# Graphical user interface, text, application Description automatically generated

Figure Required tasks

# Project plan overview

## Topic

In terms of scope, stockIT is quite the undertaking. It will require a great deal of time and resources to implement a full and final version, which are simply not available to us with the required timeline for this project. Because of the limited time and resources available we will be working towards a series of key deliverables for this project.

StockIT is a backend facing software suite that allows the user (a company or business) to track their inventory from purchase to sale and at every point in between. StockIT’s data driven approach allows the user to make informed decisions about inventory management, minimizing the risk of personnel failures and human error, in the tracking, purchasing and fulfilment of orders and inventory.   
With a heavy focus on the Retail and Hospitality sectors, StockIT allows its users to keep track of inventory from a variety of different SILos [Standalone Inventory Locations] (stores, locations, sites), or a single location, and see at a glance the current inventory on hand. This enables users with different SILos to see the bigger picture of their organization, but allows them to identify shortfalls or issues at the micro level. Resolving issues at this level allows for business to stem issues before they grow and have impacts on a larger scale. It also allows individual SILo managers to see how small changes on their end impact business more broadly. Only have a single location for your business? No problem. The scalability of StockIT means it can be utilised by a business of any size to help them achieve a greater level of efficiency in their inventory management, the key fundamental functionalities of StockIT apply to a business of any size. This negates the need for small and medium business to seek alternative business solutions as they seek to grow, making StockIT an ideal tool for growing businesses to use.

A clean and user-friendly interface is integral to any piece of software in today’s day and age. The hospitality and retail industries can be prone to staff change, especially before and after peak service season towards the end of the calendar year. Further to this, staff will most likely possess a range of different levels of technological literacy. Software that is simple and easy to use is important in ensuring that it is accessible, functional and thus fit for purpose. StockIT uses simple drop down menus and click-through commands, allowing the user to spend less time navigating systems and more time focusing on their work, whether that be customer service or deliverables.

For assignment 3 we will make steps towards completing the below elements for our presentation. A HTML interface will be built for the StockIT system based on wireframe designs. While the functionality of the HTML system may be reduced due to the smaller database, we aim to have a functioning system based on the information from a group member’s hospitality business. The wireframes will extend to cover the web version, software version and mobile version of StockIT. Wireframing will be a very useful tool for us to be able to present our vision to our audience and provide a visual guide. The MIT app inventor software will be used to create a functional mobile version with scaled back elements of the endgame version of StockIT. Python is a programming language most group members are familiar with, however we are concerned with its integrational power and so will be leaning into a group member’s current experience with PHP, MariaDB and Java. Extensive research will be carried out into Artificial Intelligence and how it could be integrated, however due to the limited time and resources for assignment 3 there will not be any implementation that can take place. We do understand the large undertaking that is StockIT and made a deliberate choice to aim high with its possibilities and scale back the functionalities for assignment 3. It may seem counterintuitive, but we believe by doing this we can and will expose ourselves to more concepts and ideas that we can research and explore, thereby learning more through-out the process.

## Motivation

stockIT was born out of a group members assignment one project idea to fill a perceived gap in the current market for a stock-taking app. After numerous discussions and brainstorming sessions stockIT has now grown from a humble stock-taking app into a fully-fledged inventory management software suite. The reason behind the pivot was that we as a group saw more development potential and marketspace for a software suite that could offer more to the user than simple stock taking. For the group, the development of stockIT allows us to flex our IT muscles and develop our skills as future IT professionals. We have made a conscious effort in with this project to aim high with stockIT’s potential to push ourselves and our knowledge as far as possible.

As a development project stockIT covers a lot of knowledge and skill bases within the IT industry that we as a group would like to develop further. At its end point the software will require a working knowledge of various programming languages (python, SQL, XML, MARIA DB, C++ , Java etc), networking (SILo’s), UI development (Websites, Apps, software design), Project management and teamwork, Cloud infrastructure, software integration and Artificial Intelligence implementation. Because the software taps into many different aspects of the IT industry and intersects with many of our planned future career paths, we decided that as a group it would be a worthwhile project to pursue.

Our group views stockIT as a start-up. Start-ups have always been a defining factor of the IT industry, whereby a group of individuals unite to create a piece of software or to solve a problem using IT technologies. We believe stockIT achieves both of these things as it uses a tech-based approach to solve a problem that affects every business that buys or sells inventory on some level. A big development within the IT industry over the past decade has been in the use and development of AI technology. As stockIT is centered around handling and making sense of large amounts of data, we believe that AI integration is an important part to the software’s utility and marketability. AI technology is at the cutting edge of the IT industry and from it has spawned many new fields of study and different career paths.

As we move forward with the development of stockIT, the group will learn invaluable skills for our future careers within the IT industry. Self-learning and upskilling are an important part of the industry, being able to teach yourself new skills and improve those that you already know is something that will always be desired by prospective employers. The sheer breadth of stockIT indicates that our groups members are not afraid of a challenge, are motivated self-learners and are able to come up with new and innovative solutions to problems that face a large number of businesses.

## Landscape

Inventory management software is a somewhat crowded marketplace. As with most software markets there are a variety of competing products that all provide very similar services but that all have their own delineations that set them apart. stockIT straddles the line between pure inventory management software and enterprise resource planning (ERP) software, placing it into a market with large established companies such as MYOB and XERO. MYOB and XERO have established accounting software systems that integrate into a range of existing Point of Sale (PoS) systems. The plan aim is for stockIT to have similar integration, in this situation MYOB focusses on being more of an enterprise resource planning software solution and XERO focusses on the accounting integration side of things. StockIT will have a heavier focus on direct supplier integration and communication than either of these.

Cin7 is designed to be more of a retail inventory solution with a strong leaning towards online retail whereas Peach Software has a strong focus on more traditional retail (agriculture businesses, auto parts etc) and managing inventories between stores and across the group. In this situation, stockIT is designed to operate as a one stop shop by facilitating all these different functionalities into the one software bundle. Oracle Netsuite is one of the closest competitors to the finalised version of stockIT, with real time inventory visibility, direct supplier purchasing available and the ability to push purchase orders directly to shipment and sales tracking – all of which will be available through stockIT. Katana offers robust manufacturing inventory management, live tracking with real-time manufacturing planning and end to end traceability. This makes Katana a slight outlier on the list as it leans towards the manufacturing process and handling the data related to that area. While this is something that stockIT does handle, our product is designed more and an inventory management tool rather than a direct Manufacturing tie-in.

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