**Solent University**

**SCHOOL OF MEDIA ARTS AND TECHNOLOGY**

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# "A Bartering Website (SWAP)"

**Date of Submission:**

# Acknowledgements

# Acronyms

**ER-Diagram -** Entity Relationship Diagram

# Abstract

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# 1. Introduction

Purchasing products for our need is a common habit one possess. In this modern generation purchasing trendy products due to influential propaganda is highly evident though the purchased product is of use or not. People purchase these products atleast to try using it for once due to excitement and usually put it away. Therefore eventually one unintentionally begins to hoard products or throw away large amount of trash annually.

Increase in excess amount of unused products results in environmental pollution. Thus, reusing of these unused products can be eco friendly and beneficial in many ways. Flea markets provide the opportunity for up cycled products and second hand items. It is often seasonal and people sell their second hand products for reasonable price. This is an efficient way of recycling products but since it is not online, it could be inconvenient to make the purchases easily.

Online shopping comes to spotlight when it comes to convenience. It has become a common trend among the modern generation. Finding products that one need most from around the world through a website has helped people to find products that suits them best, easily and quickly. There are many website available which allows users to purchase product online such as Ebay, Amazon, Alibaba etc. When we consider Sri Lanka, there are websites such as Daraz, Ikman and Riyasewana, which offers online purchasing.

Using the above mentioned websites, products are purchased with money. This method has caused problems to many. Therefore, purchasers are falling into inconvenience. Most common problems reported are products being delivered with damages, delivering of a different product from one that was ordered, delay in delivery, poor quality etc. These problems are not worth spending money on. (Lahiru 2018)

Therefore, people came up with ideas to barter products without involving money. There are websites available in western countries which provide this service. These websites specialize in selling or bartering second-hand products. Some of the websites are *Vinted*, *Gumtree*, *Swapz*, *BookMooch* and *Freecycle.org*. These websites are only popular in western countries. Some of these websites specialize in particular products for example *BookMooch*, it allows users only to exchange books. Most of the above mentioned website target the local groups of people for easy exchange. Though it provides its services across the globe, usually users prefer to swap products with local users.

Considering the above issues SWAP website has been developed as an innovative solution which is mainly targeted at the Sri Lankan audience. It is an online platform which provides '*Bartering services*', that is, it allows customers to conveniently exchange their unused products at home and get products which they need most from another customer. This way helps people to save money, time, get what they want and promote recycling.

Article published by "*The Economic Times*" defines bartering system as,

*"When the goods and services of equal value are exchanged between two or more parties without using any form of monetary exchange, this transaction is called the Barter System."*

(The Economic Times 2022)

Not involving monetary exchange benefits people, because one can get products they want even if they do not have money. They can bargain and exchange products that are of equal value. No wonder this system existed decades earlier as a form of oldest types of commerce, even now the modern generation can make use of it with the intention of recycling products, as the future is threatened due to excess wastage and environmental pollutions.

Initially a primary survey was conducted among 50 participants in Sri Lanka varying from different career backgrounds and age groups, out of which 90% of them are familiar with regular online shopping. According to the survey it was evident that 92.5% of the participants were not aware of bartering websites.

According to the website *Environmental Foundation Limited*,

*"Sri Lanka generates 7000MT of solid waste per day with the Western Province accounting for nearly 60% of waste generation. Each person generates an average of 1 - 0.4kg of waste per day."*

(Environment Foundation (Guarantee) Limited. 2022)

Generating of an average 1 - 0.4 kg of waste per day by an individual can be hazardous if it keeps continuing. Because the current population of Sri Lanka in year 2022 has been increased by 0.27% compared to 2021.(Macro Trends 2022)

According to a report released by *Ministry of Sri Lanka* in year 2021,

*"the lack of municipal capacity for proper waste management and irresponsible and improper disposal by consumers have resulted in Municipal Plastic Waste (MPW) management becoming a national burden for the country."*

(Mr. Nihal Cooray *et al.* 2021, p. 1)

The above report shows how important it is to reuse products as much as possible as long as it is usable. Therefore, SWAP website is introduced to Sri Lankan audience to encourage recycling and reduce throwing away products annually. The website will allow users to post their products so that other users can view those posts and negotiate trade for exchange. Users can register and exchange products for free of charge. This website will be a customer to customer (C2C) business model.

SWAP website is developed for all ages and provides a secure platform to exchange products easily. It provides three categories such as *electronics*, *books* and *furniture*, in which users can post their products. When a user selects a product willing to exchange, user can use the trader's contact details and make an offer to exchange. If the trader and user agrees to exchange their products depending on product's worth, they can arrange a meeting to swap their products.

SWAP provides a simple concept of helping people to post products they want to give away and find users who might actually need it. On the overall this website will eliminate the problems of the existing bartering website and purely for the Sri Lankan community. It helps people greatly impact by the economic crisis to get products without having to worry about spending money.

Information Technology sector and use of Internet is gradually increasing among the modern generation. Therefore, SWAP website will reach the modern generation quickly and be beneficial for the users. Every single user of the website will be an indirect contributor to an eco-friendly future.

# 2. Literature Review

Literature search and review was done in the initially stage of this project. It helped to get a better understanding of the project background and to find the clear path on which this project should head towards. A thorough research was done on every aspect of the project.

SWAP website was developed for Sri Lankan audience in attempt to encourage up cycling products and recycling with the aim of walking towards a greener future. It is an online platform where users find products of their interest and exchange it with products they do not use anymore, without involving any form of monetary exchange. Websites similar to SWAP were researched. It proved that many of the already available websites were not popular among Sri Lankans and most of the websites were specific to their country. Though it would help one to find products that could be exchanged from another country, yet considering Sri Lanka, expecting to exchange products from another country is not very ideal considering various factors like economic crisis, unable to inspect the product etc. Therefore, SWAP play a major role here in helping locals to find people from around Sri Lanka, so they can exchange products conveniently.

SWAP website is entirely based on ***Bartering System***, which is one of the oldest forms of economy.

# 3. Methodology

## 3.1. Professional, Legal and Ethical issues

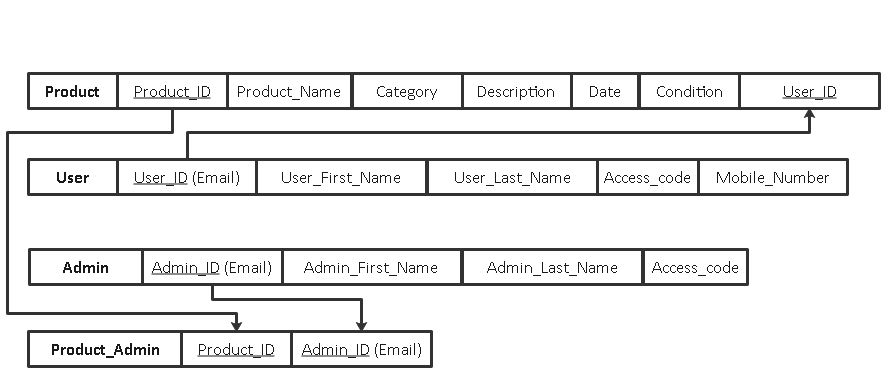
## 3.2. Project Management

# 4. Design

## 4.1. ER-Diagram

## 

## 4.2. Relational Schema



## 4.3. Activity Diagram

# 5. Implementation

## 5.1. Requirement Engineering

Requirement engineering was done to find out the absolute requirements necessary to build the website with all necessary features. The four phases of requirement engineering was completed accordingly.

### 5.2.1. Requirement gathering and elicitation

A primary survey was conducted among 50 participants who are online shoppers. The aim of the survey was to identify all the essential requirements needed to be added to the website "Swap" in order to be a successful end product.

## 5.2.

# 6. Results

# 7. Conclusions

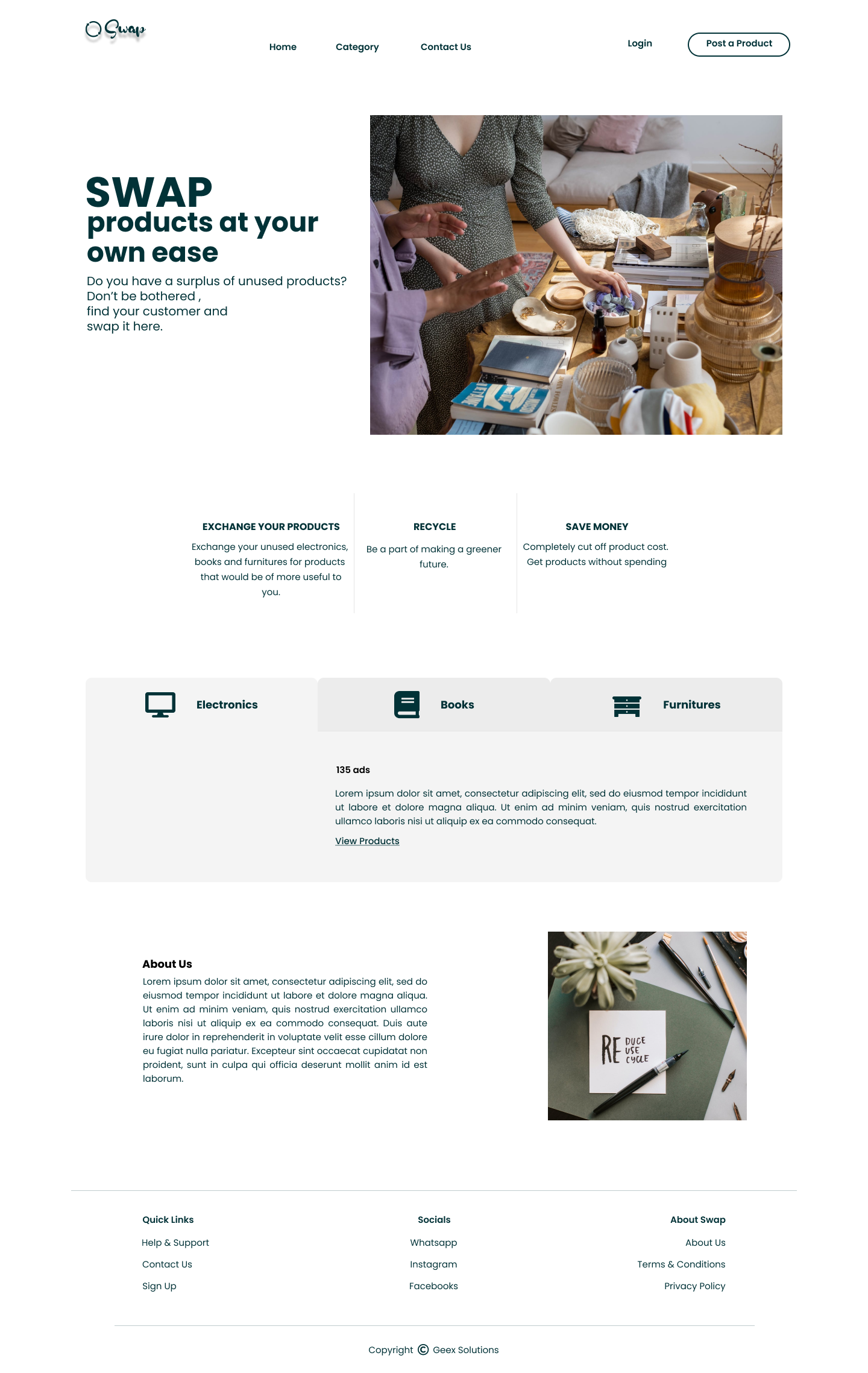
# 8. Recommendations

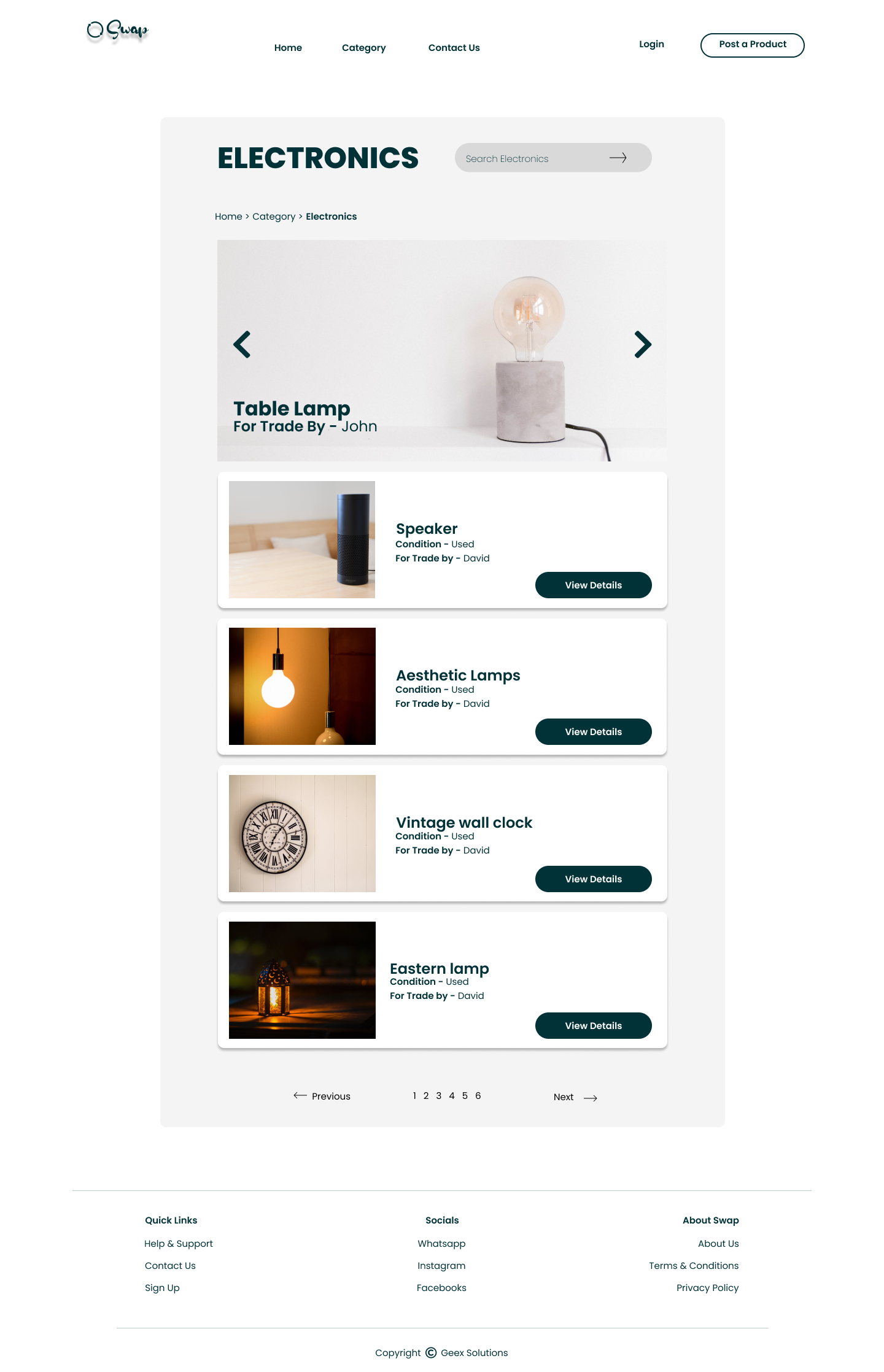
# 9. Reference list

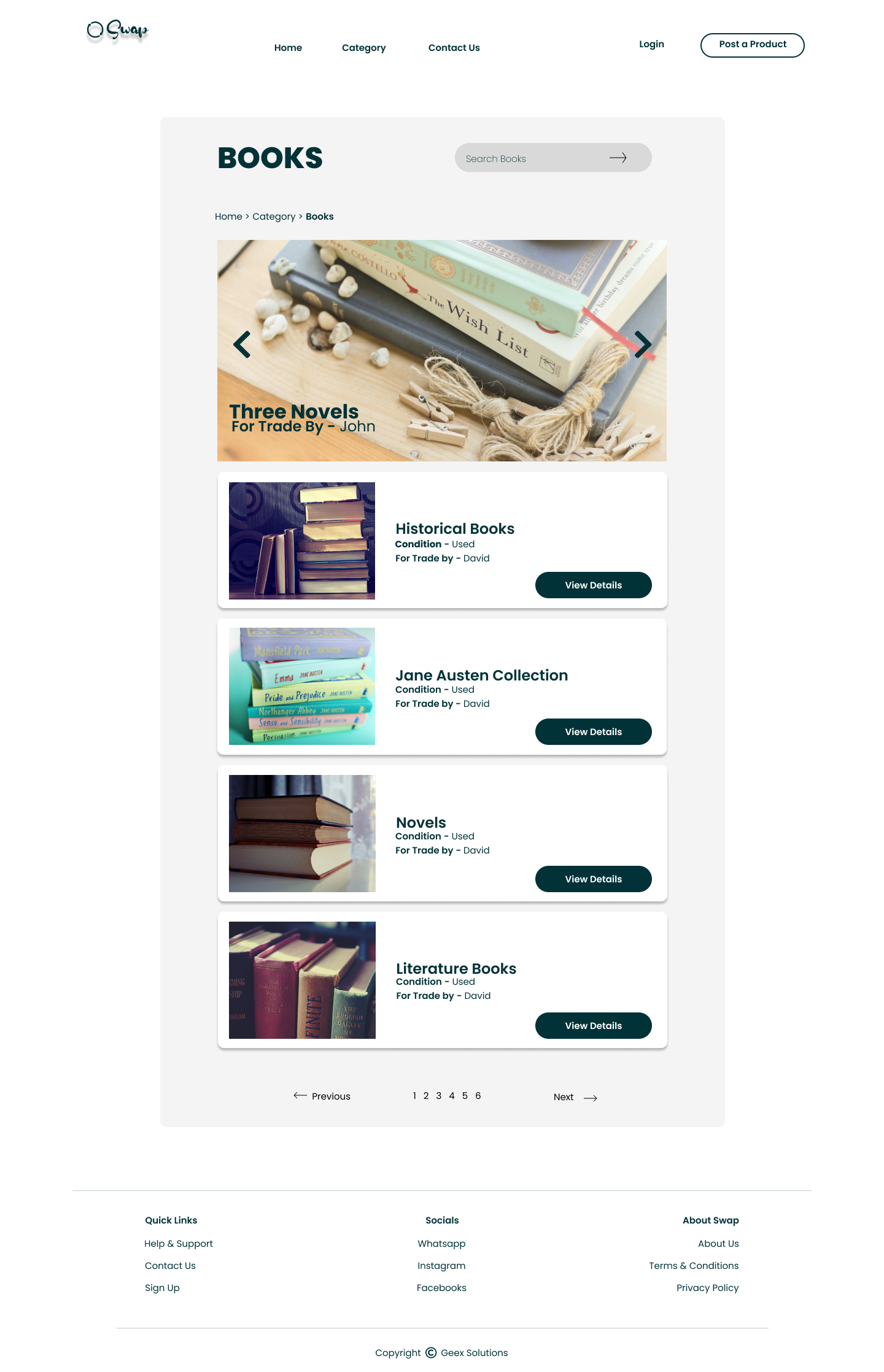
# 9.1. Bibliography

# 10. Appendices

## Appendix A - Wireframes







## Appendix B - Activity Diagrams

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