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1 Ecommerce Website Development for Melisa Baby and Kids Shop

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Abstract— In the current era of technological development, someone is always demanded to be creative and innovative in their existence in the digital world. The strategies to jump into the digital marketing field are an effective way to market products in an era of an onslaught of technological advances and the addition of the post-COVID-19 pandemic. A part of digital marketing, internet marketing is one form of marketing innovation that utilizes internet technology and creates marketing in the digital world, including among others, social media marketing, content marketing, and online platform marketing [1]. The baby shop business is one of the businesses that can implement digital marketing because the needs of babies are a primary need that must be sufficient. Strategies that can be used to increase sales of baby and children's equipment businesses are developing an ecommerce website that implements plugins, attractive landing page designs, promotion through social media, integration of online transactions, payments, and logistics, and creating a user-friendly website. Implementation of an e-commerce website can increase revenue and facilitate product marketing. This research aims to increase Melisa Baby and Kids Shop sales through ecommerce website creation strategies by utilizing plugins that enhance website functionality. By implementing those strategies, the result to business is gaining more visibility and increased sales by up to 30% based on an interview with owner.

Keywords: content management systems, e-commerce, plugins

I. INTRODUCTION

The current era of technological development requires someone to always be creative and innovative in their existence in the digital world. Understanding trends in the digital world brings our position one level above the average person who is not quick to learn about this part of the new world civilization. Survey institutes We Are Social and Hootsuite in 2020 recorded internet users in Indonesia spending an average of 8 hours 52 minutes per day accessing the internet and the total number of internet users in Indonesia reached 206.7 million users as of February 2021 [2]. There has been an increase in users from the previous year, one of which was the result of the impact of the COVID-19 pandemic. The COVID-19 pandemic that entered Indonesia in early May 2020 has resulted in a change in the form of verbal and nonverbal communication from direct to indirect communication [3].

Traditional Marketing is a form of communication delivered by the seller so that it can be accepted by prospective buyers, it can be done either directly or indirectly. Traditional Marketing is also one of those affected by the COVID-19 Pandemic, where door-to-door marketing is no longer implemented effectively due to social distancing and the PSBB implemented by the Ministry of Health of the Republic of Indonesia [4].

The baby and kids business industry are one of the businesses that can implement digital marketing because the needs of babies are a primary need that must be fulfilled [5]. Furthermore, the target market for the baby &

children's equipment business is young and productive adults (18-40 years old) who are technologically literate and follow trends in online shopping behavior. One of the businesses that will implement a digital marketing strategy is the baby and children's store, Melisa Baby Shop. Previously, this store only used traditional word-of-mouth marketing techniques, so digital marketing will be carried out through the creation of an Ecommerce CMS Website.

Therefore, the strategy of implementing digital marketing at baby and children's equipment stores are expected to be in line with the increase in sales from Melisa Baby and Kids Shop. The implementation of digital marketing is also expected to make it easier for people to make purchase transactions without the need to go to a physical store.

II. METHOD

Application Development Method

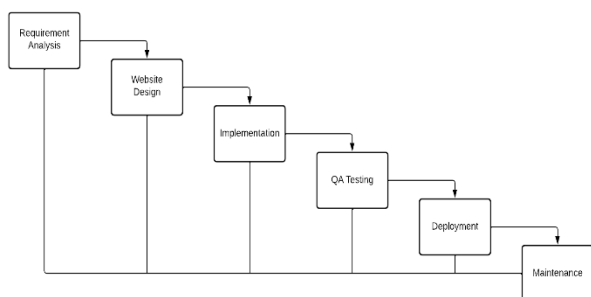


Figure 1. Waterfall Development Method

In this research, the development method used is Waterfall which has a sequential and systematic flow. The Waterfall method consists of 6 stages. The first stage is the needs analysis which aims to understand the needs of the users as well as the limitations of the website being developed. The needs analysis conducted in this research is through interviews with the owner of Melisa Baby and Kids Shop and direct surveys to the sales. The next stage is designing the appearance or interface of the website along with the features that will be displayed. The third stage is the coding stage, which is pouring the design into codes that are integrated with

syntax. Next is the testing stage for the website that has been developed by the user to get feedback on whether it meets the criteria of the client or not. Then the final stage of this method is maintenance, the website that has been completed and in accordance with the criteria given by the client will still be maintained on a regular basis to keep it updated and prevent any data leaks in its security system [6].

III. RESULTS AND DISCUSSION

A. Ecommerce Website Implementation Process

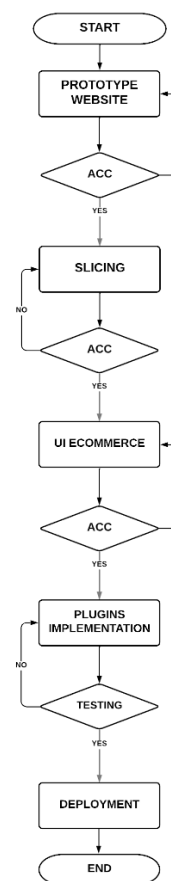


Figure 2. Ecommerce Website Implementation Process

Figure 2 explains the steps in designing a Wordpress CMS by starting with the prototype to be created. The first step is to create a website prototype design, in this website creation some tools such as Canva, Midjourney AI, and IstockPhoto are used to obtain copyrighted images. Then the next step shows the prototype results to the client

to ensure that the design meets their needs and if it does, it can proceed to the slicing stage. In the slicing stage, the prototype design that has been made will be broken down one by one into several parts such as the header, content, and footer which is called landing page. The ecommerce website is develop using CMS Wordpress. By using CMS tools, it makes easier for users to build ecommerce websites using plugins. ¹⁹ The landing page on the e-commerce website will be added with plugin such as WooCommerce and Chatbot to maximize customers in transactions. In the final stage before releasing the website or hosting, ¹¹ black-box testing is performed to test the functionality of the e-commerce website.

B. Ecommerce User Role

In Wordpress, there are several users, and each user has their own role. The purpose of these user rights is for developers to collaborate in building a website according to their expertise. Typically, in a Wordpress there are five types of user rights, the Administrator as the main role in website creation, Editor, Author, and Contributor as the content manager on the e-commerce website, but these three roles are differentiated based on their access rights and the last one is Subscriber or website visitors who can only view published content.

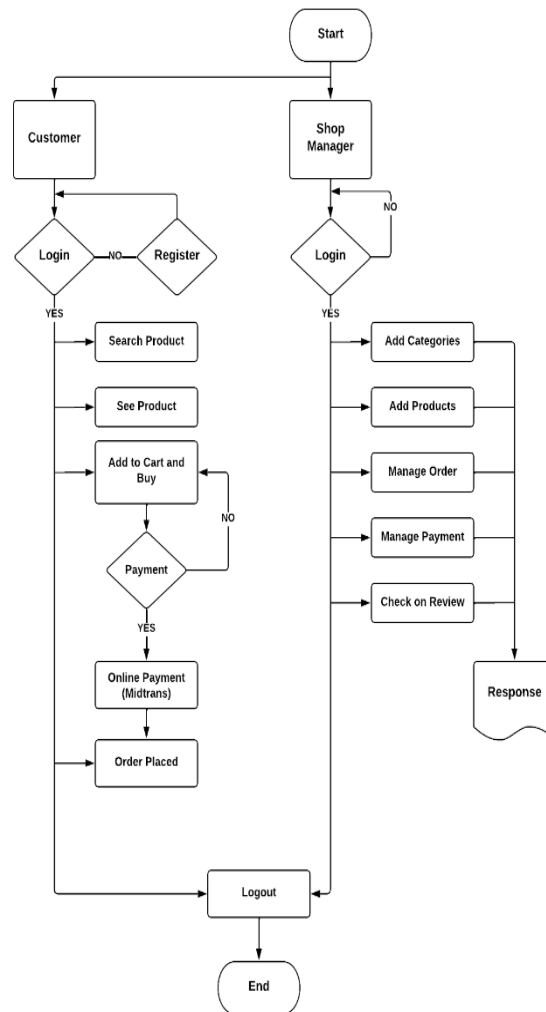


Figure 3. User Role in Ecommerce Website

When adding the WooCommerce plugin, two user roles will be obtained, namely the shop manager and customer. In Figure 3, the difference between these two roles can be seen. The role of the shop manager is as a store manager, starting from adding products, categories, and managing payments and receiving reviews. Meanwhile, for the role of the customer, like a customer in a physical store, their role is as a customer who visits the site to make transactions or just view products [7].

C. Ecommerce Website Interface

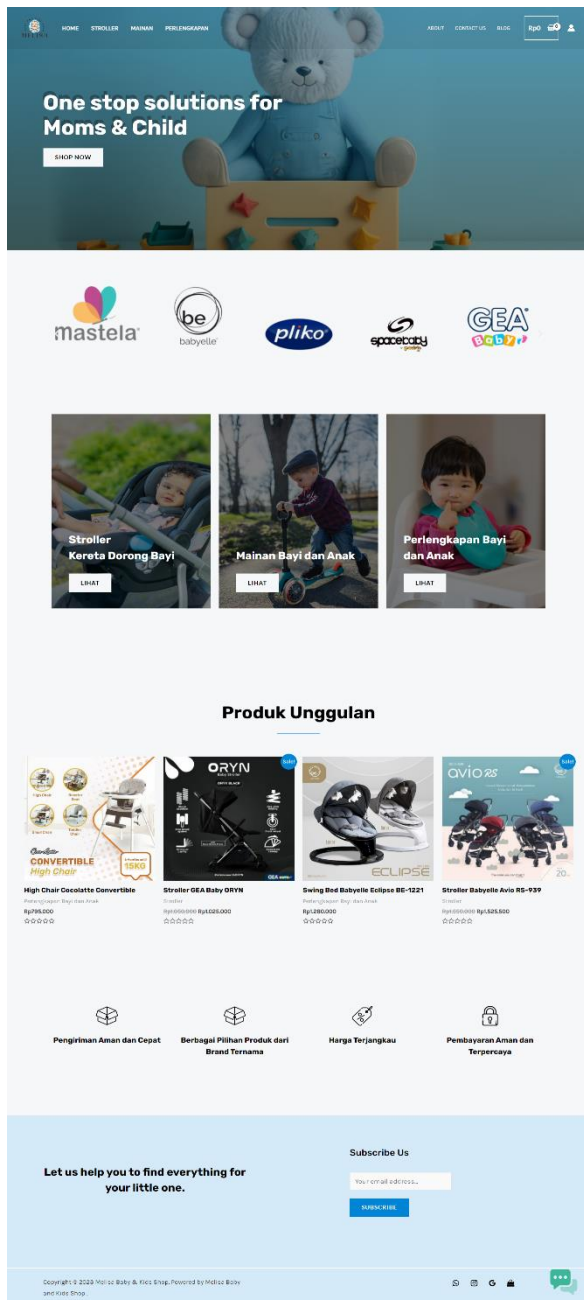


Figure 4. Website Main Layout

The main layout of the Melisa Baby and Kids Shop e-commerce website includes four sections: a welcome section, a feature brand section, a product category section, a featured product section, the store's advantages, and lastly, a subscribe form for customers. The main layout is also equipped with a chatbot that is integrated with ChatGPT Plugin AI Engine.

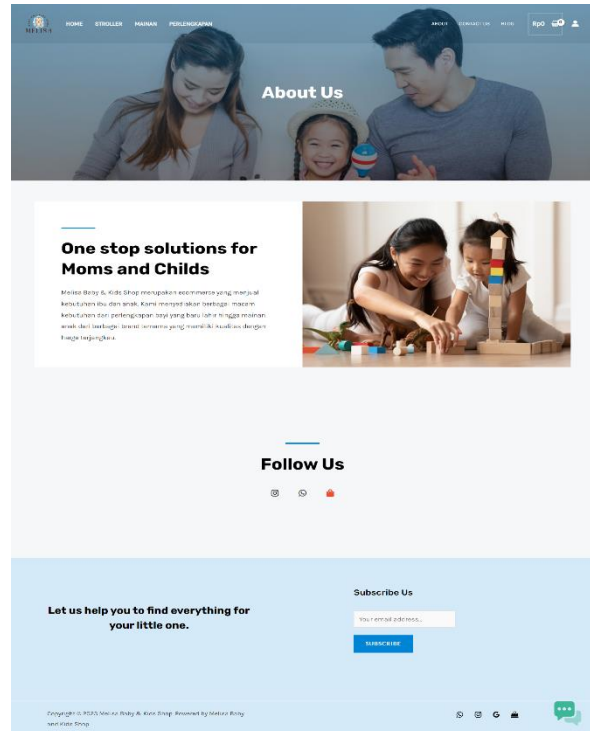


Figure 5. About Page

Figure 5 is about page, which consists of a thumbnail section, a section about the brief history of Melisa Baby and Kids Shop, and a section for social media. About Page is also important page of the website.

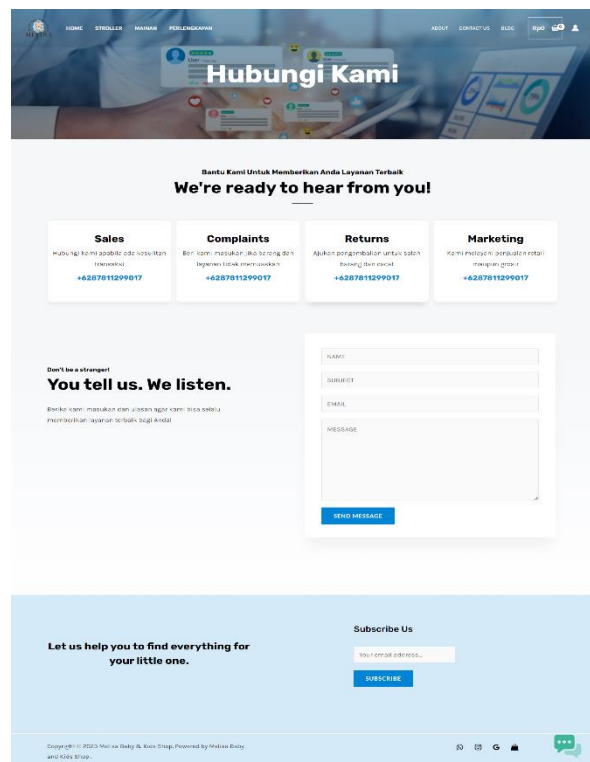


Figure 6. Contact Page

Figure 6 is the layout of the detailed about page, which consists of a Melisa Baby and Kids business contact info and contact form for user to give feedback or review about the products.

D. Plugin Implementation

In the implementation strategy for the Melisa Baby and Kids Shop e-commerce website, several plugins have been added to optimize the performance of the e-commerce website. The plugins used include:

1. WooCommerce

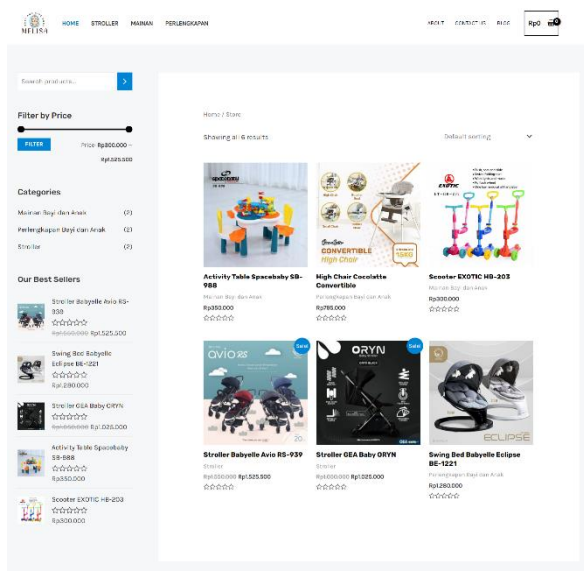


Figure 7. Ecommerce Website

The WooCommerce plugin transforms a WordPress CMS into an online store that can be used to display products, perform sales transactions, receive reviews. Until now there are still very many users of the WooCommerce plugin, even some professional websites still use WooCommerce.

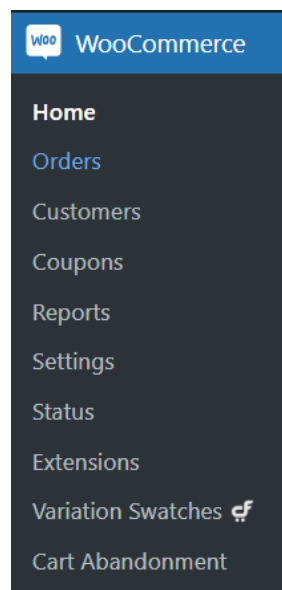


Figure 8. WooCommerce Shop Manager Features

As a shop manager in WooCommerce, it is important to check the stock and products uploaded to the store. Some features that are commonly used by Shop Managers to manage an online store are:

1. Orders feature is used to manage orders that come in from customers, including the customer's name, the products ordered, and the amount to be paid. In the Orders section, it is also possible to see which customers have completed their payments and which have not, so that Shop Managers can process orders that have been fully paid.
2. Customers feature shows a list of customers who have shopped on our website. This customer data can be used for customer segmentation to make our marketing more targeted.
3. Report feature can show the sales results for a specific period.
4. Voucher feature is used to create vouchers for customers when certain conditions are met.

2. Midtrans



Figure 9. Midtrans Integration to Website

Figure 9 shows the integration of Midtrans and WooCommerce. This integration needed Client Key which can be accessed from our account in Midtrans official website. Midtrans provide two environments to use; Staging and Production [8]. In this development Melisa Baby and Kids Shop already used the Production environment.

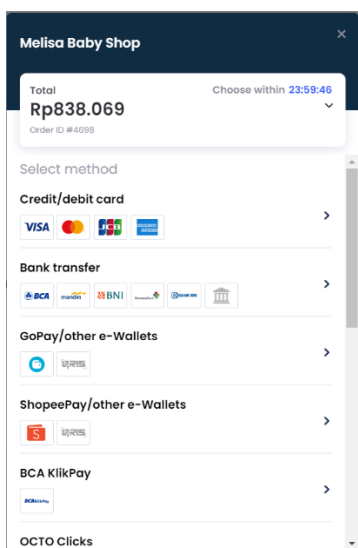


Figure 10. Midtrans Payment Methods

When customer want to check out from products from Melisa Baby and Kids Shop Ecommerce Website, they will direct to choose available payment method from Midtrans. After customer choose the suitable payment, Midtrans will process the payment and give invoice to customers.

3. SuperPWA

By using PWA Plugin, SuperPWA the goal was to give users a similar engaging experience as a native app on the mobile web. To achieve this, Progressive Web Apps were

created to offer exceptional user experience on the web [9].

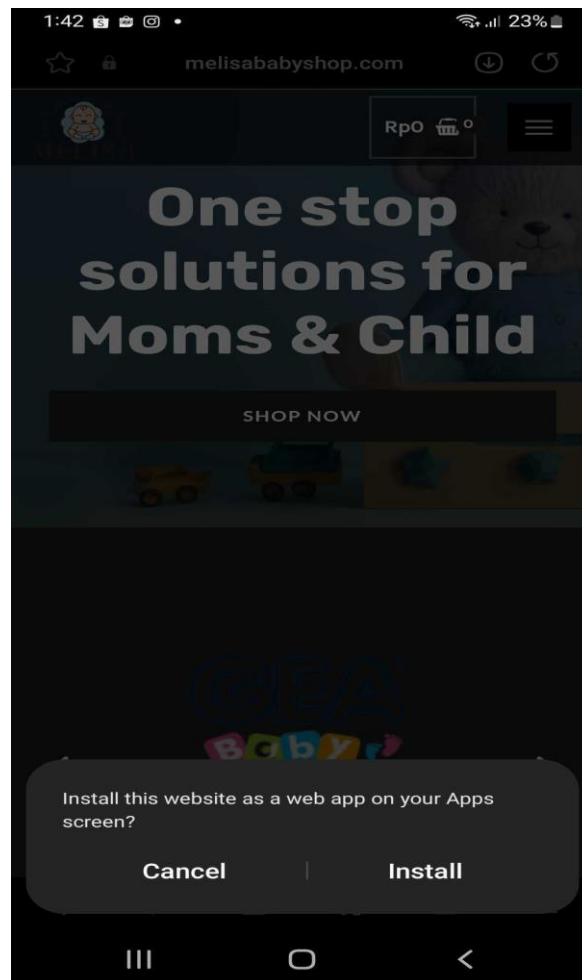


Figure 11. Grant Access to Install Website on Apps Screen

This is an attempt to include the app to homescreen feature, which is a main feature of Progressive Web Applications (PWAs)

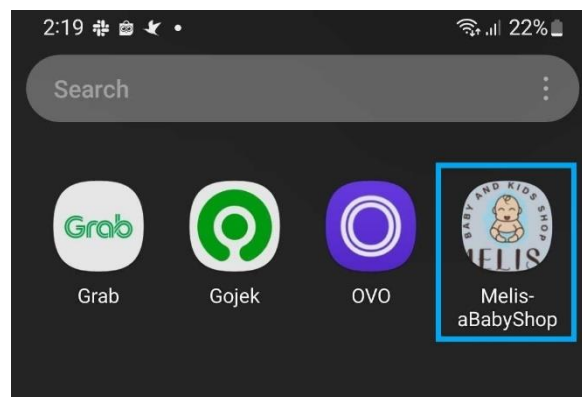


Figure 12. Shortcut on Homepage

Figure 12 shows that the website already installed as native app or webapps on the

device and the web apps work same as the desktop version.

4. AI Engine

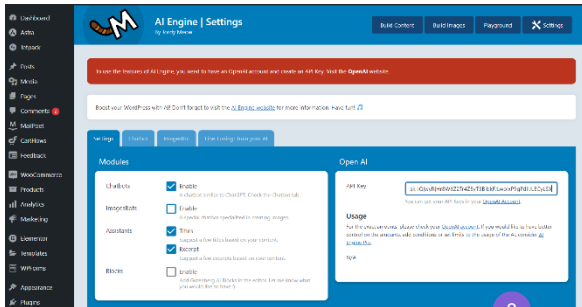


Figure 13. AI Engine API Integration with Open AI Account

The AI Engine utilizes the API from OpenAI Engine so we need our Open AI API account.

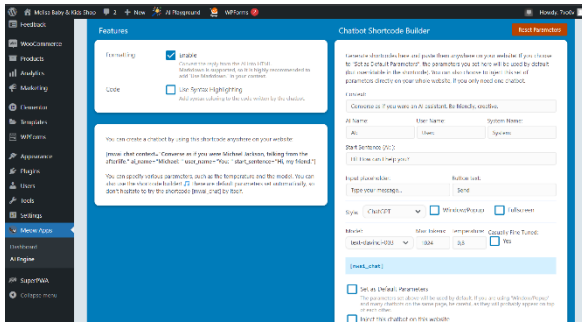


Figure 14. Configure Chatbot

By use this Plugin we can Add a ChatGPT-style chatbot (or an images creation bot) to your website with a simple short code.

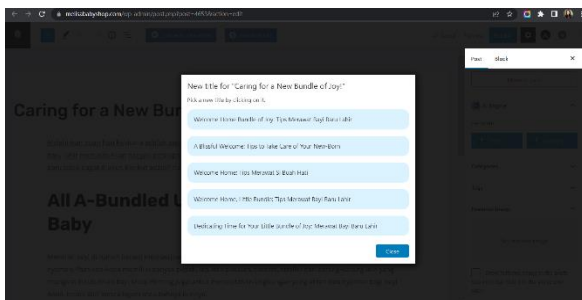


Figure 15. AI Engine to generate content which SEO-friendly

AI Engine able to generate SEO-friendly content to our website by only input few keywords.

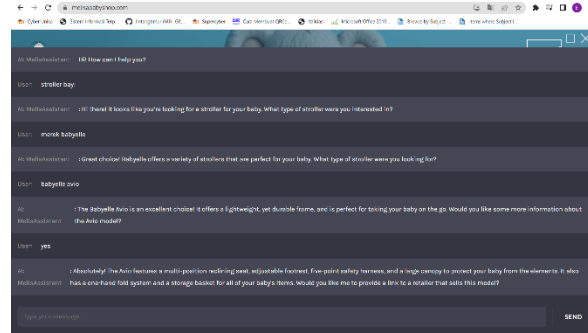


Figure 16. Chatbot on WooCommerce

This is an example of a conversation with ChatGPT that is already installed on the Melisa Baby Shop website.

E. Black-box Testing

Table 1. Black-box testing result on Website

No	Scope	Scenario	Result
Customer			
1	Homepage	Successfully enter Homepage	Pass
2	Cart Page	Verify Items are added to the Cart	Pass
3		Successfully open the cart page and see details information about the items	Pass
4		Verify the user can change the item's amount	Pass
5		Successfully Proceed to checkout Page	Pass
6	Checkout Page	Verify user able to fill the order form	Pass
7		Successfully Place Order	Pass
8	Shipping Method	Verify user able to choose shipping method and courier that available in Indonesia	Pass
9		Successfully get information about shipping bill	Pass
10	Payment Method	Verify the user can choose the payment method available in Indonesia	Pass
11		Successfully Make Payment	Pass
Shop Manager			
12	Login Page	Successfully log in using the correct username and password	Pass
13	Manage Category	Successfully add categories	Pass
14		Successfully edit categories	Pass
15		Successfully delete categories	Pass

No	Scope	Scenario	Result
16	Manage Product	Successfully add product	Pass
17		Successfully edit product	Pass
18		Successfully delete product	Pass
19	Manage Order	Verify customer's order and payment	Pass
20		Verify the item's stock and price	Pass
21	Manage Payment	Verify user payment	Pass
22		Successfully finished the user's order	Pass

Table 1. Black-box testing

The goal of using the black box testing method is to evaluate the performance of the ecommerce website Melisa Baby and Kids Shop in the internal quality assurance scenario of Ecommerce Website [10].

IV. CONCLUSION

1. A strategy that can be implemented in an effort to increase sales of baby and children's equipment businesses is to implement SEO in the form of keywords and attractive landing page designs on e-commerce websites as well as promotions carried out through social media to increase business visibility. There is integration between ordering, payment, and logistics and the appearance of the website is made User Friendly on websites and smartphones.

2. The software needed to support e-commerce website performance is the Woocommerce plugin to bridge online transactions, Midtrans as a plugin to support payments in Indonesia because Woocommerce only provides PayPal as the payment default, as well as the PWA or Progressive Web Apps plugin to make the website look like a native application, by using PWA it can be downloaded and accessed via a smartphone with the Android and iPhone operating system and AI Engine Plugin.

3. The impact of implementing an E-Commerce website on baby and child equipment businesses can be seen from the increase in the amount of income received by clients which are higher than just relying on physical stores. Moreover, by using social

media as digital marketing increased followers, there's much reach through IG's direct messages and comments, and product marketing is likely easier.

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