



Analysis of Implementation Information Technology at Bakery Shop

Group 1

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PROJECT ON

Analysis of Implementation Information Technology at Bakery Shop

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CERTIFICATE

This is to certify that this report titled “Analysis of Information Technology Implementation at Bakery Shop” embodies the original work done by Kheyral Sutan Dumas, Zaky Al Fitra and Rizqika Nurrahma Faira. Project in partial fulfillment of their course requirement at NIIT.

Coordinator:

Tirta Akdi Toma Mesoya Hulu, S.Kom.

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The authors would like to say praise to Allah, for the presence of plenty of mercy and his grace, And don't forget we would also to say praise and gratitude to Prophet Muhammad SAW, so that we can complete this project with the title "Analysis of Information Technology at Bakery Shop" and without with all his we would not be able to complete this project right in this calculated time and authors would like also to say thank you to Mr. Tirta Akdi Toma Mesoya Hulu, S.Kom. as our Lecturer who has given useful suggestion which are help author in writing this project.

Even though we have so many challenge and obstacle that we face on making this project, but finally we can finish this project The authors realized that our project is far from perfection, and if colleagues and the guide's agreeing the lecturer gave the suggestion and criticism for this project perfection, we as authors will be so helpful for the suggestion and criticism.

BACKGROUND

In today's digital era. The implementation of information technology (IT) into small businesses, such as bakeries or coffee shops, is increasingly vital. These businesses may not be as extensive as larger corporations, but they still reap significant benefits from effective Information Technology implementation.

Information Technology significantly streamlines daily operations for small businesses like bakeries and coffee shops. Utilizing inventory management software and point-of-sale systems helps efficiently manage goods and monitor sales, ensuring consistent product availability, reducing waste, and upholding customer satisfaction.

Information Technology enhances customer interactions by providing automated booking systems for reservations and online orders. These businesses can cater to customer needs more conveniently and efficiently, ensuring a seamless experience that is essential in today's competitive market.

In this project the author also discussed about implementation of technology at bakery shop the benefits of information technology systems, and concept as well as details of the cost required for implementing information technology at Bakery Shop.

SYSTEM ANALYSIS

System Summary: A Bakery is a small business that specializes in selling items like bread, tea, and coffee. It's perfect for clients looking for breakfast in the morning or lunch around midday. The place needs IT implementation for a crucial role in improving its operations. To manage inventories, speed orders, and simplify record-keeping, this often entails the introduction of computers. Additionally, establishing a strong Wi-Fi network allows clients to access the internet while taking in their meals, transforming the bakery into a friendly space for online interactions. Putting in place a secure payment system enables simple, quick transactions that satisfy current payment preferences. Further strengthening the bakery's position are calling tools and customer notification systems that guarantee effective order processing and give clients a smooth and efficient experience.

System Processes: In this system we will describes about hardware specifications, software that will be needed, network topology and budget in a Bakery Shop

HARDWARE SPECIFICATION

1. Admin Computer



Figure 1 (REF: www.tokopedia.com/liemzstore/cpu-pc-office-kasir-core-i3-4gb-ssd-128gb-all-new-garansi-1tahun)

TYPE

Type of Device : Custom CPU

SPEIFICATIONS

CPU	: Intel Core I3	CPU Model	: 3220 2C/4T
Base Frequency	: 3.30 GHz	Turbo boost	: N/A
GPU	: Intel® HD Graphics 2500		

MEMORY & STORAGES

RAM	: 4GB	Type of Memory	: DDR3
Storage Type	: SSD	Storage Size	: 128 gb

2. Monitor



Figure 2 (REF: www.tokopedia.com/jayakomputa-1/led-monitor-19-inch-full-hd-hdmi-vga-input-spc-garansi-resmi-tanpa-kayu-44bab)

TYPE

Type of Device : Display Monitor SPC

SPEifications

Panel Type	: LED	Brightness	: 200-230 cd
Panel Size	: 19 inch	Aspect Ratio	: 16:10
Resolution	: 1440 x 900	Respons Time	: 1ms

3. Keyboard & Mouse



Figure 3 (REF: www.tokopedia.com/komicofficial/keyboard-mouse-komic-kmc-650)

TYPE

Type of Device: Keyboard & Mouse

SPEifications

Keyboard Type	: Membrane	Mouse DPI	: 1000
Keyboard Dimension	: 444.5 x 143.2 x 23.5mm	Interface	: Wired USB
Keyboard Keys	: 112	Cable Length	: Both 1.3 Meters

4. Cable LAN



Figure 4 (REF: www.tokopedia.com/king-solusindo/cable-kabel-lan-cat6e-300-meter-gratis-rj45-nyk-dan-plugboot)

TYPE

Type of Device : Cable LAN Cat 6

SPEifications

Cable Length : 300 Meters
Interface : RJ45
Transmission : Up To 1000Mbps

5. Router (Access Point)



Figure 5 (REF: www.tokopedia.com/duniacom-srv/tp-link-archer-c54-ac1200-dual-band-wi-fi-router-tplink-archer-c-54)

TYPE

Type of Device : Router TP – Link Archer C54

SPEifications

Features	: Wi-Fi 5	Interface	: 1x 10/100 Mbps WAN
	IEEE 802.11ac/n/a 5 GHz Up to 867Mbps		4x 10/100 Mbps LAN
	IEEE 802.11n/b/g 2.4 GHz Up to 300Mbps		

6. Router



Figure 6 (REF: www.monotaro.id/items/s010002681.html)

TYPE

Type of Device : Router

SPEifications

Features	: Dual-Band: IEEE 802.11 b/g/n (2.4GHz) IEEE 802.11 a/n/ac (5GHz) 300Mbps and 876Mbps
Interface	: WAN x 1 : 10/100/1000Mbps Auto MDI/MDIX Ethernet Port (RJ45). LAN x 4 : 10/100/1000Mbps Auto MDI/MDIX Ethernet Port (RJ45). USB2.0 x 1 (Optional).
Firewall	: DoS, IP/MAC Filtering, DMZ

7. Cashier Computer



Figure 7 (REF: id.aliexpress.com/item/1005003202369862.html)

TYPE

Type of Device : All In One Cashier Computer

SPEIFICATIONS

CPU	: Intel Celeron	CPU Model	: J1900
Base Frequency	: 2.00 GHz	Turbo boost	: N/A
GPU	: Intel® HD Graphics		
Features	: Touchscreen, USB 2.0, Lan Port, VGA Port, Serial Port, PS/2, Audio, Mic, LPT/COM1	Display	: 15.6inch 1024 x 768
Extra Devices	: 1D Scanner, Receipt Printer		

MEMORY & STORAGES

RAM	: 4GB	Type of Memory	: DDR3
Storage Type	: SSD	Storage Size	: 64GB

8. CCTV



Figure 8 (REF: www.tokopedia.com/cctvcanggih/ip-camera-1080p-cctv-snowman-5mp-v380-pro-cam-kamera-wireless-wifi)

TYPE

Type of Device : Display

SPEifications

Resolution : LD, SD, HD

Features : Wireless, 2 Ways Communication, Notification Alert

Storage Type : SD Card Up To 128 gb

9. Smart TV



Figure 9 (REF: www.tokopedia.com/legendelectronic/samsung-cu7000-tv-smart-43-inch-crystal-uhd-4k-ua43cu7000kxxd-43cu7000)

TYPE

Type of Device : Display

SPEifications

Resolution : UHD 4K

Features : PurColor,
Smart Hub

10. Switch



Figure 10 (REF: www.tokopedia.com/ganzenshop/tp-link-tl-ls1008g-8-port-gigabit-10-100-1000mbps-desktop-switch-hub)

TYPE

Type of Device : Switch TP – Link LS1008G

SPEifications

Interface	: 8 x 10 100/1000Mbps Auto-Negotiation RJ45 port
Port Type	: Gigabit
Features	: Power Saving with Green Ethernet, Plug n Play, IEEE 802.3X flow control provides reliable data transfer

SOFTWARE SPECIFICATION

- **OPERATING SYSTEM WINDOWS 10**



Figure 11 (REF: <https://www.revolutionsnet.com.br/produtos/windows-10-pro-office-2021-pro/>)

Windows 10 is a versatile operating system developed by Microsoft, first released in 2015. It features a user-friendly interface that combines elements from both Windows 7 and Windows 8, including the reintroduction of the Start Menu. Windows 10 offers compatibility with a wide range of software and hardware, making it suitable for various devices.

- **SISCOM ACCOUNTING SOFTWARE**



Figure 12 (REF: triloker.com/id/company/detail/20887)

SISCOM is a business software that assists in solving challenges related to production process calculations and costs, allowing companies to be more efficient in generating accurate business reports. It is equipped with over hundreds of features to help manage and control your business accounting and operations, ranging from on-premise accounting software, online accounting software, point of sale, HRIS software, to custom software to meet your specific needs.

- **BROWSER GOOGLE CHROME**



Figure 13 (REF: tekno.republika.co.id/berita/rdywr5368/5-fitur-baru-google-chrome-di-ios)

A popular web browser created by Google is called Google Chrome. Since its initial release in 2008, it has grown to rank among the most widely used web browsers worldwide. Google Chrome is, at its foundation, a web browser created to let people access and interact with websites on the internet.

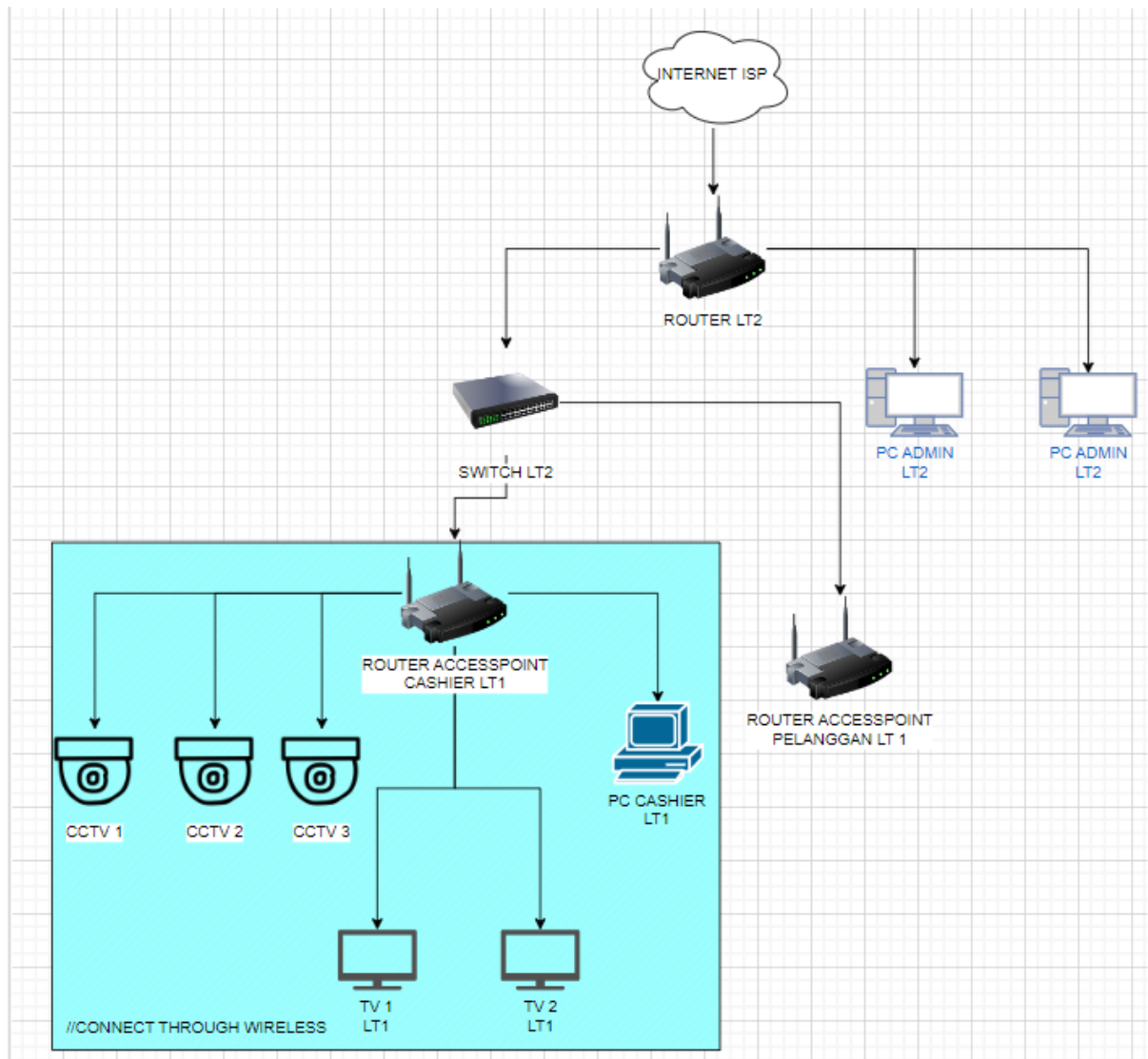
- **CCTV SOFTWARE V380 PRO**

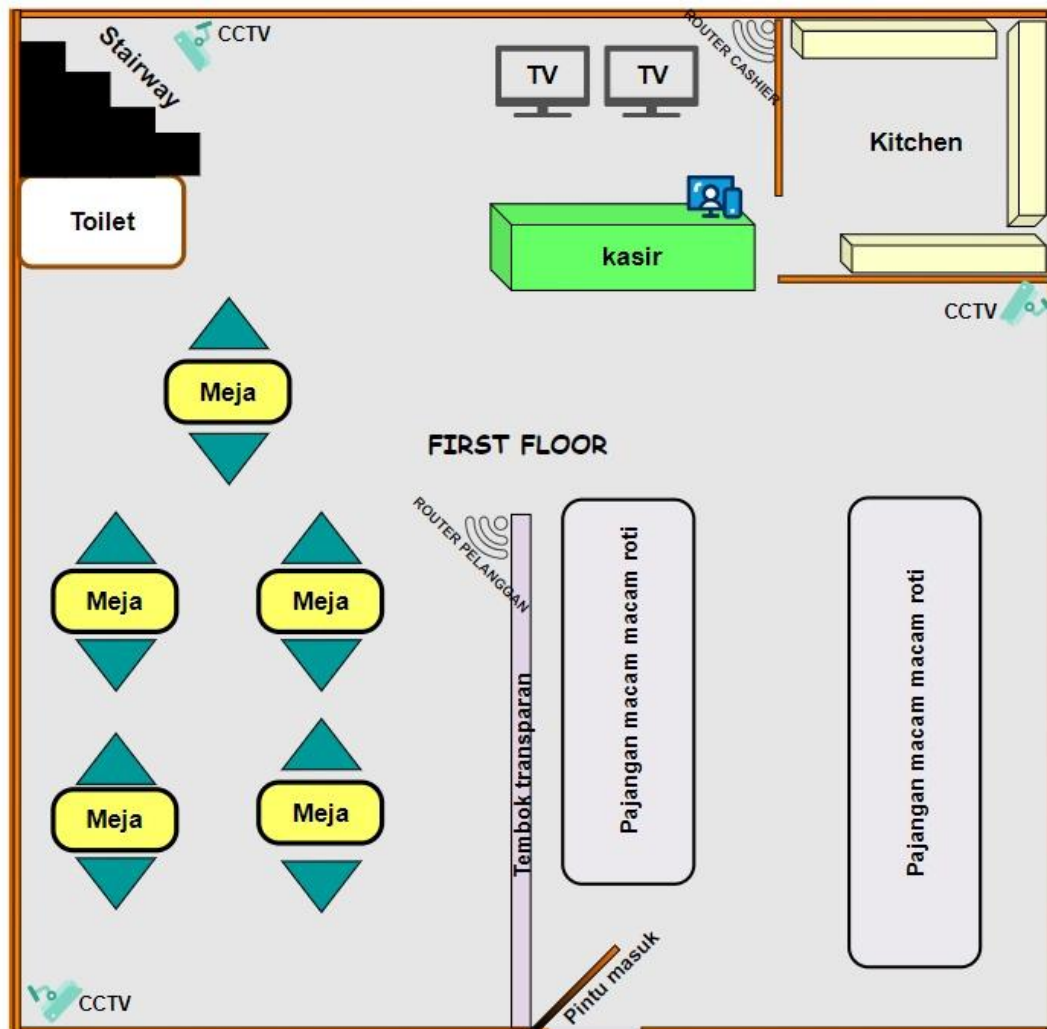


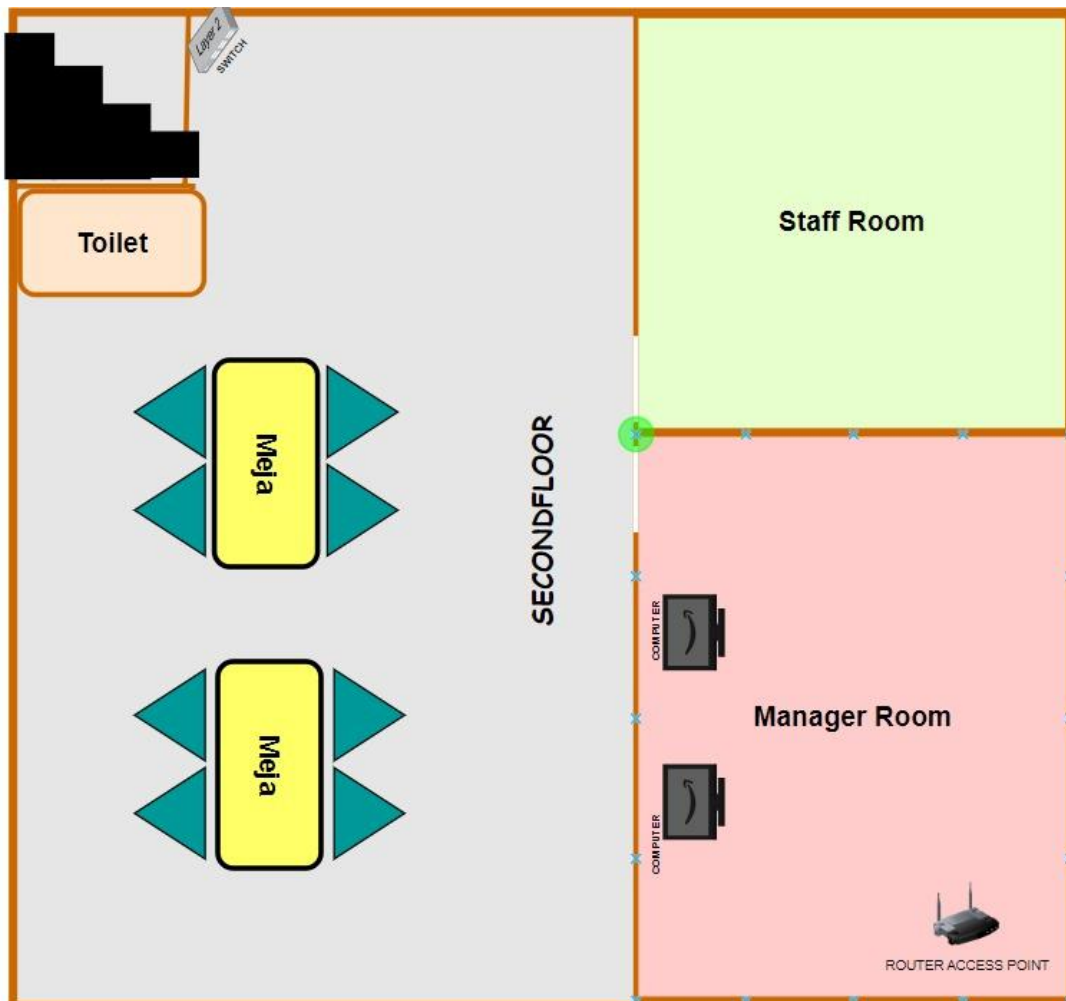
Figure 14 (REF: play.google.com/store/apps/details?id=com.macrovideo.v380pro&hl=id)

V380 Pro is a mobile application designed for remote video monitoring and surveillance. It enables users to access live video feeds from their IP cameras, DVRs, and NVRs using their PC, smartphones or tablets. The software provides a user-friendly interface, making it easy to manage and view video footage from connected surveillance devices. It often includes features like live video streaming, two-way audio communication, motion detection alerts, cloud storage options for remote video storage, and the ability to review and playback recorded video.

NETWORK TOPOLOGY DESIGN







IP ADDRESSES

NAME	IP ADDRESS	SUBNET MASK	GATEWAY
ROUTER	192.168.18.2	255.255.255.0	IP ISP
PC 1	192.168.18.3	255.255.255.0	192.168.18.1
PC 2	192.168.18.4	255.255.255.0	192.168.18.1
ROUTER AP CASHIER	192.168.18.5	255.255.255.0	192.168.18.1
PC CASHIER	192.168.18.6	255.255.255.0	192.168.18.1
CCTV 1	192.168.18.7	255.255.255.0	192.168.18.1
CCTV 2	192.168.18.8	255.255.255.0	192.168.18.1
CCTV 3	192.168.18.9	255.255.255.0	192.168.18.1
TV 1	192.168.18.10	255.255.255.0	192.168.18.1
TV 2	192.168.18.11	255.255.255.0	192.168.18.1
ROUTER AP PELANGGAN	192.168.18.12 - 254	255.255.255.0	192.168.18.1

BUDGET

DEVICES USED IN BAKERY SHOP			
No.	HARDWARE	PRODUCT	PRICE
1	CPU	CPU Intel Core I3 4GB SSD DDR3 128 gb	Rp. 1.975.000 x 2 =Rp 3.950.000
2	Monitor	Monitor LED -19 inch - 1440 x 900	Rp. 900.000 x 2 = Rp 1.800.000
3	Keyboard and Mouse	Keyboard-Mouse Komic kmc 650	Rp. 49.000 x 2 = Rp 98.000
4	Cable LAN	Cable LAN Cat 6 300 meters RJ45 Up to 1000 Mbps	Rp. 550.000
5	Router Access Point	Router TP- Link Archer C54	Rp. 291.000 x 2 =Rp 582.000
6	Router	Router Dual-Band: IEEE 802.11 b/g/n (2.4GHz) IEEE 802.11 a/n/ac (5GHz) 300Mbps and 876Mbps	Rp. 1.330.890
7	Cashier Computer	Cashier Computer Intel Celeron J1900: Intel® HD Graphics 4GB SSD DDR3 64GB	Rp. 7.459.790
8	CCTV	CCTV LD, SD, HD Wireless, 2 Ways Communication, Notification Alert SD Card Up To 128 gb	Rp. 159.000 x 3 = Rp 477.000
9	Smart TV	Smart TV 43" Crystal UHD 4k CU7000	Rp. 4.599.000 x 2 = Rp. 9.198.000
10	Switch	Switch TP - LS1008G	Rp. 235.000
The Total Prices of The Devices			IDR 25,680,680.00

SOFTWARE THAT IS PURCHASED TO OPERATE		
No.	PRODUCT	PRICE
1	Windows 10 Include Offices	Rp. 2.000.000
2	SISCOM Erp	Rp. 550.000/m
TOTAL PRICE		IDR 2,550,000.00
GRAND TOTAL		IDR 28,230,680.00