Therefore the new system will exhibit the NBN ready LG eMG80 Telephone System at a cost of \$429.</p>

<ul style="list-style-type: none"> Processor - 11th Generation Intel® Core™ i5-11400H (12 MB cache, 6 cores, 12 threads, up to 4.50 GHz) Operating system - Windows 11 Home, English Video card - Intel® UHD Graphics Display - 15.6" FHD+ (1920 x 1200) InfinityEdge Non-Touch Anti-Glare 500-Nit Display Memory - 16GB DDR4 3200MHz Hard drive - 512 GB, M.2, PCIe NVMe, SSD 	<p><u>Dell XPS 15 laptop</u></p> <p>Dell's XPS 15 laptops will be a great addition to the new system. The requirements report outlines that the computers in the graphics design department required an upgrade in order to increase performance of the system. The Dell XPS 15 laptops will support this performance improvement. 4 laptops will be purchased for designers in the warehouse and implemented into the existing computer system. The price of 4 laptops will round up to \$9596. This will be a costly upgrade, however, feasible as it is a substantial upgrade to the performance of the system.</p>
<ul style="list-style-type: none"> Zebra LS2208 USB barcode scanner USB cable Barcode scanner stand 	<p><u>Square barcode scanner</u></p> <p>As stated earlier, this solution will adopt the square payment route throughout the online store and physical store. This barcode scanner functions perfectly with other square hardware and therefore was considered for upgrade in the new system. If two of these are purchased, pricing would reach \$198. This will be implemented into the new point of sales, cash register system.</p>
	
<ul style="list-style-type: none"> Square Register MC-Print 30 Receipt/Kitchen Printer with LAN/USB Receipt Printer Paper Rolls (24 Rolls) USB Cash Drawer 	<p><u>Square register kit</u></p> <p>The main component of the new point of sales cash register system is the square register kit. Each of these kits cost \$2099 to purchase. If two are purchased the price will rise to \$4198. This product will receive its return on investment as long as the square POS system is used for a fair amount of years.</p>
	
<ul style="list-style-type: none"> Draft tables - 2 	<p><u>Furniture/equipment of the new system</u></p> <p>The new system will require a small upgrade to the</p>

- Male and female mannequins - One of each
- Chairs - 8
- Handheld textiles instruments
- Storage units for this equipment - 4
- Cashier's desk - 1
- Clothes rack hanger - 16
- Air conditioning - 3
- Store owners office

equipment/furniture of the system. The amount of each product is stated in the specifications column. The cost of all of these products required will amount to \$11,200. The largest of this cost being the air conditioning as this is a costly product. However, it is important for the system to maintain climate control at the desired climate as it can greatly affect the systems performance.

Software

The following table describes the software that will be installed and used within the new information system in this solution. Each software component used will greatly affect both the participants and users of the information system. This solution will include an entire point of sales system taking care of many of the system's needs. This system includes a website, the hardware to be used and a point of sales software for the cash register devices. An entire custom database will then be developed and programmed by the software developers from scratch to automate the processes of the store and store records etc.

Specifications	Description
	 Square
<p>This can be accessed through an internet browser. Therefore, the requirements are:</p> <p><u>Windows</u></p> <ul style="list-style-type: none"> • Core i3 or equivalent • Windows Vista or later <p><u>Apple OSX</u></p> <ul style="list-style-type: none"> • Macbook Pro 2010, Macbook Air 2011; • OS X 10.9 or above 	<p><u>Square</u></p> <p>Square is a state of the art point of sales system that allows businesses to effortlessly:</p> <ul style="list-style-type: none"> • Add a synced online store, no coding required. • Sell through Instagram and Facebook with a few taps. • Offer pickup, local delivery and shipping. • Manage your entire business from one place. <p>With a simple processing rate, the entire point of sales (pos) system can operate, through the online store and in store. The processing rate at square is 1.9% with no monthly cost needed. However, pos hardware will need to be purchased from square to operate in store payments.</p>
	

<p><u>Operating Systems</u></p> <ul style="list-style-type: none"> • Microsoft Windows 11/10 (all versions) • Microsoft Windows 11 in S mode with ARM processors • Microsoft Windows 10 in S mode (32-bit or 64-bit or ARM32) version 1803 and above • Microsoft Windows 8/8.1 (all versions) • Some protection features are not available in Windows 8 Start screen browsers. • Microsoft Windows 7 (32-bit and 64-bit) with Service Pack 1 (SP 1) or later with SHA2 support <p><u>Hardware</u></p> <ul style="list-style-type: none"> • Processor - For Windows 11/10/8/7: 1 GHz • Random Access Memory (RAM) - 2 GB (minimum of 512 MB RAM required for Recovery Tool) • Hard disk space - 300 MB of available hard disk space. • Graphics card - Nvidia/AMD cards with minimum of 6 GB of memory. 	<p><u>Norton security</u></p> <p>Norton security is an antivirus and protection application which keeps private and sensitive information secure. It is very important to ensure computers, networks and the server are secure. As part of the needs of the users and the system requirements, system data and information should be secure. This can be achieved with Norton security ultra costing \$239 annually.</p> <p>The package includes features like defenses against spyware, viruses, malware, and ransomware, VPN, firewall, password manager, SafeCam webcam protection and dark web monitoring.</p>
 <p><u>Operating system</u></p> <ul style="list-style-type: none"> • Windows 10 64-bit (version 1909) or later; LTSC versions are not supported <p><u>Hardware</u></p> <ul style="list-style-type: none"> • Processor - Intel® or AMD processor with 64-bit support; 2 GHz or faster processor with SSE 4.2 or later • Random Access Memory (RAM) - 8 GB • Graphics card - GPU with DirectX 12 support; 1.5 GB of GPU memory • Monitor resolution - 1280 x 800 	<p><u>Adobe creative cloud</u></p> <p>Adobe creative cloud is a fundamental part of this business. All graphics and clothing design is created through adobe creative cloud applications. The primary applications used are Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Adobe MediaEncoder and Adobe Spark. All of these applications are included as part of Adobe creative cloud. These software applications are required in order to run the system at efficiency and quality as warehouse staff are skilled with these specific programs. Two enterprise subscriptions were available. The most feasible option was the “All apps” subscription as it incorporates all creative cloud applications at the price of \$1,391.94 annually. The alternate subscription only provided access to a singular application at the price of \$587.93 annually per application. As the warehouse staff require the use of</p>

<ul style="list-style-type: none"> display at 100% UI scaling Hard disk space - 4 GB of available hard-disk space; additional space is required for installation of applications. 	<p>multiple applications the “All apps” subscription will be purchased. Adobe creative cloud provides software of high quality and performance and is worth every dollar even though \$1,391.94 is fairly expensive pricing.</p>
 Corentin	
<ul style="list-style-type: none"> Stock moderation and control User product recommendations Authorisation of sales Customer details organisation Orders made (Through the website) Pay/commission calculation Discount system for loyal customers • 	<p><u>Custom database</u></p> <p>The column to the left represents the capabilities required in the database of the new system. The hired software developers will work to create a database on Azure SQL. This database will work hand in hand with the website. A job of such a degree will cost roughly \$20,000 upfront, being the largest cost of this solution.</p>
 Microsoft SQL Server	
<p><u>Hardware</u></p> <ul style="list-style-type: none"> Hard Disk - SQL Server requires a minimum of 6 GB of available hard-disk space. Monitor - SQL Server requires Super-VGA (800x600) or higher resolution monitor. Internet - Internet functionality requires Internet access (fees may apply). Random Access Memory (RAM) - 2 GB or greater Processor Speed - x64 Processor: 1.4 GHz or faster 	<p><u>Azure SQL</u></p> <p>The custom database developed by the software developers will be run on Azure SQL servers. Azure SQL runs Microsoft SQL servers through the cloud rather than locally. Pricing of an Azure SQL server to store the systems customised database will reach a price of \$1/hour. This price amounts to approximately \$9000 per year. This is a significant cost, however, it will provide the necessary power to process the custom database without the need for a more expensive, localised server.</p>
	
<p><u>Latest operating system</u></p> <p>Make sure you're running the latest version—either Windows 7 SP1 or Windows 8.1 Update.</p>	<p><u>Windows 10 pro (Operating system)</u></p> <p>Windows 10 pro is a powerful operating system installed in the best of computers today. This operating system will be used in the new system as it can run most software and systems</p>

<p><u>Hardware</u></p> <ul style="list-style-type: none"> • Required processor - 1 GHz or faster compatible processor • Required memory - 1 GB RAM for 32-bit; 2GB for 64-bit • Required hard disk space - Up to 20 GB available hard disk space • Required video card - 800 × 600 screen resolution or higher. DirectX 9 graphics processor with WDDM drive 	<p>present today. This operating system will need to be purchased and installed in all computers of the new system. Pricing to provide for this many downloads of the operating system will amount to an upfront cost of \$880. This price is fair for the amount of extra security that Windows 10 Pro provides.</p> <p>Though the Windows 11 operating system is available and may provide a stronger performance or security, the Windows 11 operating system has been reported to have compatibility issues and therefore will not be immediately implemented. As time proceeds and this issue is solved, computers will eventually be updated to the windows 11 operating system.</p>
 <ul style="list-style-type: none"> • No \$99 connection fee when you sign up online • Static IP address • Telstra Business Smart Modem with 4G mobile network backup • Phone line + unlimited calls to Australian standard lines. 	<p><u>Internet service and phone bill</u></p> <p>A high-speed NBN internet service with unlimited data will be needed for this information system as the new system strives to convert the majority of the business online. A secure business plan from Telstra to support the needs of roughly 25 participants will cost \$110 monthly.</p>

Costs of the new system

The new system has an initial cost of \$43,019.00 and a yearly cost of \$10,740.94. This will be cheaper than the other solution, well within the system upgrade budget and will include a cost that is economically reasonable on a yearly basis.

Impact on the staff and the business

The new information system is a significant improvement over what is already in place, and it will change the way the organisation operates for the foreseeable future. The new information system will have a huge influence on both the employees and the company. This solution will adopt squares POS system and will create its own custom database which will be run remotely from Azure SQL (Cloud database hosting). This upgrade will hold both favourable and adversely impacts to both the staff and the business itself. Systems designers have designed an alternative feasible solution to this problem that should have a much more favourable impact than negative.

As explained earlier, Corentin is a growing small business expanding. Corentin has a promising future especially with the implementation of a new system. If everything goes to plan, Corentin will receive the return on investment predicted and will continue to expand as time proceeds.

However, there is a minuscule chance that Corentin may not receive the return on investment expected even if predictions suggest otherwise. There are many ways that the system could fail to be implemented correctly or fail to function perfectly after implementation. The main concerns are stated below.

As Corentin increases its size, new staff will need to be hired to maintain a sustainable performance rate as the existing staff may not be capable of running the entire new system. The new system will run as planned with current staff maintaining the information system. If staff complain of being overworked then changes can be made. The main concern is the warehouse as it may not be able to provide for the orders being made. Projections do not suggest that a physical upgrade will be needed, however, an increase in staff may be required. A warehouse upgrade will be planned in the case of another surge in popularity causing a work overload.

The sustainability of the new system was detailed in the physical section of the system requirements. The new information system has been designed to last for roughly 5 years of maintenance. However, this cannot be sure as the development of information technology could increase remarkably in the future causing the need for a new information system. Other factors, for example, Covid-19 could greatly affect the system's future as it may limit the revenue made through in-store purchases etc. The new systems future could never be certain, thus the use of the agile system development life cycle approach, allowing for quick change.

In the long term aspect the main difference of impacts between the solutions is that this solution has a custom database and the first solution has a custom website. This solution is focused on the database and the organisation and automation of processes rather than the website. As stated above, an entire POS system will be adopted from "Square." Though this may suit the business for the next couple years, it is not a sustainable solution as when Corentin expands further, they will eventually create a POS system unique to their company. Corentin's customised database, however, can be used for a longer period of time as it can be easily updated to the system's exact needs.

Testing

Testing for both solutions will be almost identical as the both systems are very similar. Unlike the other solution, testing for this system will be focused on the database as this is the main component of this solution. Changing the system so abruptly would create great fear of change, for this reason, the parallel conversion method will be used. Testing of the system should be conducted throughout the entire system's lifetime to ensure that the system is functioning properly and efficiently. This method will eliminate some of the risk of change of the existing system. Also explained in the project plan, it is costly to run both systems at the same time, however, this conversion method will allow for direct comparison and contrast to test and evaluate the new system before complete implementation. Within the implementation of the new system, surveys will be conducted to evaluate how the system is performing. Some questions that may be asked are:

- Participants
 - Do you feel that the new system is effective/efficient and why?

- Is the new system easy to operate?
 - Is the system's database effective?
- Users
 - Is the website easy to use? If not, why?
 - Do you prefer shopping online or in-store? Why?
 - Has the store's layout improved?

New procedures to be followed by the staff

Again, both systems are quite similar and, therefore, will have very similar procedures to be followed by staff within the new information system. There are many new procedures to be followed by the staff of Corentin with the implementation of the new system. Although, many of the system's existing tasks will be also transferred to the new system. The new procedures to be implemented will primarily link to the website or new database. Many processes will be eliminated as they are to be automated within the computer based database of the new system. The specific new features to be followed were mentioned earlier in the participant characteristic requirements of the new system. Both solutions are almost identical and therefore will follow similar procedures. The main difference in organisational processes will be that this system requires more maintenance of the website, whereas the other solution will require more focus on maintaining the database.

New participant roles will be implemented into the new system as described in the participant characteristics. These roles consist of:

- **Store owner** - The store owner will take charge of the businesses major processes, for example, moderation of the entire system, periodic inspections, viewing and evaluation of any business opportunities etc.
- **Clothing designer** - Warehouse employees who excel at apparel design will be isolated from warehouse employees in order to divide the effort and improve the system's overall performance and quality.
- **Phone customer service member** - Two warehouse members will be appointed to collecting phone calls on a daily basis as part of their warehouse duties.

Floorplans

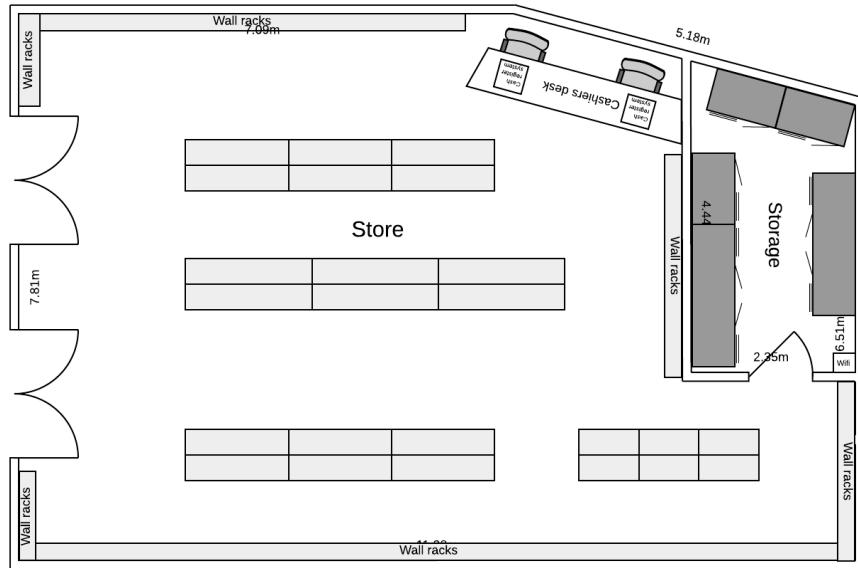
Retail store

Each retail shop floor layout is not unique to any of the potential solutions. The distinction between the two floorplans is that one has change rooms while the other does not. This floorplan does not include the change rooms and will cost less than if they were included.

Corentin can decide which floor plan is implemented into the new system.

Retail department floor plan

Nathan Samuel | November 17, 2021

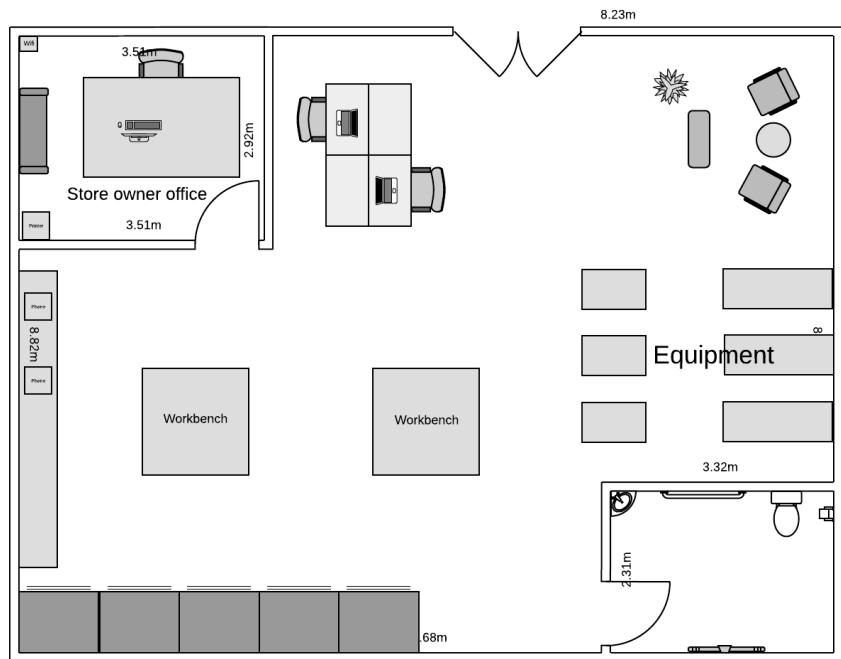


Warehouse

In the end, either warehouse department plan can be adopted. Each design is not unique to a single solution.

Warehouse floor plan

Nathan Samuel | November 17, 2021



Recommendation

Evaluation of feasibility

When developing a new information system, an evaluation of feasibility is required. Economic, technological, operational, and scheduling considerations are all taken into account while assessing the system's practicality. Before implementing the system, it is critical to establish that it is practical.

Economic feasibility

When designing a new system, it is critical to consider economic feasibility. The biggest economic challenge while developing a new system will be going over budget. However, not just the initial expenses should be considered when determining the system's economic viability. A new system will require a significant upfront expenditure as well as periodic charges. If both of these expenses add up to be sustainable and under budget, the system is considered economically practical.

The initial cost of the first solution, as stated above will amount to approximately \$50,627.00 and \$2,889.94 annually. This solution has solved all requirements of the new system while staying well under the financial constraints of the project. For this reason, Corentin can easily support even further modifications in the near future. The website is the main purchase in this solution being a long term investment that will develop as time proceeds. The costs of maintaining this website will increase as the website develops.

Compared to the other solution which adopts primarily a fully customised database which requires less upfront investment but increased maintenance costs. The second alternative solution to the problem also contains all the required software and hardware in the new system while keeping under the budget. The upfront cost of this solution is \$43,019.00 and the yearly amounts to \$10,740.94 annually. Immediately it is acknowledged that the annual maintenance cost of this solution is unequivocally greater than the first solution.

Even though the upfront cost of the second solution is a lot more economical than the first, the annual costs of the system greatly outweigh the first. Ultimately the first solution is deemed moreover economically feasible than the second solution. Furthermore, it is more crucial for businesses to contain a unique website rather than a unique database. Eventually, Corentin will, regardless of the database, require a uniquely composed website. Therefore, from a long term perspective, the first solution is also more economically feasible.

Technical feasibility

Technical feasibility is critical in information systems, especially in today's changing workplace. As we speak, technology is being developed and innovated. It is critical to guarantee that the company can receive the greatest available technology capable of completing the organisational

duties. However, when evaluating this, it is also necessary to evaluate economic feasibility in order to select the most cost-effective product accessible. This specific information system requires a small technological improvement.

Neither of the solutions from the new system make a significant upgrade to the current technical capabilities of the system. Both solutions provide a similar upgrade. The Dell XPS 15 laptop provides a rather large upgrade in the technical department of Corentin, ultimately, increasing the performance and technical sustenance of the computer systems.

Furthermore, VoIP (Voice over Internet Protocol) is a rising method of communication that does not require phone service. As more businesses use this communication technique, it is beneficial to convert early. Both solutions will utilise this opportunity to convert early to this new, technically powerful form of communication.

Both solutions use a cloud database which each are run remotely. The first solution runs the cloud database through Knack cloud servers, whereas the second runs on Microsoft Azure servers. These cannot be directly compared as the exact specifications of these servers are not provided. Reviews made online comparing the two subscriptions suggest that Knack servers are more technically feasible.

Conclusively, both solutions are similarly quite technically feasible. The first solution may be considered more technically feasible as Knack servers are evidently more technologically capable than Microsoft Azure.

Operational feasibility

Operational feasibility is an important feature of information systems since it determines the system's capabilities. A system is deemed operationally viable if it can meet predefined goals after implementation. The current system is functional, however it can be considerably enhanced. A new system for this system should fulfil all needs and processes, as well as add to the current ones.

As outlined earlier, both solutions are very similar and, therefore, both have very similar operational feasibility. The system's operations will greatly increase with the implementation of the new system with the addition of many new organisational processes. Both solutions should be able to function efficiently and effectively with the addition of these new processes.

There is the risk that the system may not function properly after implementation due to incorrect installation, incapable products etc. These solutions have both evaluated the required operation of the new system and upgraded the systems operational ability to be able to withstand the new systems operations, therefore, both solutions are considered operationally feasible.

Scheduling

When establishing a new information system, it is equally critical to consider scheduling. This is due to the fact that establishing and planning new information systems is a time-consuming and flexible process.

Parallel conversion will be employed to implement the new system. In the case of a tragedy, the parallel method of conversion gives the most secure implementation plan, but the costs and risks of a fair trial cannot be overlooked. Both solutions will adopt this method of conversion as both are alike and would most suit this conversion method. Each solution will require a similar amount of time to complete, both being just under the schedule of 15 weeks.

Alternative solution number 2 may take a little longer to complete than the first alternative solution as more hardware components are included in the new system. Furthermore, installation of Microsoft Azure (Second alternative solution) will be needed to operate the database, whereas Knack, (First alternative solution) can be accessed simply from the internet. Although the second solution may require a minor additional time commitment, the first solution will also require a fair amount of time to complete as the unique website (first solution) will take longer to complete than the unique database (Second solution).

The scheduling of both solutions are feasible and will require a very similar amount of time. The agile system development life cycle approach being used in Corentin will allow for change in schedule during the project in case of a setback.

Appropriate solution

From an evaluation of the recommendation outlined above, we can conclude that the most feasible solution of the two will be the alternative solution number 1 (Customised, unique website). The primary reason that this solution will be more feasible than the other is that a website will be developed by the software developers. A website developed through Square (Alternative solution 2) is not flexible and may not be able to support future features needed in the website. Furthermore, a custom made website will not only be more economically feasible but also sustainable compared to a custom made database. With the use of powerful cloud based database servers like Knack, Corentin will be able to function perfectly as planned for years ahead.

Some of significant the advantages of the new system are:

- Higher system performance rate
- Significant improvements to security
- Ease of use for participants
- Exponential increase in revenue
- In terms of price and advantages, it is economically balanced.
- Allows online shopping
- Data accuracy through better data organisation

Project Plan

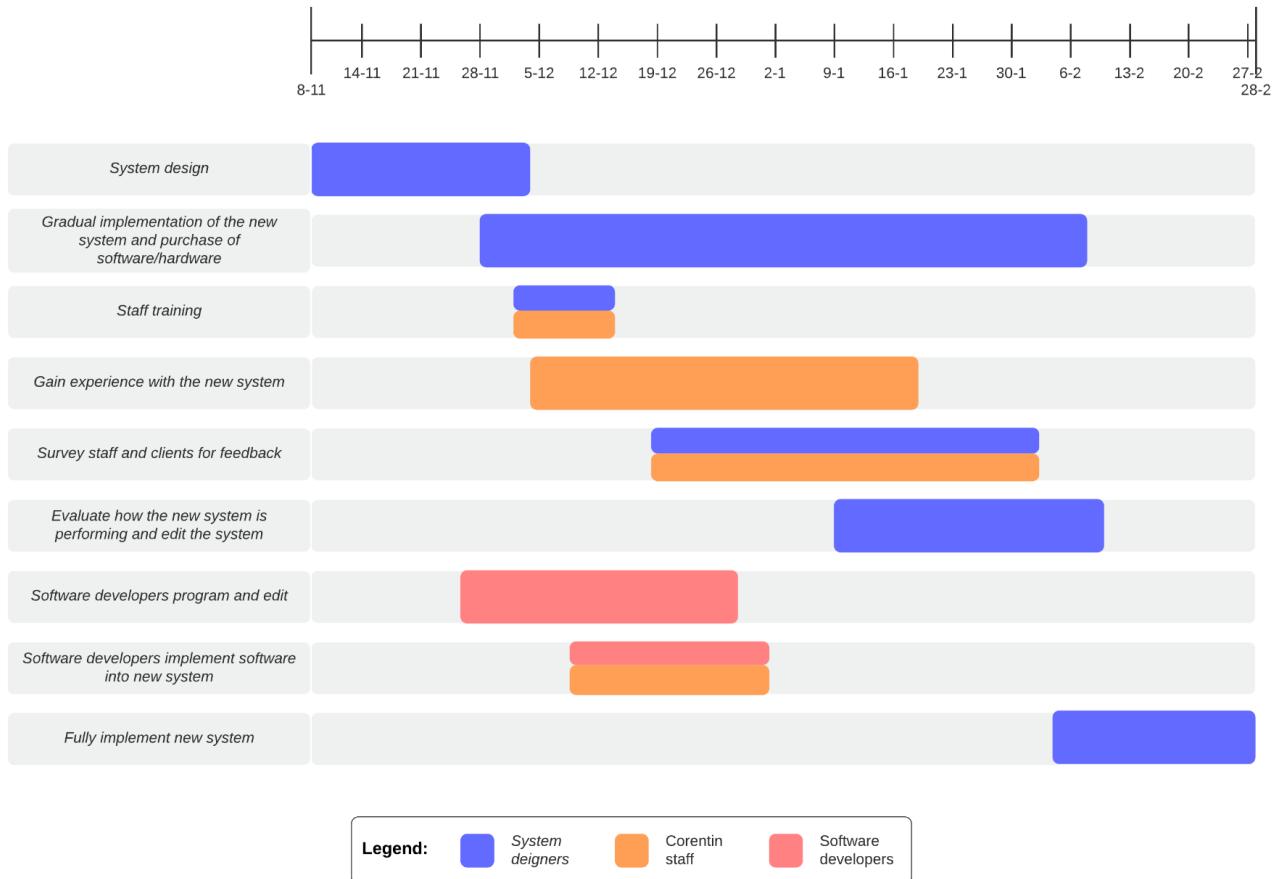
Corenting follows an agile system development life cycle model. This model consists of the following processes:

- **Concept** - The organisation will create a project scope and outline the concept to be completed while conducting a feasibility study to determine whether the project is feasible.
- **Inception** - A system development team will be constructed during this phase.
- **Iteration** - This phase is usually the most time consuming phase of the project as it consists of the construction of the new system.
- **Release** - Tests and evaluation is completed during this process which will then be followed by the official release of the new system/project.
- **Maintenance** - After the system/project is fully deployed to customers the system will be maintained and iterated.
- **Retirement** - This is the final phase in which the system/project will be ended or replaced by a new system/project.

Agile system development life cycle methodology consists of collaborative, iterative, short “sprints” where a specific task will be completed. These tasks are completed quickly and subject to change. This model suits Corentin as it is generally the most effective model allowing for quick change and the ability to alternate plans with ease.

The conversion method that will be used to implement the new system will be parallel conversion. In the event of disaster, the parallel method of conversion provides the most secure implementation plan, but the expenses and hazards of a fair trial must be neglected. This conversion method specifically suits this system conversion as the new systems primary components consist of a website and a cloud database which can be implemented parallel to the existing system at a low cost and maintenance rate. Therefore during the “Gradual implementation of the new system including purchase and installation” phase of the following Gantt chart represents the parallel implementation of the new system and the “Fully implement the new system” phase represents the final and complete conversion to the new system.

The following Gantt chart represents the scheduling of the business project implementing the new information system. Each task to be completed is outlined below the Gantt chart:



- **System design** - The systems design is the base of the entire project, and therefore will take up a fair amount of time to complete. The process is composed of 5 main tasks:
 - Requirement report - 7 days
 - Summary of investigation - 5 days
 - Alternative solutions - 7 days
 - Recommendation - 3 days
 - Project Plan - 2 days
 These tasks will require a decent amount of time to complete to a high level of quality. A feasible solution has to be developed within this time period. This will require extensive research and consultation with sellers to regulate a high quality feasible solution to the problem.
- **Gradual implementation of the new system including purchase and installation** - This stage in the project plan will require the greatest amount of time to complete. This is because it includes not only the implementation process but also the purchasing and installation of all software and hardware. Purchasing of needed software and hardware will take time to finalise, be collected then

installed. While this is being completed the system will subconsciously be implemented as software and hardware is installed.

- **Staff training** - Staff training is a process required to start the implementation of the new system. The method of staff training that will be used will have system designers train managing staff who will then train the remainder of the staff. This process will not require much time to complete as staff will quickly learn and adapt to the new system with the method of staff training being used.
- **Gain experience with the new system** - Experience will be gained with the new system as the staff are trained. Also, operation of the new system will aid staff with experience of the new system. This task simply requires the participants to use the new system and gain an understanding of the new system. For this reason, this task can be completed with ease, however, will require a fair amount of time to complete.
- **Survey staff and clients for feedback** - Staff and clients will need to be surveyed throughout the implementation of the new system to provide valuable feedback that can be used as part of evaluation of the new system. This relates to the next task in the project plan (Evaluate how the new system is performing and edit the system respectively.) A feedback system will be developed to receive feedback from both users and participants and will run for the majority of the implementation of the new system.
- **Evaluate how the new system is performing and edit the system respectively** - After collecting feedback and data from how the new system has performed, the system designers and Corentin staff will work together to evaluate the new system and decide whether the system should be implemented completely as it is or whether drastic or minor improvements should be made. This process can be completed as the implementation and installation of the new system is being completed and will only require a small amount of time to complete.
- **Software developers program and edit** - This is a crucial step in the project plan as this is the process in which software developers will design, program and test custom software which will be used in the new system. This process will require a fair amount of time to allow developers to create software of high quality.
- **Software developers implement the new system** - This task will begin shortly after software developers begin to program and edit the custom software. The custom software is a large part of the new system and therefore will be implemented early on as part of the new system. This process will not require much time to complete as software can be installed to computers and updated through a short period of time.

- **Fully implement the new system** - This is the final task in the project plan and also one of the most important. After evaluation and editing of the new system, the system will be completely implemented to run as the organisation's new primary system. The existing system will be completely removed or upgraded within this task. This task should not require much time to finish as the new system will already be present within the organisation.

Journal

 Y12 IPT major project - Journal

(PDF format included in submission)