New Generation Academy

Department of Software Programming and Embedded Systems

Course: SPEWI302 – Development of Web User Interface

Chapter 0 – Basic Understanding Before Starting HTML

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0.1 Understanding a Computer System

A computer system is an electronic device that receives data, processes it, stores it, and produces output. It consists of hardware and software components.
Hardware includes input, output, storage devices, and the CPU, while software includes system and application programs.

Example (Local Context): In Rwandan schools, computers in a lab connected to a local server form a simple networked system for learning and web development.

0.2 Binary and Hexadecimal Reminder

Computers use binary (0s and 1s) to represent information. Hexadecimal is a compact form often used in color codes for web design.
Example: #FF0000 represents red in hexadecimal.

0.7 Understanding Network and Internet Basics

A network is a collection of connected computers. The Internet connects millions of networks globally using protocols like TCP/IP.
Example (Local Context): Schools in Rwanda connect to the Internet using fiber or wireless networks to access online learning platforms.

■ Quick Recap

Students should now understand what a computer system is, how data is represented in binary and hexadecimal, and how networks and browsers connect to web servers. These basics prepare you for HTML and web design.