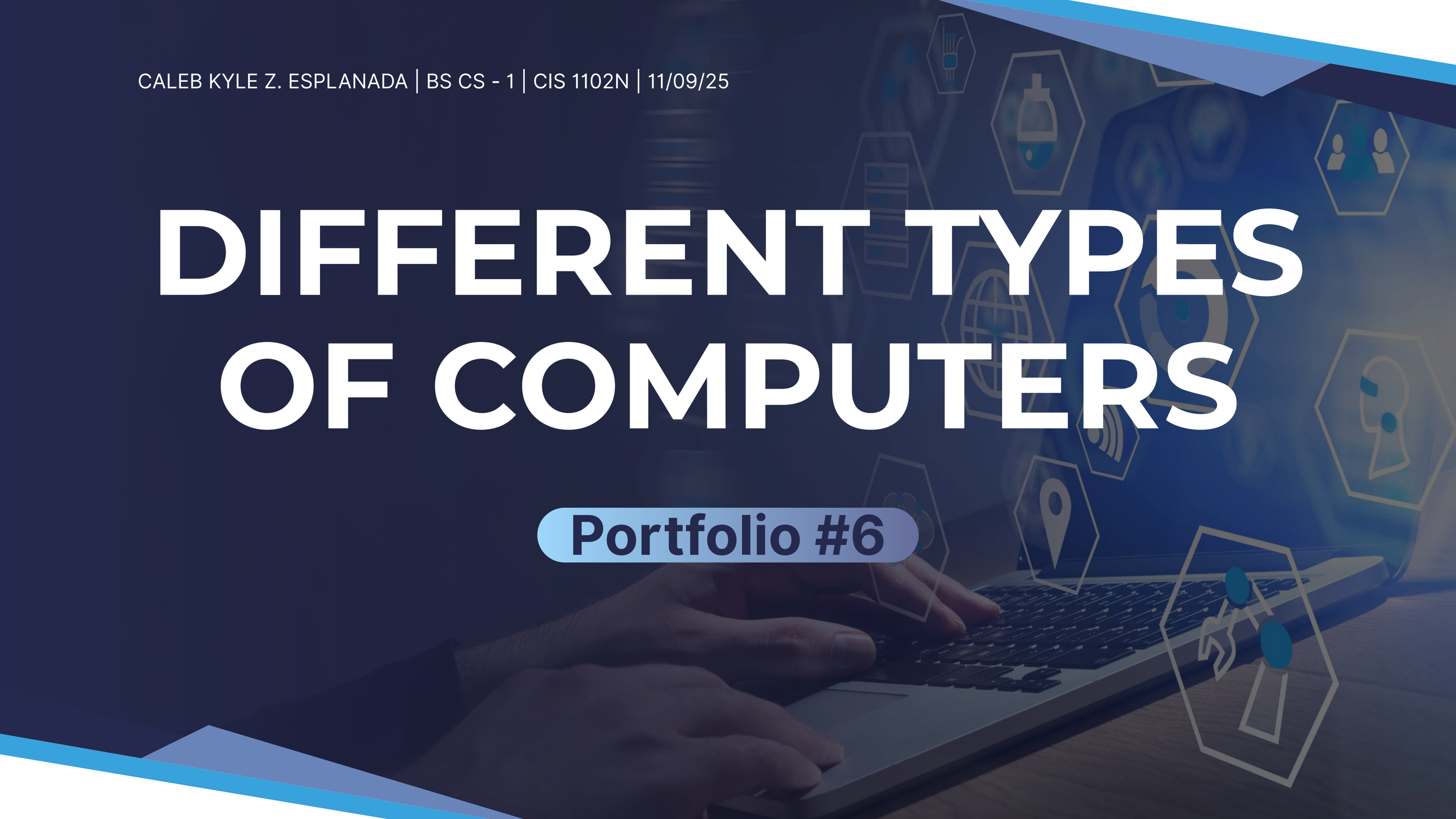
CALEB KYLE Z. ESPLANADA | BS CS - 1 | CIS 1102N | 11/09/25

DIFFERENT TYPES OF COMPUTERS

Portfolio #6



Introduction

A computer is an electronic device, operating under the control of instructions stored in its own memory that can accept data (input), process the data according to specified rules, produce information (output), and store the information for future use.

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A computer is an electronic device, operating under the control of instructions stored in its own memory that can accept data (input), process the data according to specified rules, produce information (output), and store the information for future use (Vermaat, 2014).

Discussion

According to Becher (2024), Computers come in different types, each designed for specific functions and users,

Supercomputers are the fastest and most powerful, used for scientific research and complex calculations. Mainframe computers handle vast amounts of data and support multiple users simultaneously, often found in banks and government offices. Minicomputers are smaller and serve medium-sized organizations that need shared computing power. Servers provide data and services to other computers over a network and usually run continuously. Workstations are high-performance personal computers used by professionals like engineers and designers for demanding tasks. Lastly, microcomputers, or personal computers, are the most common and affordable, used for daily work, studying, and communication.

Types of Computers	Name/Brand	Build	CPU	Memory	Processing Speed	Calculating Power	Working Principle	Energy Consumption	Field of Use
Supercomputer	IBM Summit, Fugaku	Very Large, Many processors	Thousands of high-speed processors	Extremely large (petabytes)	Fastest	Very high, parallel processing	Performs many complex tasks at once	Very high	Research, weather, simulations
Mainframe Computers	IBM Z series, Unisys ClearPath	Large, heavy system	Multiple powerful processors	Very large	High	High and stable	Handles many users and transactions at once	High, lower than supercomputers	Banking, government, large data work
Mini Computers	older times models like DEC PDP etc.	Medium-sized	Multi-user processor	Medium to large	Moderate	Moderate	Multitasking machines for small-medium business tasks.	Moderate, generally less than mainframes.	Departmental work, small business systems
Server	Dell PowerEdge, HP ProLiant, blade servers etc.	Rack or tower form, always on	Multi-core, multi-processor	Large	High	High	Provide services to other computers	Moderate to high, higher than microcomputers,	Data storage, websites, networks
Workstations	HP Z Workstation, Dell Precision, etc.	Single-user, strong hardware	High-speed processor	Large	High	High	Designed for professional workloads	Higher than standard personal computers, lower than large mainframes/servers.	Design, engineering, graphics
Micro Computers	Dell, HP, Apple, etc.	Small, single-user	Single microprocessor	Low to medium	Low to moderate	Basic	Standard general-purpose computer for one user	Lowest	Home, office, school tasks

Compare and Contrast

Type	Processing Speed	Memory Capacity	Power / Energy Use	Typical Usage Scenario
Mini Computer	Medium (multi-user, moderate)	Medium to Large	Moderate to High	A department of a business uses it for billing, inventory.
Micro Computer	Lower (single-user tasks)	Low to Medium	Low	Home computer, student's PC, everyday office work.
Workstation	High (single user, heavy tasks)	Large	Moderate	Designer/editing workstation, engineering modelling.
Server	High (many users, many requests)	Large to Very Large	Moderate to High (depends on scale)	Company network, web hosting, database centre.

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