

Design and Build Online Store Website bicycle store KawanKita

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Abstract— E-commerce websites are important to implement in small business processes. To facilitate the transaction process, this research was carried out so that the transaction process between sellers and buyers became more effective and efficient. The purpose of this research is to attract consumers with an attractive and user-friendly website to buy products from the KawanKita bicycle shop so that it has an impact on increasing sales, the analytical method process is applied to implementation. The development method used is "waterfall" where step by step are related to one another. That way the discussion process with the KawanKita store owner resulted in a website business process design, ER Diagram, UI and UX design for display, for the platform framework used is Node Js as the back-end and React Js as the front-end. In terms of storing data, this website uses Firebase as a data storage provider and as a hosting provider. KawanKita bicycle shop business owner. So that this research produces a website that makes it easier for consumers and sellers in the transaction process, the appearance of the website is good at displaying the goods being sold. From the process of business analysis, ERD creation, user UI and UX design, to the creation of this website, from the appearance to the functions in each of its features, all have received a positive response from the public.

Keywords— process of business analysis, ERD creation, user UI and UX design.

I. INTRODUCTION

Website is a collection of pages that have information that are interconnected to form a series of pages and are connected by hyperlinks which are summarized with domains or addresses on the internet.

Currently, there are a lot of uses for websites, from social media to online shops. Websites have also proven to be relatively easy to develop and maintain, because they can be accessed via desktop PCs or smartphones and other smart devices. The website is very influential on commerce to market the products that are owned and implemented on the website [1]. The User Interface is all the displays that are on the website to make it easier for the user or users to access the website [2]. This UI design will also describe the use case and the display that will appear later on the website [3]. Before creating a UI design, we also need to know how the customer wants the web conceptually [4]. UI design is needed to design a website so that later the appearance of the website becomes more user friendly [5]

ERD (Entity-Relationship Diagram) design is a modeling scheme of the relationships between entities that are interrelated. This ERD design is useful for database design by utilizing existing entities, when information has been completed it is easier to build a more relational database [6]. This diagram design has been widely used in conceptual modeling. With this diagram, every relationship between entities can be easily understood and easier to apply [7]. The quality of this ERD design will greatly affect the system being built because ERD is database mapping before it is built into the

system [8]. ERD is very necessary for website development from the website design process and must be implemented [9].

The programming language used on this website is in the form of Java Script. This Java Script has been widely used and not a few have also developed it, so that the use of this programming language has the advantage of having many developments and users[10]. Apart from that, in making JavaScript objects too more flexible [11]. The use of Java Script can also be accessed in various browsers such as Google Chrome, Firefox, Internet Explore [12] this is also a consideration why Java Script was chosen.

The platform is a software development provider based on a certain programming language in creating a website for the CSE system. The platform used is Node JS on a Java Script basis and for the display platform for this website, it uses the React.Js platform.

Node.Js was developed in 2009 by Ryan Dahl. The architecture of node js makes it easy to use as an expressive functional language.[13]. This Node.Js has the advantage of matching the data real-time [14]. Thus the data that has been uploaded becomes more quickly accessed. while the framework used for display is React.Js. React.Js is a platform developed by Facebook to display a website or application based on Java Script [15]. React.Js also has display functions which are relatively easy to execute. [16]. The language used by React.Js is easy for website developers to understand and easy to implement. good in terms of website implementation [18].

II. METHOD

Primary Data Source

Primary Data Source were obtained from interviews buyers and owners of the Kawan Kita bike shop as user.

Secondary Data Source

This data source is obtained from journals and several sources from the internet which refer to e-commerce

Data Gathering Methodologies

Interview Method Interviews will be conducted for owner and buyers from Kawankita bike store Magelang.

Literature Review

Sources of information obtained through journals on the Internet refer to e-commerce

III. RESULTS AND DISCUSSION

Website development method

The method used in developing this website uses a method called "waterfall" where step by step are interrelated and sustainable. The first step taken to analyze how this website was created was to carry out a communication process with the owner of the "Kawan Kita bicycle shop" to determine the framework for this website. The second step is to create a design for this website, starting from analyzing business processes, creating ERD tables, and creating a display design or website UI/UX. And the last step taken in making a website is testing to check for various existing bugs so that they can be repaired and maintained.

Website business process

In making a website, it is necessary to know how the business process will occur from the first to the end of the user to make it easier to map how the website will be made and make it easier to create a database design for the website interface and script.

The figure 1 above shows how the business process of the Kawan Kita Bike Shop website is, here you can see the interaction between the buyer and the system, the system and the seller, and the seller and the buyer

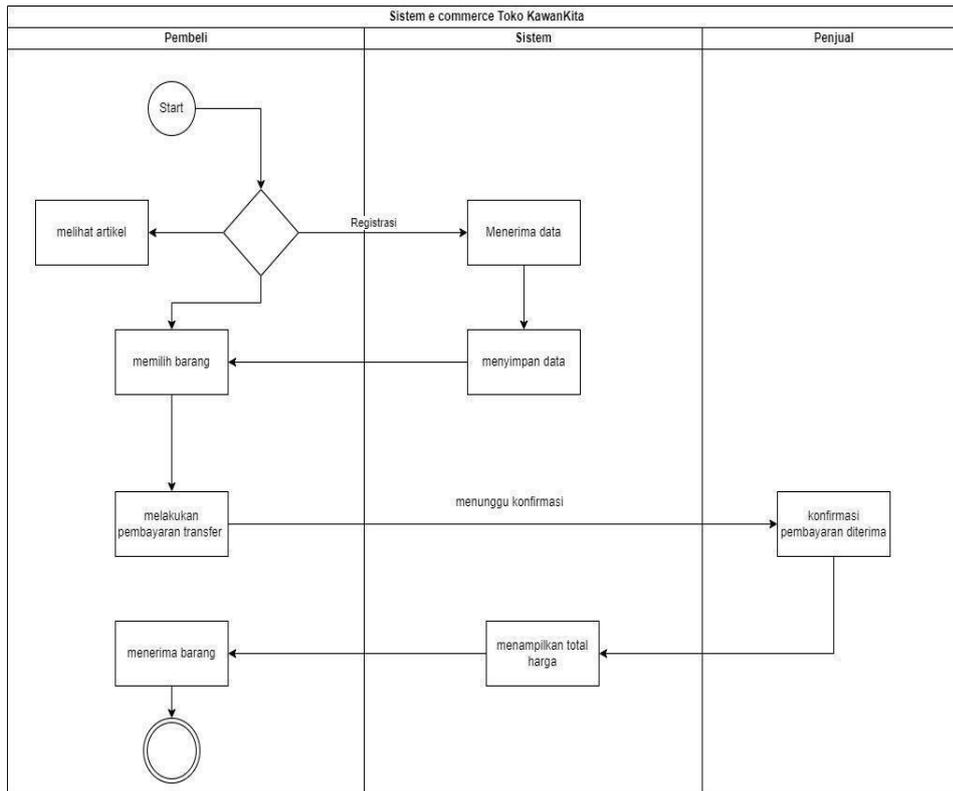


Figure 1 Use case diagram business process

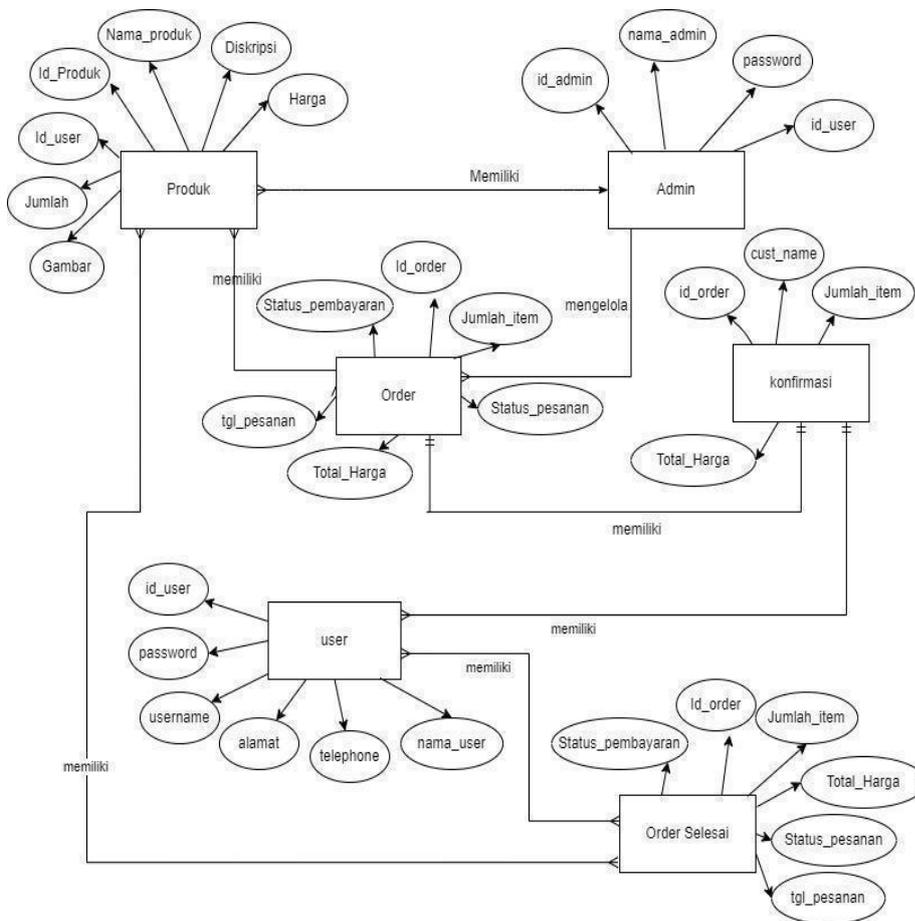


Figure 2 ERD

At the beginning of this business process, when the buyer opens the website marked with the Start label, the buyer can choose to register or not. When the buyer does not choose to register, the buyer can only see it in terms of the appearance of the article and to continue the transaction process. The buyer or user must carry out the registration process. for validation of buyer data

The design of this application aims to record and plan in the future for making this process application after we know what business processes the system will carry out. From the source of the business process Figure 2 the business process of the Toko Kawan Kita website, we can do the initial design here, after that we do the design, starting with designing the UI / UX for users.

Website planning

In making a website, it is also necessary to design an ERD to make it easier to map data in the database later.

The figure 3 above is how the relationships between entities are connected to each other and an example of a design in Firebase can be seen in the image below.

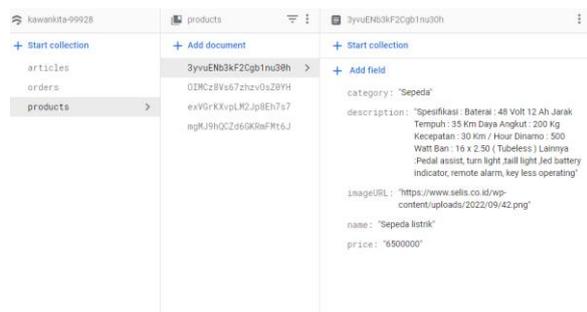


Figure 3 Firebase Database

Database

The database used is based on firebase which will make it easier to create user tables and facilitate the authentication process from emails that have been created. Figure 4 User Authentication Above is a picture where a table containing registered users will enter into the authentication table.

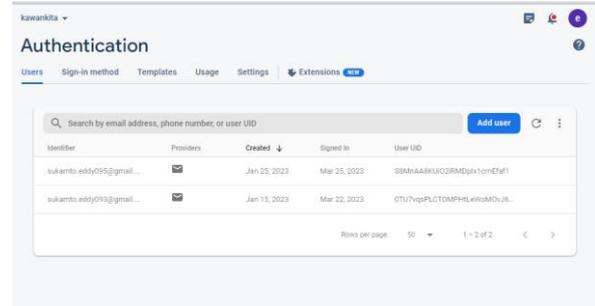


Figure 4 Table in firebase

The figure 5 above shows the product table along with the contents of its fields which show the contents of the products stored in the database. Whereas Figure 6 shows the contents of the order table in the firebase database where when the user orders the data will enter this table. The picture above shows the product table along with the contents of its fields show the contents of the products stored in the database. Whereas Figure 6 shows the contents of the order table in the firebase database where when the user orders the data will enter this table.

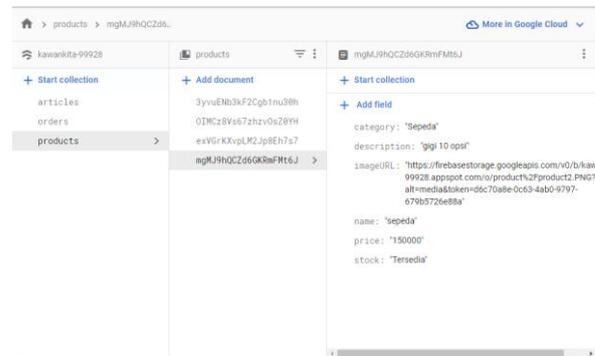


Figure 5 Table Product

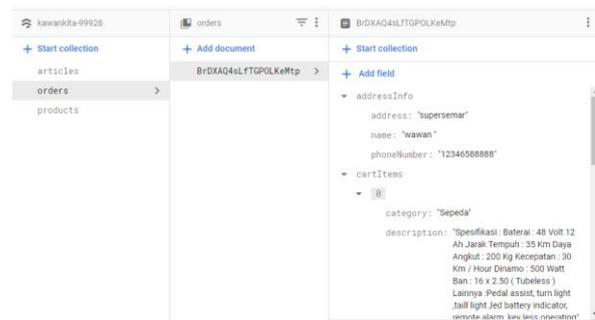


Figure 6 Table Order

Transaction Process

As e-commerce, the main function of this website is to sell seller's products

through this website as an intermediary. With the meaning that on this website the transaction process is the main function of this website which indirectly finds sellers and buyers.

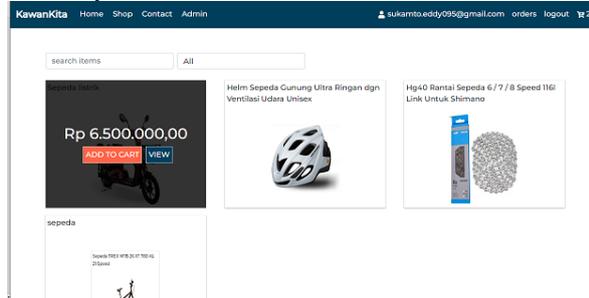


Figure 7 Product page

The figure 7 is a display of the shop menu which displays all the products sold by the website. In this view, when the user chooses to press the "add to chart" button, the item will automatically enter the available chart. Whereas when the user chooses to press the view button the user will be redirected to the detail page of the product.

Helm Sepeda Gunung Ultra Ringan dgn Ventilasi Udara Unisex



Stock/Ketersediaan barang : Kosong

Coloursas the picture shows Material:EPS Size:20*15*12cm Lingkar:55-62 Package Content:1pc A perfect present for your friends,families, lovers etc Picture is enlarged to show detail - see description for actual size. Due to the difference between different monitors, the picture may not reflect the actual color of the item. Thanks Selalu tanyakan terlebih dahulu untuk ketersediaan barang dan spesifikasi jumlah barang

ADD TO CART

Figure 8 product details

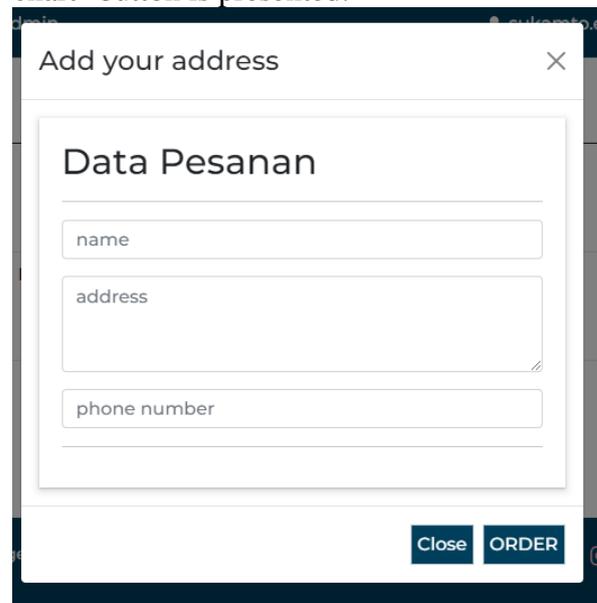
In figure 8 show page presents details of the item starting from the name, stock availability and detailed specifications of the product listed in the product description where if the user selects the product an "add

to chart" button will be provided at the bottom of the page.



Figure 9 chart

In the chart view in figure 9, what items have been selected to be included in the char or the user has chosen to press the "add chart" button is presented.



Gambar 10 popup place order

Figure 10 show when the customer is sure of the product he is going to buy, the consumer can press the place order button which will bring up a popup for the consumer to fill in his personal data. After all data is filled in, consumers can press an order to continue the order so that it can be processed by the seller.

Nama	Email	Alamat	Nomor	Status	order id	Detail
wawan	sukanto.eddy095@gmail.com	supersemar	1234568888	diproses	BrDXAQ4u FTGPOl KeMtp	VIEW

Figure 11 Order List

In figure 11 is a display of the order list where all orders from consumers will be displayed. In the list, you can see the status of the order and if the customer wants to see the details of the order and send proof of transfer, the customer can see it in the

view section.



Upload bukti

Figure 12 Upload proof

The figure 12 shows when the consumer is finished by uploading a photo of proof of transfer. Proof picture will be displayed again in the view menu.

order id	Email	Nomor	NoResi	Status	Total	Update	Detail
8rCWAQ4sLFTGCPOLkaMtp	sukamto.eddy095@gmail.com	123456888888	-	diproses	Rp. 6.735.000,00		
9ILbM6P M6WmRRPpgCROTJ	sukamto.eddy095@gmail.com	089356644489	1347990284	di kirim	Rp. 235.000,00		

Figure 13 Order List Admin

Figure 13 shows where the admin will see all orders that enter the website. Here the admin will check and update the orders that have been paid. If indeed it has been paid, the admin will update the status of the ordered item from "processed" to "shipped". And the admin will also attach the buyer's receipt number that has been sent. Building a dashboard for the admin is the first step in making this website. For the admin dashboard in figure 14, it starts with creating a display from an admin perspective using react.js. Setting up an admin dashboard will make it easier to map firebase databases.

Image	Name	Category	Price	Action
	Sepeda listrik	Sepeda	6500000	
	Helmi Sepeda Gunung Ultra Ringan dgn Ventilasi Udara Unisex	sparepart	179000	
	Hg40 Rental Sepeda 6 / 7 / 8 Speed 116i Link Untuk Shimano	sparepart	235000	

Figure 14 Admin Dashboard

No file chosen

 Spesifikasi :
 Baterai : 48 Volt 12 Ah

Figure 15 Edit product menu

The figure 15 shows the edit product menu on the admin dashboard which shows a pop up edit product menu that has been stored in the database.

INTERVIEW RESULT

From the results of interviews conducted with several consumer users and owners who are vulnerable from 24 years to 65 years with a total of 9 people as shown by the percentage in the figure 16

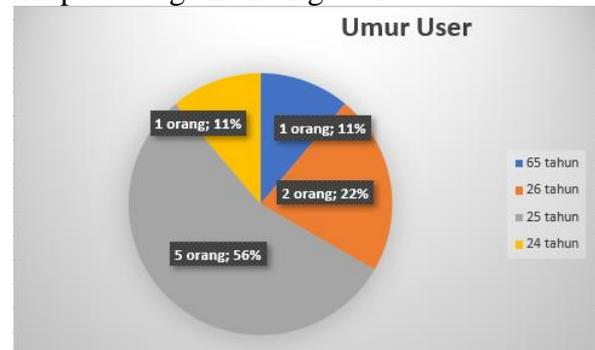


Figure 16 Chart of user age percentage

Based on the gender percentage of the users who have been interviewed, the figure below includes 8 males and 1 female.

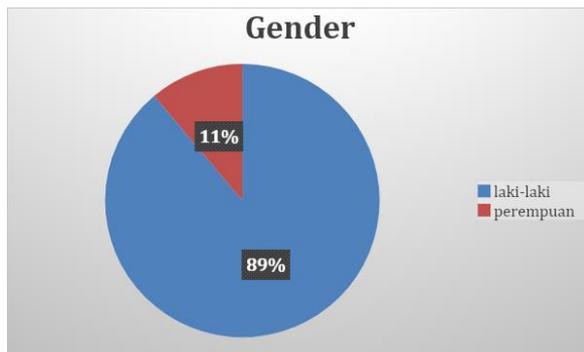


Figure 17 Gender percentage chart

From the two pictures Figure 16 & figure 17, all users who have been interviewed all stated positive responses to the 10 questions that stem from the formulation of the problem. Things that received a positive response started from the appearance of the website and the function of the website features, including the owner stating that the website could help market their products and could attract consumers to buy at their store. Here the user or consumer also believes that some displays for the future might be maximized such as the description display feature for products and the number of items can be added accurately.

IV. CONCLUSION

The conclusions from the results of research through interviews with several informants on the Kawan Kita store website are:

With the development of a ui/ux design that utilizes layout, colors, real object images so that the website can attract consumers' interest to shop on the KawanKita Bike Shop website because according to consumers the appearance is easy to understand.

By displaying the product profile from photos to item details on the website, it will attract consumers to buy products at the Kawankita Bike Shop.

This website received a positive response. The results of interviews with 8 users aged 25-65 years. And it can be concluded that from this response this website has succeeded in solving the

problems that exist at the KawanKita bicycle shop and can attract public interest.

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