



Introduction to Computer Science

Instructor: Kayode Oladapo

Education: Ph.D in Computer Science

Email: oladapoka@mcu.edu.ng

Website: <https://sites.google.com/view/kayodeabiodunoladapo>

Course Content

- Brief history of computing.
- Description of the basic components of a computer/computing device.
- Input/Output devices and peripherals.
- Hardware, software and human ware.
- Diverse and growing computer/digital applications.
- Information processing and its roles in society.
- The Internet, its applications and its impact on the world today.
- The different areas/programs of the computing discipline.
- The job specializations for computing professionals.
- The future of computing.



— Laboratory Work Practical

- Demonstration of the basic parts of a computer.
- Illustration of different operating systems of different computing devices including desktops, laptops, tablets, smart boards and smart phones.
- Demonstration of commonly used applications such as word processors, spreadsheets, presentation software and graphics.
- Illustration of input and output devices including printers, scanners, projectors and smartboards.
- Practical demonstration of the Internet and its various applications.
- Illustration of browsers and search engines.
- How to access online resources



Brief history of computing

- **Generations of Computer**

- First Generation (1937 – 1953) - Vacuum Tube
- Second Generation (1954 – 1962) – Transistors
- Third Generation (1963 – 1972) – Integrated Circuits
- Fourth Generation (1972 – 1984) – Very Large Scale Integrated Circuit
- Fifth Generation (1984 Till Date) – Artificial Intelligence

- **Basic Concepts**

- Data
- Information
- Data Processing
- Computer
- Characteristics of Computer

Characteristics of Computer

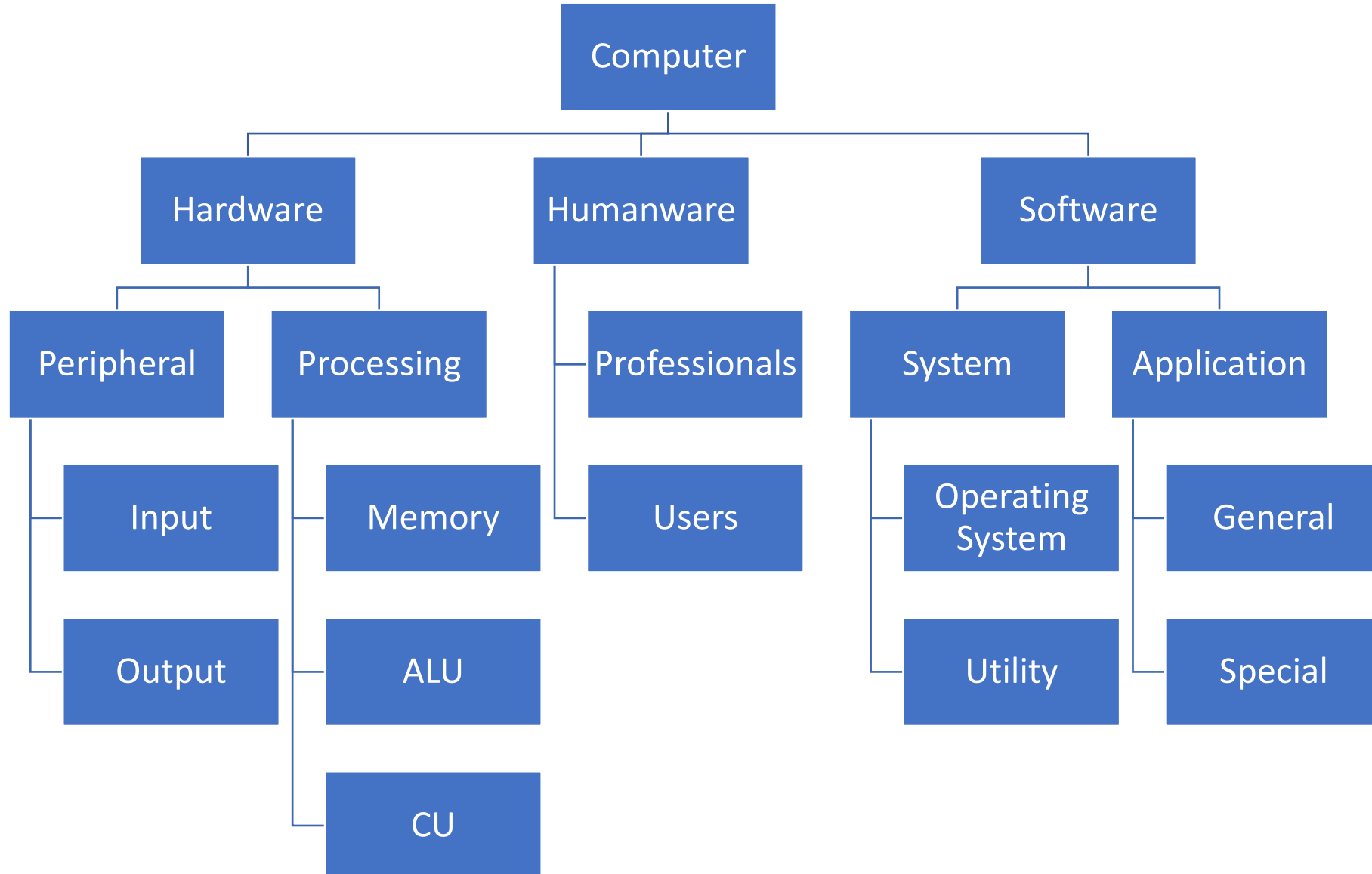
- **Characteristics**

- Speed
- Accuracy
- Storage
- Automatic
- Reliability
- Flexibility

- **Basic Concepts**

- Data
- Information
- Data Processing
- Computer
- Characteristics of Computer

Description of the basic components of a computer/computing device.



Categories of Computer

Based on Signal

- Digital Computer
- Analog Computer
- Hybrid Computer

Based on Purpose

- Special Purpose
- General Purpose

Based on Capacity

- Microcomputer
- Minicomputer
- Mainframe

Diverse and growing computer/digital applications.

Computer are used in every day of life, and today we cannot imagine growing our technology without computers.

Assignment: Pick as field and highlight the diverse and growing application of computer in that field.

Communication
and
Collaborations

Social Media
and Networking

Health and
Fitness
Application

E-commerce
and Online
Shopping

Cloud Services

Financial and
Banking
Application

Artificial
Intelligence

Machine
Learning

Blockchain and
Cryptocurrency

Transportation
and Navigation

Augmented and
Virtual Reality

Internet of
Things (IoT)

Information processing and its roles in society

Information processing plays a crucial role in modern society across various domains. It involves the acquisition, storage, manipulation, and dissemination of information, and it has profound effects on individual lives, businesses, governance, education, and more. Here are some key roles of information processing in society:



The internet, its application and its impact on the world today

The Internet is a global network of interconnected computers that enables the sharing of information, communication, and access to a wide range of digital resources



Communication

Information Access

E-Commerce

Education

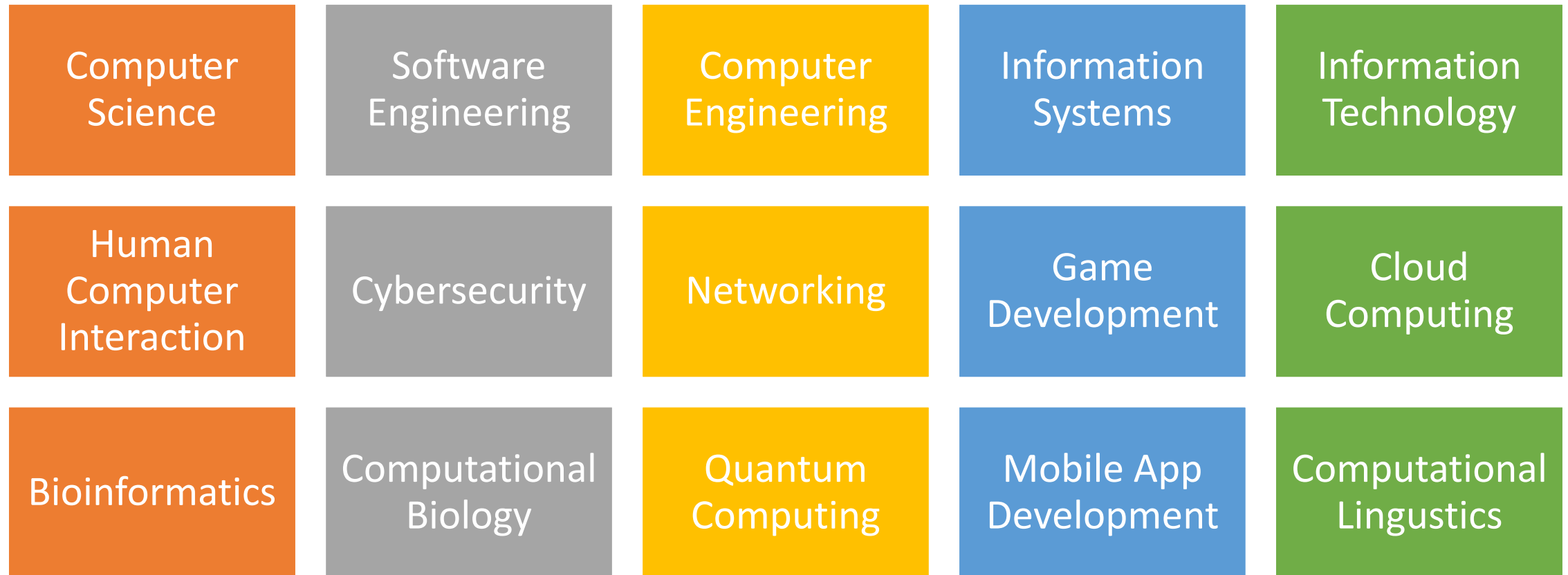
Social Impact

Business and Partnership

Healthcare Services

The different areas/programs of the computing discipline.

The field of computing is broad and encompasses various areas and programs, each focusing on specific aspects of information technology and computer science.



Discussion Pane

- ❑ The job specializations for computing professionals
- ❑ The future of computing

