**1.1 Introduction (AZZAM ESAM 202209451)**

Project Overview:

The back-end of this E-commerce new company, Which will be the seed of the future e-commerce platform that will make e-shopping better and easier for all parties! This platform supports browsing products, adding them to a shopping cart and purchasing by credit cards, bank transfer or even cash on delivery. The platform will further include a tracking function, so that customers can track their deliveries from when they are ordered to the point of final delivery.

Technically, the system should be designed to process thousands of transactions per day at high speeds without any performance loss. It will use sophisticated algorithms to analyzing user data and recommend products based on their behavior as well as the preferences. The system will also connect to real-time inventory management, giving the details of in-stock products, avoiding stockouts.

The platform will also connect with shipping and delivery systems to improve logistical efficiency, which in turn could eventually translate into higher speed of deliveries. The two presented solutions will be available to purchase immediately through a streamlined UI that reduces the number steps you need to take.

Client/Organization:

This new organization is a startup: Marketplace(TypeError 1) for everything online shopping. The priority here is going to be all about ensuring a seamless and fast shopping for users within the local market with the expansion to regional and international markets in steps later on. Its offering will include electronics, fashion and homeware among others.

The firm wants to bring local shipping companies and suppliers into its fold in a bid to move even faster, all while making deliveries cost-effectively. Payment options are flexible and secure, allowing customers to shop their way and enabling merchants to provide choice of payment types that encourage their customer trust and privacy.  
  
Stakeholders:

Investors: Will fund the initial phases of the projects and help financing running operations until the company is profitable. We will be supplying regular performance reports on financial and operational basis.

End users: This will be individuals and small organization that want to buy products in a very simple way They will regularly poll students to solicit feedback and update the platform for their needs.

Technical Team: The software engineers, user experience designers and database administrators who will work towards building the system keeping it high performing.

Coordination & Logistics: Manages the inventory, shipping and delivery functions. The team will be trained on the systems that interface the available inventory to the platform for immediate product availability updates and accurate shipment alignments.

Customer service team: A standby round-the-clock customer service team to handle customer queries related to payment, orders, or shipping.

**1.2 Background (AZZAM ESAM 202209451)**  
  
Client Operations:

The new company will provide e-commerce through an end-to-end online platform. We will start in the local market starting with the most searched categories such as electronics, fashion and household appliances. Early market research indicated that consumers in the area enjoy shopping online, but they complain of shipping times and payment options. However, Savyour plans to provide better options in a somewhat different way as well — built into its API — by offering commerce solutions (with multiple payment methods including cash on delivery) along with fast and reliable shipping based on the results provided.

For business expansion, we are considering responding to the delivery costs by collaborating with local suppliers who we can deliver ourselves and speed up shipping by delivering onshore. Also, local warehouses will be integrated with the platform for easier inventory management. For example, if some product categories were seeing high demand, then we will stock in those categories to avoid stockouts and cut down the inventory on low-demand items so that extra cost is minimalized.

Current System:

The fact that the company is still in its startup phase means that there is no prior system. The forthcoming system will also be built from the ground up to be flexible and scalable, handling orders and inventory in real time. Definition of a dynamic database to manage availability and stock extremely accurately or in real time after each sale. By utilizing dynamic pricing algorithms, accounting for the availability and response of supply and demand metrics, these price adjustments will be automated via a quicker market-to-market approach to drive enhanced profits

Higher level system integration with shipping services (Available via APIs) for real time shipment tracking by the end user. A built-in data analysis system also helps track user behavior and create products suggestions tailored exactly for the user's shopping behavior.

Business Objectives:

Create an All-Round Shopping System – Shopping module will contain features like product listing, shopping cart management, multiple payment options and live-tracking. Purchase steps are very reduced and user experience should be on planet earth.

Streamline Your Logistics Operations: We integrate our solution directly into your multi-channel inventory/shipping platform, to offer just-in-time inventory and on-demand shipping that is monitored in real time. Through association with local and overseas shippers, the company will deliver goods to satisfy the unique requirements of customers.

Maximum Growth: with the help of latest digital marketing technologies, which targets both local and international market. Funds will be earmarked for promoting digital marketing campaigns through various search engines and social media platforms to access the maximum targeted audience.

The highest safety standards and data security — including encryption, secure financial transactions in order to prevent the risk of compromising client data which must be stored on an absolutely secure basis. This will include robust protocols to prevent fraud and maintain high levels of ATM security like industry-leading encryption technology.

Secure and Flexible Payment Options: We will offer a variety of flexible and secure payment options, including credit cards, bank transfers, e-wallets, and cash on delivery. Payment transactions will be integrated with a multi-layered security system to ensure the safety of financial transactions .

1.3 Problem Definition: (Saud 202207164)

* 1.3.1 Specific Issues: the issues that the new online shopping system aims to address are:
  + Security: customers don’t order online due to some security concerns.
  + personalization: current systems don’t provide customers with personalized products.
  + order processing: processing orders manually usually leads to errors, which in turn leads to customer dissatisfaction.
  + Trust: most customers won’t try new brands unless they have a guarantee i.e. a warranty.
  + Customer service: bad client follow-up may lead to bitter customers leaving bad reviews (bad reputation).
  + Global availability: confining the business to a specific region limits growth.
* 1.3.2 Impact Analysis: these issues have many negative consequences associated with them, which include:
  + Revenue Lost: limited customer base will result in missed revenue and opportunities.
  + Security leaks: data breach results in customer trust issues and lawsuits.
  + Unsatisfied customers: bad customer service or lack of personalization leads to dissatisfied customers that won’t come back.
  + Operations Inefficiency: bad order processing and inventory records lead to increased costs.
* 1.3.3 Desired Outcome: The desired results the new system is expected to achieve are:
  + Robust Security: integrate a secure system to protect client’s private data to avoid data leaks and lawsuits, also build trustworthy reputation.
  + Better Customer Experience: providing personalized products and services will enhance customer experience, leading to customer satisfaction.
  + Global Reach: Global shipping provides unlimited customer growth and revenue.
  + Optimized Operations: Optimizing operations will decrease overhead costs by ensuring accurate inventory records (no overstocking or understocking), logistics etc.