



## ***ELECTRONIC MARKETING ARCHITECTURE FOR BANANA FLAVOR SNACK UMKM USING THE ENTERPRISE ARCHITECTURE PLANNING MODEL***

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### **Abstract**

Electronic marketing (e-marketing) has become key for Micro, Small, and Medium Enterprises (MSMEs) in increasing Power competitiveness and market reach. Study This aims to develop electronic marketing architecture for mobile MSMEs in banana flavored snack industry uses the approach of *Enterprise Architecture Planning* (EAP). Using EAP, research This try compile a framework of systematic and comprehensive work for planning, designing, and implementing marketing strategies for effective electronics. Application method *Enterprise Architecture Planning* (EAP) specifically for deep flavor banana snack industry MSME context. Approach This covers an analysis of technology and business processes and considers aspects of typical of local culture and markets from industry the. Additionally, the research will develop an integrating architectural model for various component technology information, such as *e-commerce platforms*, social media, and data analytics, to support adaptive and responsive marketing strategies. Result of study This expected can give a guide practical for MSMEs, deep-flavored banana snacks optimizing utilization digital technology for increase performance business they.

**Keywords:** *Marketing, Enterprise Architecture Planning, e-commerce, MSMEs*

### **INTRODUCTION**

Progress technology information in the current era This experience very rapid and bringing development significant influence in various field, one of them in field business. So that impact on growth economy in a way whole. One of strength long economy This become support Indonesia's economy and strength economy area is presence perpetrator enterprises, micro, small and medium enterprises (MSMEs) (Defrina & Lestari, 2017). Indonesia's digital economy will become big if potential for MSMEs lifted through digital and trading platforms electronic that is with utilise development technology for open field Work new, developing inclusion finance and expand access to capital for MSMEs (Terzi, 2011).

Electronic marketing is one of the current marketing media This currently Lots interested by the public for support various activities performed (Wiji Susanti & Noca Yolanda Sari, 2015). Electronic marketing is one of the media that is becoming obligation for used by the perpetrator business nowadays Because ability new consumer in follow current digitalization, some businessman little by

little start abandon the marketing model conventional /and switch to marketing. With digital marketing communications and transactions can done every time/real time and can be accessed to all over the world, someone can too see various goods via the internet, in part big information about various product Already available on the internet, convenience in reservations and capabilities consumer in compare One product with product other(Philip Kotler, 2009).

MSMEs are perpetrator businesses operating in various fields field business and own role important in growth country's economy. In this digital era, MSMEs have must for transformation from marketing conventional to digital via utilization technology and online platforms. However in fact Still many MSMEs do approach marketing in a way conventional, so hinder MSME growth and limitations market reach. For that's necessary development *digital marketing* for MSMEs in Pekon Terbaya Tanggamus To use support efficiency and effectiveness sale for MSMEs, expand market reach, making things easier customer in access information about MSME products, providing an easy promotional platform accessed for the selling process buy what you can used and can accepted in various circles public.

For build A system available information support walking A organization with good need made A plan development system information. Planning the can utilis technology *Enterprise Architecture Planning* that produces three architectures, that is data architecture, applications and technology as well as plan implementation architecture the for enterprises. Architectures the made based on business models enterprise functional and implemented based on inter -data dependencies function business. Result of study This is How make planning enterprise system architecture information *E-Marketing* for MSMEs and Banana Flavored Snacks give contribution to the solution problems in marketing and sales.

## RESEARCH METHODS

### 2.1. Enterprise Architecture

Architecture is art or practice designing *blue print* and build something structure that will made, the same case in Industry drinking water packaging own Lots customized structure for application special, as well a number of framework Work from A survey and calculation. Lots of skeletons checked including the Architecture Framework, an example of a framework that is often used is *Zachman Framework* (Gamayanto, Angelina, & Wibowo, 2020).

EAP (*Enterprise Architecture Planning*) is one of them approach for build architecture system planned information. (Ahmad, 2021) necessary support for data that is accurate, relevant, reliable, objective and precise time For do analysis marketing. This matter make more EAP methodology appropriate used Because do approach *data dependency* as criteria main For determine priority the application will implemented (Pressman, 2001).

Stage analysis in E-Marketing development using Enterprise Architecture Planning method developed (Fauzi & Handoko, 2018; Saputra, Antoni, & Akbar, 2021; Saputri, 2019). One objective from application enterprise architecture is create harmony between business and technology information for need organization, implementation enterprise architecture does not regardless organization planning and designing the enterprise architecture. Planning architecture enterprise required something complete methodology as well as easy used. enterprise architecture planning or often abbreviated with EAP is something method used for build a architecture information (Fauzi1, Siti Mukodimah, 2022). The EAP method is available four depicting layer activities and processes of achieving architecture. On the layers there are 7 components in support system information in the organization. The following are 4 (four) layers of Enterprise Architecture Planning. Here are 4 (four) layers *Enterprise Architecture Planning* (EAP):

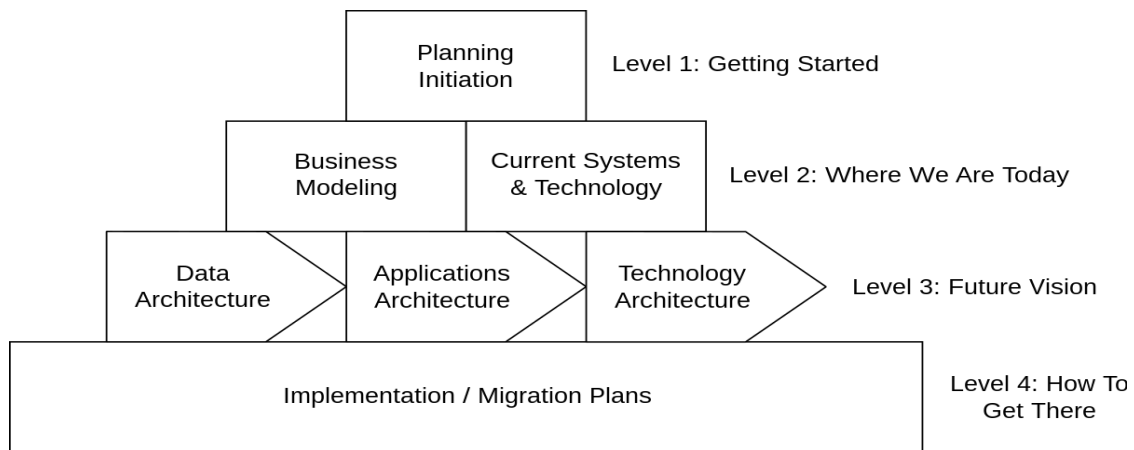


Figure 1. EAP Components and Layers (Pressman, 2001)

### 1. Layer 1 Initialization planning

Stages a must start done is do initiation planning, with expectations of the architectural model building process This can directed very well. Stages This become important Because as base from all stages, because in stages here it is room its scope Enough large covering whole planning activity or plan Work defined for determine methodology that will used as well as for determination source forces involved and determination the device will used.

### 2. Layer 2 Understanding condition moment This

Stage This is on modeling business collect and build a knowledge base business and information used moment This. At stage furthermore identify system applications and technology used in support business moment This

### 3. Layer 3 Plan forward

Stage This confirm exact data for used in support activity business with objective for identify and define need company to the data in order to be able to support function from business the

- a) Data Architecture: defining the main types of data required for operate business.
- b) Architecture Application: define applications main requirements for manage and support function business.
- c) Architecture Technology: define the required technology platform for produce provision environment for applications that manage data and support function business.

### 4. Layer 4 Achievement strategy

Stage This define order for implement application, schedule implementation, analysis costs, and proposed pathways for immigration from condition moment This to desired condition.

## 2.2. Modeler Business

Based on draft chain Michael Porter values, functional areas main for modeling business in Banana Flavor Snack MSMEs can be grouped to in activity main (*Primary Activities*) and activities support (*Support Activities*). Figure 2 shows chain mark for modeling business in Banana Flavored Snack MSMEs.



Figure 2. Value Chain

### 1. Primary Activities

Function Line is activity main from involved organizations activities as following:

- Include logistics*, in section This related with purchase goods, receipt goods, and storage product.
- Operations, everyone related activities with converting input to form end from product So like production goods.
- Outbound logistics*, in section this is related with activity distribution product.
- Marketing and sales*, in part This related with marketing and sales like market research, promotion and so on.

### 2. Support Activities

Represents activity helpful support activity main. *Secondary activities* involve a number of parts / functions, including:

- Firm infrastructure*, namely related activities, costs, and assets with management general, accounting, finance, security and safety system information, as well function other.
- Human resources*, consisting of from activities involved like recruitment, training, development and compensation for all type personnel and develop level Skills Work.
- Technology*, related activities with product process improvement, design equipment, development software, telecommunications, database and development equipment system supporter-based computer.
- Procurement*, related with function purchase of inputs used in the organization's value chain.

## DISCUSSION

### 3.1. Needs Analysis Technology

Needs analysis technology is definition about the types of technology platforms available in an enterprise. On development system This needed Minimum hardware and software specifications as following:

Table 1. IRC Hardware & Software

No	Component	Name	Information
1.	Hardware	PC, Laptop, Smartphone	As device software used for run and help system operation processing data.
		Mouse, Keyboard, Monitor, Printer, Pointer	As device pointer for makes it easier laptop use.

	Hard disk	Storage external for data backup and management capacity.
	Network	For internet connection and communications between device
2.	Software	Windows 10
		As system operation used for run the required software system
	M.S. Vision	UML Diagrams
	Xampp	Servers (apache, mysql and php)
	Visual code studio	As a text editor
	Google chrome	Application For running the web

### 3.2. Planning analysis

Following is an analysis of the plans prepared for 3 years started from 2022-2024. The following is an analysis of planning for UMKM Banana Flavored Snacks:

Table 2. *Planning Analysis*

Analysis Description	2021	2022	2023	2024
<ul style="list-style-type: none"> <li>Marketing Not yet focuses on digital platforms</li> <li>have a website yet</li> <li>Sales department Not yet using the market place platform</li> <li>Not yet own application management finance</li> </ul>	<ul style="list-style-type: none"> <li>Repair quality MSME products</li> <li>Development production with add more Lots variant</li> <li>Increase marketing</li> <li>Sales and marketing using via WhatsApp</li> </ul>	<ul style="list-style-type: none"> <li>Increase social media activities for marketing</li> <li>Development production with add more Lots variant</li> <li>Expansion market share</li> <li>Sale using an e-commerce platform</li> </ul>	<ul style="list-style-type: none"> <li>Identification need system marketing and sales</li> <li>Increase social media activities for marketing</li> <li>Implementatio n marketing with digital media</li> <li>Sale use marketplace platforms</li> <li>Making interesting and relevant content with public</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring market trends</li> <li>Creation of a website for UMKM Banana Flavor Snacks</li> <li>Making application management finance</li> <li>Making Point of Sales application</li> </ul>

### 3.3. Data architecture

Data architecture will visualized and documented with *Unified Modeling Language* (UML) via *Use Case Diagrams*, *Activity Diagrams*, *Class Diagrams* and *Sequence Diagrams* with consider the diagram considered represent in a way whole running system that can understood by users.

#### a. Use Case Diagrams

In stages beginning done designing a use case diagram that will explained desired needs users, as well explain how user or actors involved related to the running process in the system *E-Marketing*. *Use Case Diagrams* depicted in the image below This :

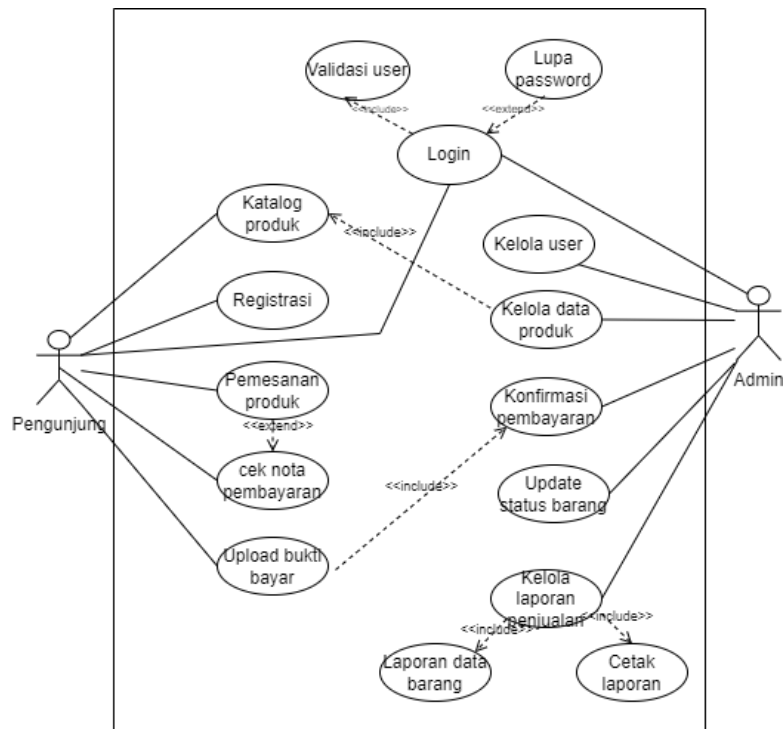


Figure 3. Use Case Diagrams

## b. Activity Diagrams

*Activity Diagrams* is a diagram that depicts the workflow of A information system or activities in the *software*. On research This explain about process flow for A channel where program planning actors involved is visitors and admin.

Figure 4 shows *activity diagram login* for the user, after the user logs in to the login menu, then must enter *username* and *password*, if the username and password are successful validated so will enter to page main, but If fail return to login page.

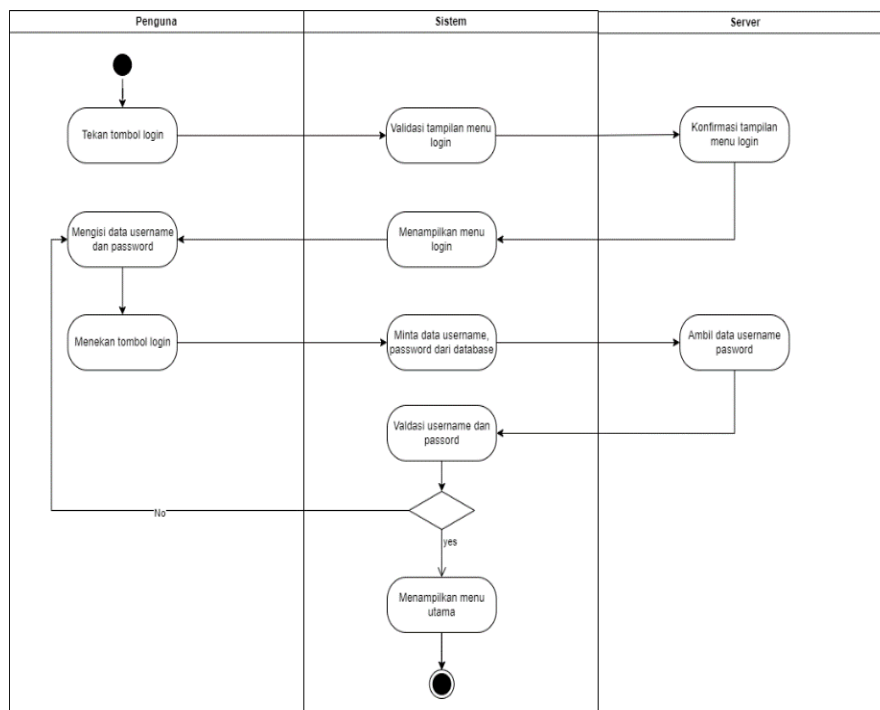


Figure 4. Activity Diagram Login

In Figure 5 below depicts the activity diagram of product data input carried out by the admin.

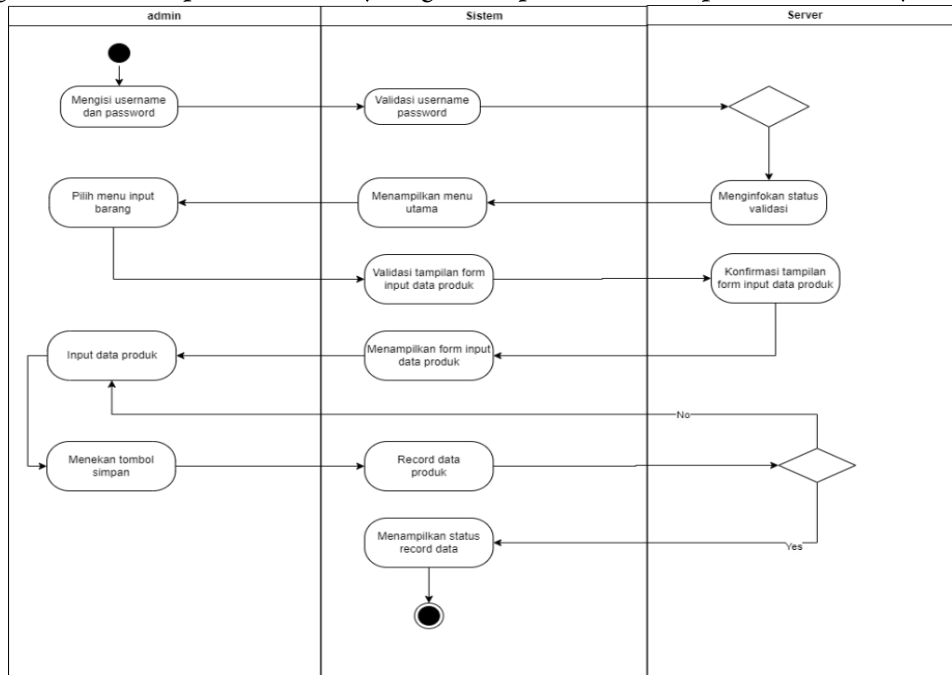


Figure 5. Product Data Input Activity Diagram

### c. Sequence Diagrams

Sequence diagrams are used for describe scenario or series steps taken as A response from an event for produce a certain output. Figure 8 shows the *user login* sequence diagram (*admin* and customer) with input username and password.

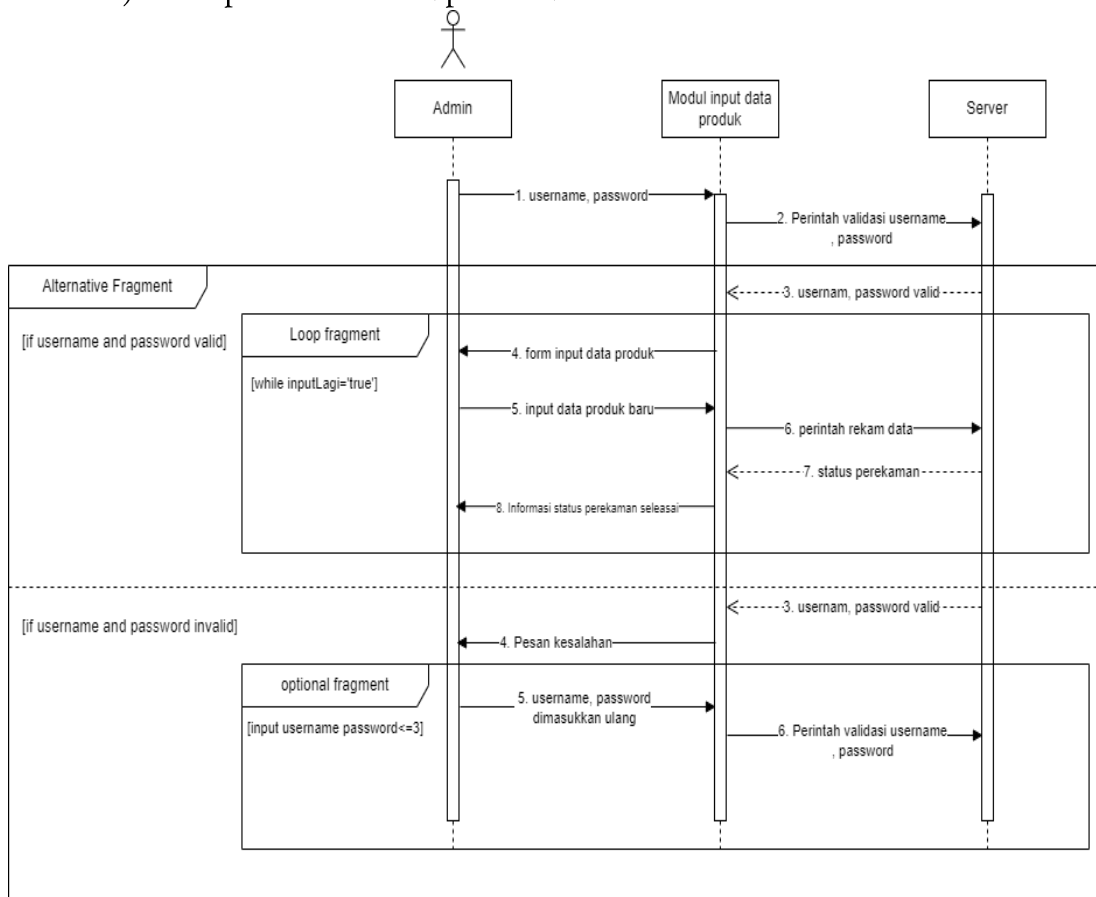


Figure 6. Login Sequence Diagram

Figure 6 shows the sequence diagram for do booking products by customers.

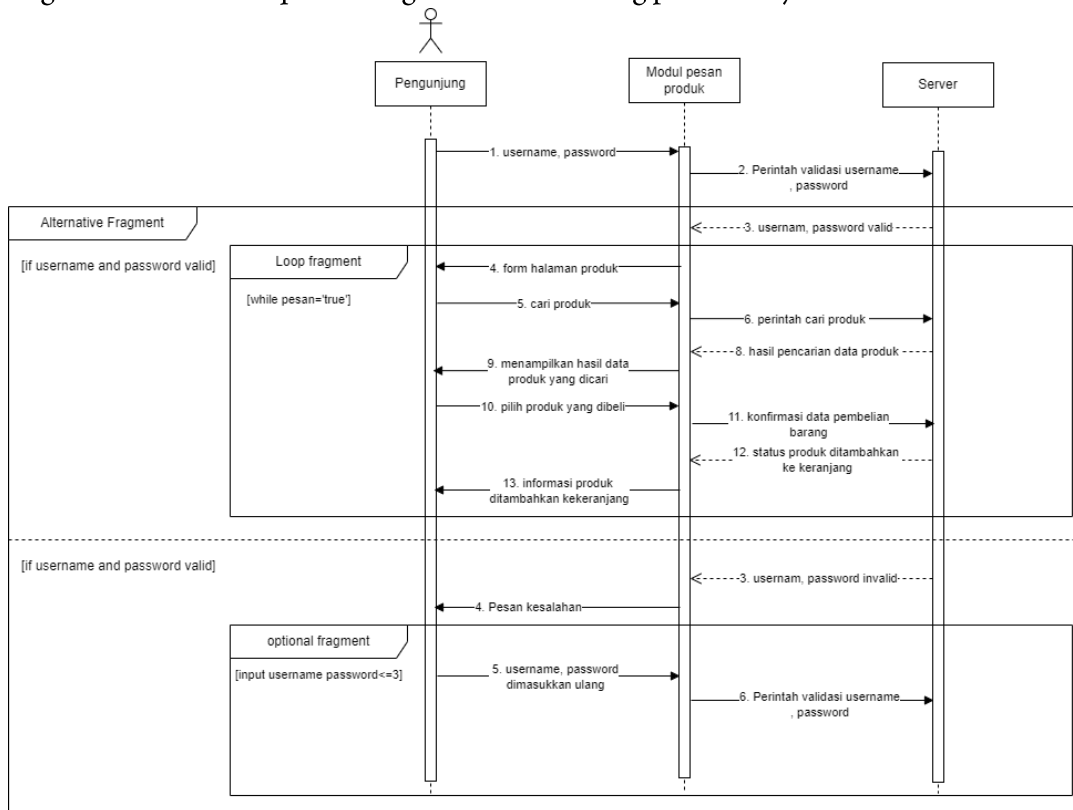


Figure 7. Message Sequence Diagram Product

Figure 7 shows the sequence diagram for do payment and for know all over transaction.

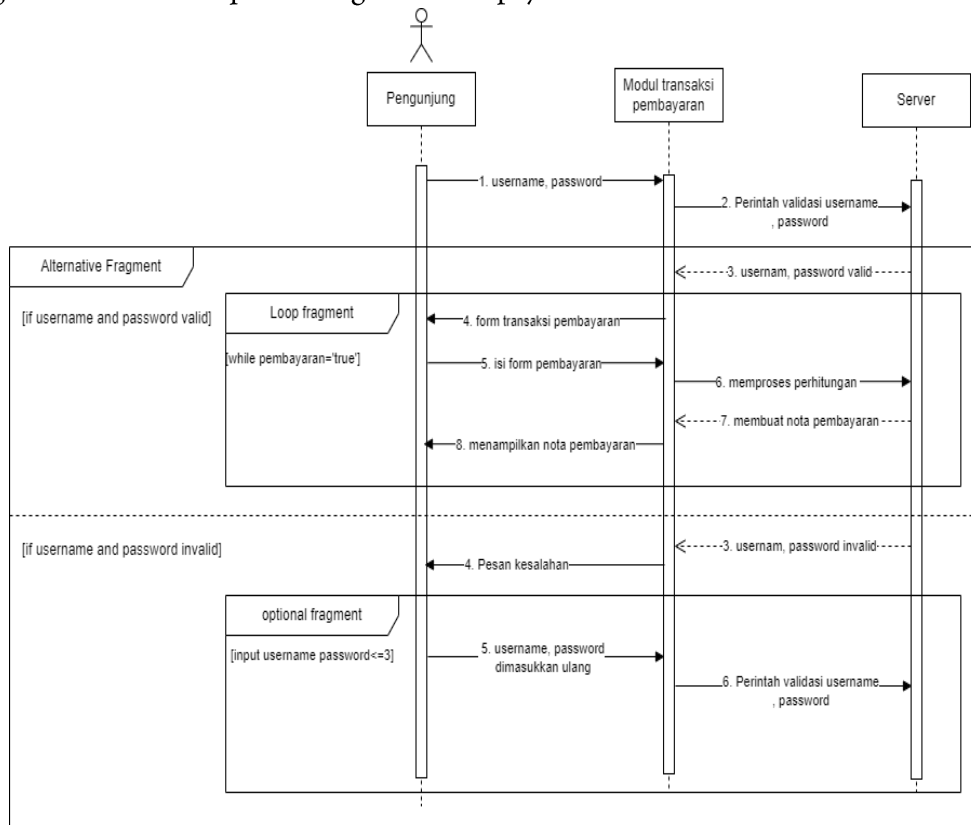


Figure 7. Payment Sequence Diagram

#### d. Class Diagrams

*Class Diagrams* displays several classes that exist in the system this and give description about systems and relationships inside it. Furthermore depicted connectedness described entity the relationship in form a class diagram. *Class Diagrams* depicted in the image below This:

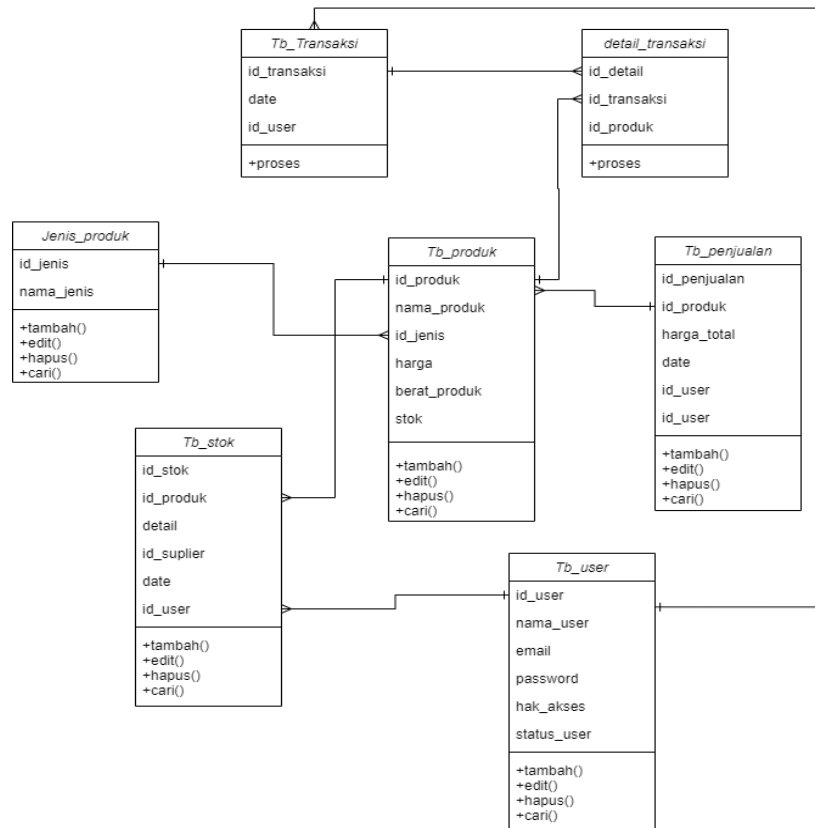


Figure 6. *Class Diagram of Relationships Between Entities*

#### 3.4. Architecture Technology

Architecture technology aim for define type technology needed by the company ata organization for provide a environment for applications that manage data. Architecture technology is a conceptual model for define platforms. Architecture technology This define type technology, which supports environment system distributed. Based on definition architecture technology so draft Network at UMKM Banana Flavored Snack can seen in the picture following :

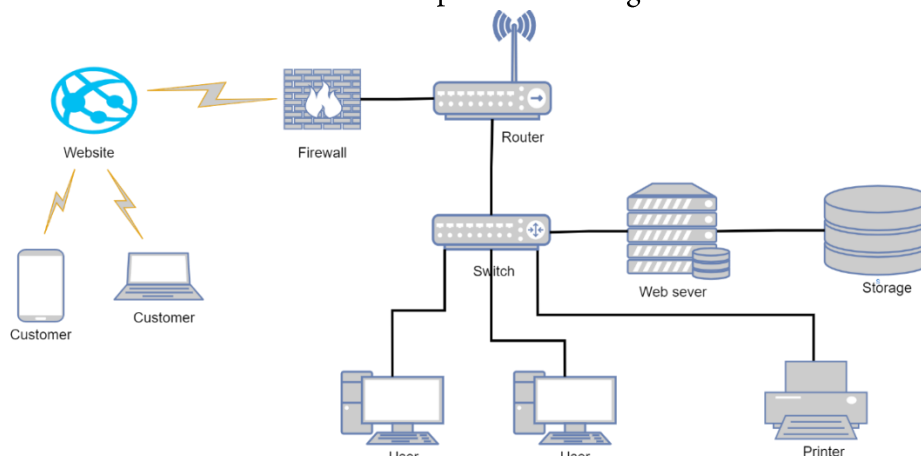


Figure 7. *Architecture Network*

### 3.5. SWOT analysis

SWOT analysis is analysis that sees factor *strength*, factor *weakness*, factor *opportunities*, and factors *threats* obstacles in reach the purpose of A company. SWOT analysis has objective for determine appropriate and realistic actions in accordance with condition A company. Table 3 shows SWOT analysis of Banana Flavored Snack MSMEs.

Table 3. SWOT analysis

<div style="text-align: center;"> <b>FAKTOR</b>  <b>INTERNAL</b> </div> <div style="text-align: center;"> <b>FAKTOR</b>  <b>EKSTERNAL</b> </div>	<b>STRENGTH</b>	<b>WEAKNESS</b>
	1. Variation type diverse products so that buyer have Lots choice. 2. Friendly service. 3. Quality material standard guaranteed 4. Creativity in develop product new.	1. Management finance Still nature traditional. 2. Absence power IT expert at the Banana Rasa Snack shop. 3. Marketing Still use method conventional. 4. Still often happen error in recapitulate sales data.
<b>OPPORTUNITY</b>	<b>SO STRATEGY</b>	<b>WO STRATEGY</b>
1. Keep developing product suitable new one with market trends 2. Expanded marketing 3. Build Work The same with resellers	1. Improving the marketing strategy for Banana Flavored Snacks through technology information. 2. Maintain and improve quality product as well as service. 3. Increase activity promotion for interesting customer	1. Carrying out marketing strategies digitally for increase sale 2. Add number of human resources 3. Increase activity promotion
<b>THREAT</b>	<b>STRATEGY ST</b>	<b>WT STRATEGY</b>
1. Lots of it competitor with sell the same product. 2. Software doesn't suit with specification computer. 3. Lack of means marketing product	1. Maintain stability price and do efficiency cost 2. Add variant unique food	1. Do promotion as much Possible with Good 2. Guard quality products and improve variant product 3. Apply marketing digitally

Following is explanation SWOT analysis of internal and external factors:

#### a. Strength

1. Variation Jeni Diverse products: Diversity Products in Banana Flavor Snacks can be interesting various market segment. Buyer own Lots choice, improve potency for interesting different customers.
2. Friendly service: Banana Snack employees have a taste friendly service so that can increase satisfaction customers and build connection period long, with give service friendly can give experience positive to customer.
3. Quality material standard guaranteed: Product the food produced of the Flavored Banana Snack has good quality. Quality material good standard is factor main in industry food and

Drink Because can increase reputation brand and trust customer. Even though with many increase material raw, Banana Flavored Snack will still notice quality in production.

4. Creativity in develop product new: Always Banana Flavored Snack do innovation For Keep going develop product new and show desire for adapt with change market trends, opening opportunity growth.

**b. Weakness**

1. Management finance Still nature traditional, approach traditional in management finance become obstacle in management efficient source Power finance. Banana Flavored Snack yet apply management finances in a modern way because constrained lack of understanding technology.
2. Absence power IT expert, Weaknesses This can influence ability Deep Flavor Banana Snack shop adopt and manage technology latest. Existence power trained IT experts can help speed up the implementation process supporting technology operational shop.
3. Marketing Still use method conventional, use marketing in a way conventional can limit market share so can limit introduction product from Banana Flavor Snack.
4. Still often happen error in recapitulating sales data, Error in recapitulate sales data can detrimental to the retrieval process decision. matter This because the Banana Flavor Snack is still there do bookkeeping Manually.

**c. Opportunity**

1. Develop product suitable new one with market trends, Identify and follow latest market trends allows Banana Flavored Snacks to Keep going develop product new ones that fulfill expectation consumer. This can open opportunity growth new and maintain continuity business.
2. Expanded Marketing, developing more marketing strategies extensive, incl digital and online marketing, can help Banana Flavored Snack achieve more audience big. With effective marketing can increase awareness brand and improve market share.
3. Build Collaboration with Resellers, Opportunities For expand Work The same with resellers can open channel distribution new. This is not only increase availability products in various location, but also expand Banana Flavored Snack market coverage.

**d. Threat**

1. Lots of it competitor with sell the same product, indeed competition from other sellers are offering product similar even sometimes with price A little can be more slanted threaten Banana Flavored Snack market share.
2. Software doesn't in accordance with specification device used, Usage devices and software that do not in accordance can hinder efficiency operational if later in implementation digitalization marketing UMKM the face limitations in performance system, cause potency difficulty in manage online marketing.
3. Price of materials standard fluctuating, Fluctuation price material standard can impact on the profits of Banana Flavored Snacks. Manage connection with supplier, consider reserve inventory, and evaluate alternative material standard can help reduce impact threat This to cost production.

## CONCLUSION

Based on discussion and results that have been carried out displayed so can concluded that, research This produce recommendation systems and potential enterprise architectural models for support business processes as well as for reach sales and marketing for UMKM Banana Flavored Snacks. Enterprise architecture planning helps in planning system E-Marketing information on Banana Flavored Snack MSMEs that are still available apply marketing with method conventional. By implementing it planning the proposed system, can repair system information based on current business processes walk moment This so that creation something draft need technology supporting information need business that can become reference in investment technology period long at banana flavor snack UMKM.

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