SEIS 610 Project Deliverable

Inception Phase

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*** Name of the project: Online Pharma**

*** Project Vision**

The vision of the project was inspired by the lack of pharmaceutical access in most parts of the world. Especially third world nations where finding live saving drugs becomes a problem even in the most developed parts of the country. Countries like Ethiopia, in Addis Ababa a major problem is the drugs would be available but you would have to check a dozen or more pharmacists before you find the one with the drugs and medicine you need. So the idea was to create a software that keeps track of the inventory of all the pharmacies in a 500 mile radius or even a whole state then make that inventory from the hospitals and pharmacies available to patients that need them.

The software would have two different portals; one for patients and another for Pharmacists. This project will describe how the software will work and what kind of services it will be able to provide to its customers. We will try to describe what kind of features its application or website will have. The software will also be using features like AI and machine learning algorithms.

*** Project Boundaries**

1. This software will not have a windows application and Mac OS application.
2. The software will not run on android and Iphones
3. Customers will not have access to the pharmaceutical portal of the software. There is a separate pharmaceutical management system for hospitals and pharmaceutical companies.
4. The software will not be used for data collection of customers.
5. Medication shortage is expected and to prevent that from happening often, there will be a limit on the number of items you can order through the software at one time. Bulk orders need special Authorization from pharmacists.
6. No advertisement platform will be set up on the software.
7. There will not be a Linux compatible version.
8. This application will be only web based at first and not available as an application.
9. This software will only register the hospitals and pharmacies with a Pharmacy Licensure and DEA Registration to sell products on the software.
10. A prescription is needed for ‘Behind the counter and Prescription’ medicines.
11. Software will not have access to illegal drugs.

12. Once an order is placed and is out of delivery, the software will not give options to cancel or return your order.
13. Software does not require customers to have insurance to obtain drugs and products.
14. High cost for special orders can be a possibility as software won't be able to predict the exact cost of shipping.

*** Requirements that are written as User Stories**

For each point we would need 2 software developers and 1000$ per week per person and at least 2 weeks or work budget. That is how we will be calculating the estimated value of the software.

1. As a customer, I would like to have a picture and detailed description of the medicine so that I can order the right one by confirming it. (**2 points)**
2. As a customer, I would like to create a recurring account so that I do not need to add information every time I visit. (**2 points)**
3. As a customer, I would like to have a 2-step verification and my account so that I can be the only one to have access to my order records, medical prescription history and prevent someone from accessing it. (**3 points)**
4. As a customer I would like a search tab where I can search up different products so that I can purchase with ease.**(4 points)**
5. As a customer, I would like to be able to view my order history and be able to have a monthly subscription to certain products and save plans so that I can reorder my regular medicine automatically. (**2 points)**
6. As a customer, I would like to know my data is not being misused so that I can freely enter my information. (**2** points)
7. As a customer, I would like to have suggestions for alternatives for the prescription so that I can have the medicine if I need it urgently and cannot miss it. (**2 points**)
8. As a customer, I would like to have delivery options and in person pickup from locations so that I can choose the option that's more convenient for me. (**2 points)**
9. As a customer, I would like timely updates on the delivery date of the product once placed until delivered and about pick up locations of the product so that I can know when it's arriving or I can pick it up and that it's not lost or delayed. (3 Point)
10. As a customer, I would like information about the company that is delivering the product so that I can enquire about the delivery if needed. (1 Point)
11. As a customer, I would like to know more about the product I am purchasing over the counter from customer reviews and pharmacist recommendations so that I can make an informed decision and correct use. (2 Point)

12. As a customer, I would like to know the after effects, side effects, and symptoms of the products I am purchasing so that I know what to expect after taking the medication.(1 Point)
13. As an institution providing the product , I should be able to update inventory in the database so that patients can order it as per their need.(2 Points)
14. As an institution providing the product , I would like to have access to the customer information so that I can verify a patient's identity and prescription as per the records. (4 Point)
15. As an institution providing products, I would like the right not to sell products for any reason (like drug abuse from customers) so that I can prevent or avoid similar cases that might come up. (3 Point)
16. As an institution providing products I would like the facility to sell products with a discounted price, if products are near expiration date or have a high inventory of the product, so that the products don't go to waste.(1 Point)
17. As an institution providing products, I would like a good back end structure so that I can process purchases and bank transactions.(2 Points)
18. As an institution providing the product , I would like to be able to update inventory records so that I can update the stock on the website and proceed with the order by the patient.(1 Point)

*** Business Case and Initial Cost Estimate**

The lack of access to life-saving drugs in many parts of the world is a serious issue that needs to be addressed. This software aims to create a platform that allows patients to easily locate pharmacies and hospitals with the necessary drugs and medicine they require, regardless of their location. By providing easy access to the inventory of all pharmacies within a certain radius, patients will be able to obtain the necessary drugs in a timely manner, which could ultimately save lives.

Moreover, this software will also provide a significant benefit to pharmacists by providing them with a platform to showcase their inventory to a larger audience, which could increase their business revenue. This will help pharmacies and hospitals to better manage their inventory and avoid stock outs. This software will also provide a way for hospitals and pharmacies to collaborate and share resources, which could lead to a more efficient and cost-effective use of available resources.

Initial Cost Estimate:

The initial cost of developing this software will depend on various factors such as the scope of the project, the size of the development team, and the technology stack used. Assuming that the project will be developed using cutting-edge technology and AI/machine learning algorithms, the cost could be estimated to be between $100,000 to $200,000. According to our point system For each point we would need 2 software developers and 1000$ per week per person and at least 2 weeks of work budget. That is how we will be calculating the

estimated value of the software. So according to the point system it would be about 152,000$ plus some extra expenses for starting.

The cost estimate includes the development of two portals, one for patients and one for pharmacists, a database to store information, server infrastructure, and the cost of hiring developers, designers, and other necessary personnel. Ongoing costs such as server maintenance, data storage, and salaries will also need to be considered.

Revenue Model:

1. To make the software financially viable, there are a few potential revenue models that could be considered, such as:
2. Subscription-based model: Pharmacies and hospitals could pay a monthly fee to have their inventory listed on the platform.
3. Commission-based model: The software could take a commission on each transaction that occurs on the platform.
4. Premium services: The software could offer additional premium services, such as marketing and advertising, to pharmacies and hospitals for an additional fee.
5. Data analytics: The software could also offer data analytics and insights to pharmacies and hospitals for an additional fee, which could help them to make better inventory management decisions.

Finally, This software has the potential to revolutionise the way patients access life-saving drugs, and provide a platform for pharmacists and hospitals to collaborate and share resources. The initial cost of development is high, but the potential revenue models make it financially viable. With the right team and technology stack, this project could have a significant impact on the healthcare industry.

Technical Risks

1. Basic training on how to create the software.
2. Internet access would be needed to create the software.
3. Need for consistent software security management and updates; to prevent bugs.
4. Lack of experience in programming language or technical requirements.
5. No experience in AI and image recognition software for prescription authentication.
6. No current knowledge on the legal practices on this software when it comes to privacy and approval from the FDA.
7. No experience in cyber security software, debugging and authentication programming.
8. Inability to create the working environment for that number of developers.

9. Customers forgetting their authentication and the need for a call base to fix small problems like this.
10. Institutions providing products might not know how or forget to update inventory.
11. The technology used might not have a sufficient level of development and community support (it cannot provide the necessary functionality)
12. No experience or idea in large-scale system implementation.
13. Having new technology might not be possible as some software updates cease to support old devices over time.
14. Inability to integrate with the third party systems.
15. Inability to deliver critical functionality due to lack of resources or technical expertise
16. Inadequate testing that could result in bugs or errors.
17. Changes in technology or market trends could impact software.
18. Compatibility issues with different operating systems or web browsers.
19. Inadequate backup and disaster recovery processes that could result in data loss or system downtime.
20. Inability to obtain necessary hardware or software licences on time or with the available budget.
21. Legacy code issues could impact the maintainability of the software over time.

Non-functional requirements (5 points)

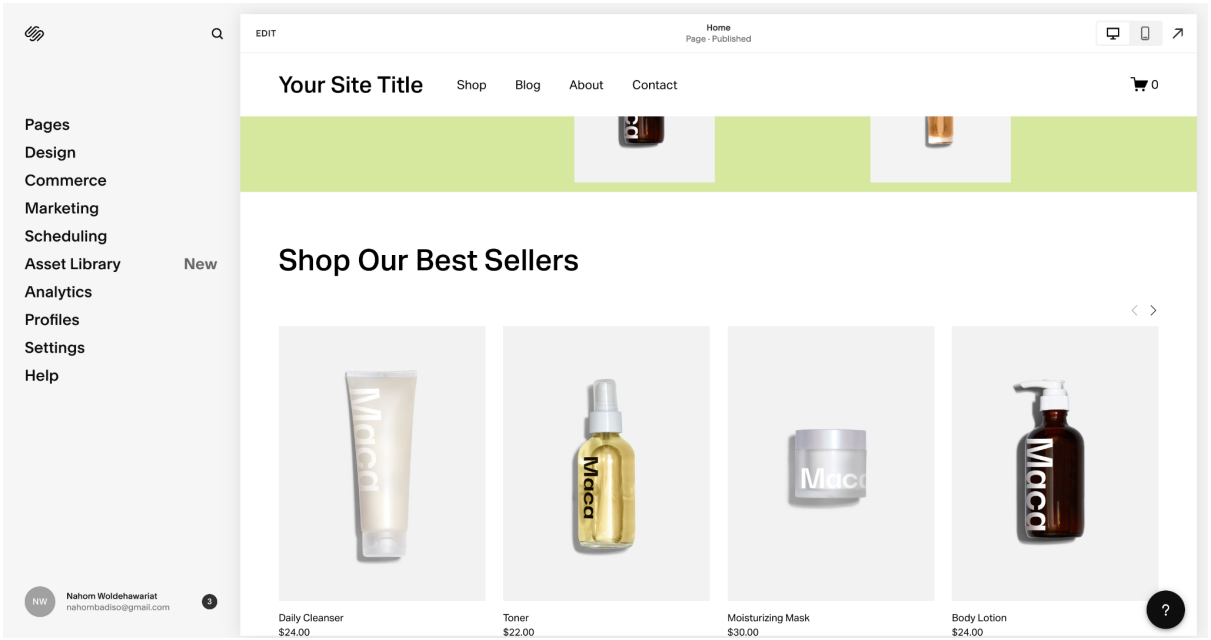
1. Security: The system must ensure that patient data and information are securely stored and transmitted. It must implement authentication and authorization mechanisms to prevent unauthorised access to the system.
2. Performance: The system must be able to handle a large number of requests from multiple users concurrently. Response times for search queries must be fast and must not take longer than a few seconds.
3. Reliability: The system must be designed to minimise the occurrence of system failures, errors, and crashes.
4. Usability: The system must be user-friendly and easy to navigate. It must be easy for patients to search and locate the required drugs and medication, and for pharmacists to update their inventory. The system must also support multiple languages to cater to different regions and users.
5. Supportability: The system must be easily adaptable to changing business requirements and regulatory compliance.
6. Packaging and Legal Requirements: The software must comply with all relevant legal and regulatory requirements, including those for data protection and privacy.
7. AI and Machine Learning Requirements: The software must be capable of learning from data and continuously improving its search results based on

user feedback. The system must be designed to handle large amounts of data and perform complex algorithms while maintaining high levels of accuracy.
8. Deadlines: The software must be delivered within the stipulated timeframe and meet all the specified requirements. Any potential risks that could impact the delivery timeline must be identified and addressed in a timely manner.

Glossary.

1. Inventory Management: The process of tracking and managing the stock of drugs and medication in a pharmacy or hospital.
2. Pharmacists: Licensed healthcare professionals responsible for dispensing medication and providing information and advice about prescription drugs.
3. Patients: Individuals seeking medical treatment or prescription drugs from pharmacies and hospitals.
4. AI (Artificial Intelligence): The simulation of human intelligence in machines that are programmed to learn, reason, and self-correct.
5. Machine Learning: The application of AI that allows systems to learn and improve from experience without being explicitly programmed.
6. Portal: A web-based application that provides a single point of access to information and services from different sources.
7. Authentication: The process of verifying the identity of a user or system to ensure secure access to data and services.
8. Authorization: The process of granting or denying access to specific resources or actions based on the user's identity and permissions.
9. Compliance: The adherence to legal, regulatory, and industry standards and guidelines.
10. Scalability: The ability of a system to handle increased workload or user demand without a drop in performance or functionality.
11. Usability: The ease of use and user experience of a system, application, or website.
12. Performance: The speed, response time, throughput, and reliability of a system under specific conditions and load.
13. Supportability: The ability of a system to be easily maintained, updated, and adapted to changing requirements and environments.
14. Security: The protection of data and systems from unauthorised access, theft, and damage.

This would be a good example of how the website would look on your laptop or desktop, with products laid out on the home page and with the option to search your products.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Shop
Blog
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Design
Commerce
Marketing
Scheduling
Asset Library
New
Analytics
Profiles
Settings
Help
Shop Our Best Sellers
Daily Cleanser
$24.00
Toner
$22.00
Moisturizing Mask
$30.00
Body Lotion
$24.00
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