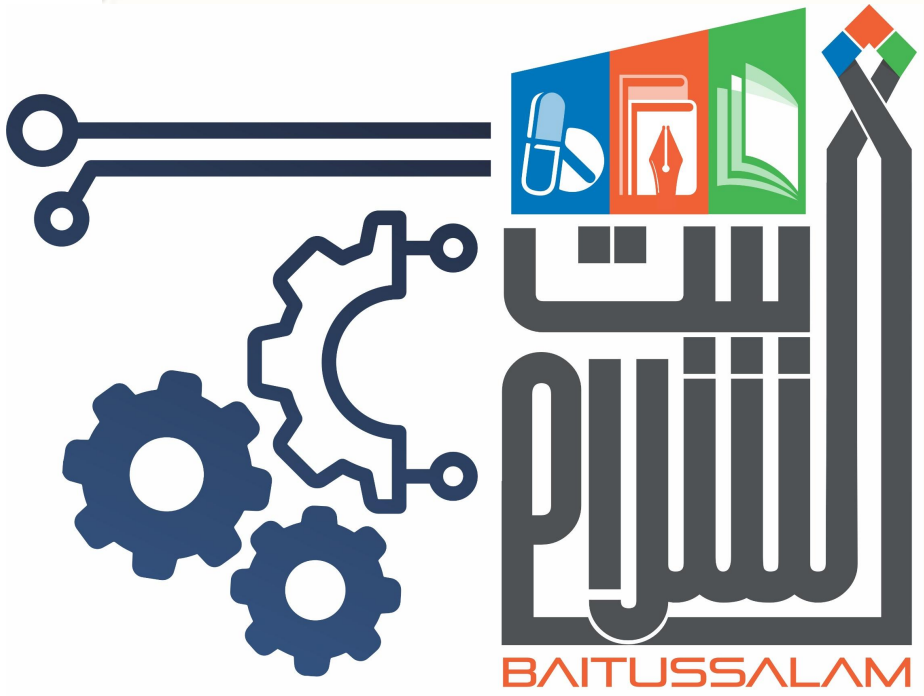



# BAITUSSALAM
# —TECH PARK—

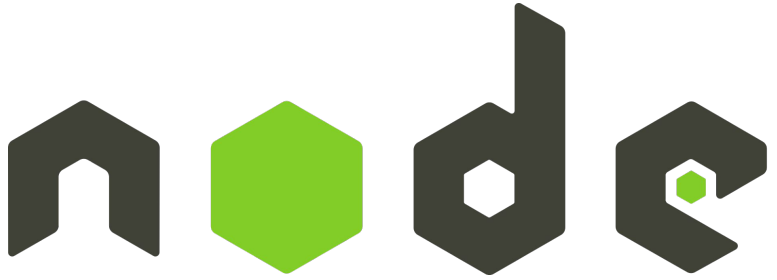
# Orientation

BAITUSSALAM
—TECH PARK—

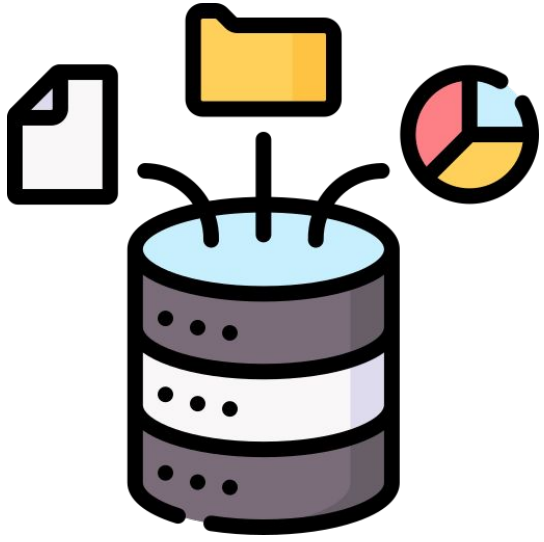
# You will be learning…

Linux

HTML

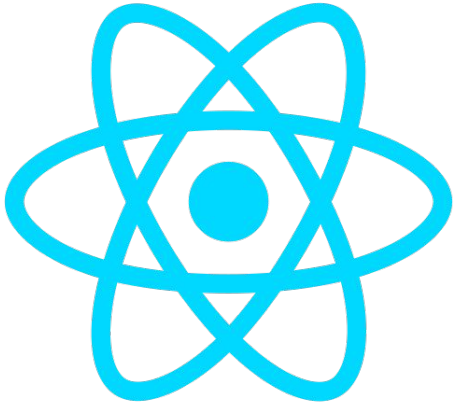


Node js



Databases

CSS



React

JavaScript

# Foundations

BAITUSSALAM
—TECH PARK—

# What is a Program

A program is a set of instructions that a computer follows to perform a specific task.

**Components**

Code: Written in programming languages (e.g., Python, Java, C++).

Algorithms: Step-by-step procedures for solving problems.

**Types of Programs**

Applications: Software for end-users (e.g., word processors, games).

System Software: Operating systems and utilities that manage hardware.

**Purpose**

Automate tasks, solve problems, and manage resources efficiently.

**Execution**

Programs are executed by a computer's CPU, transforming code into actions.

# What is Internet

BAITUSSALAM
—TECH PARK—

# To understand internet, let’s understand what  is computer network..

# First.. What is a Computer Network?

A computer network is a system linking computers/devices for communication and resource-sharing.

## LAN (Local Area Network)

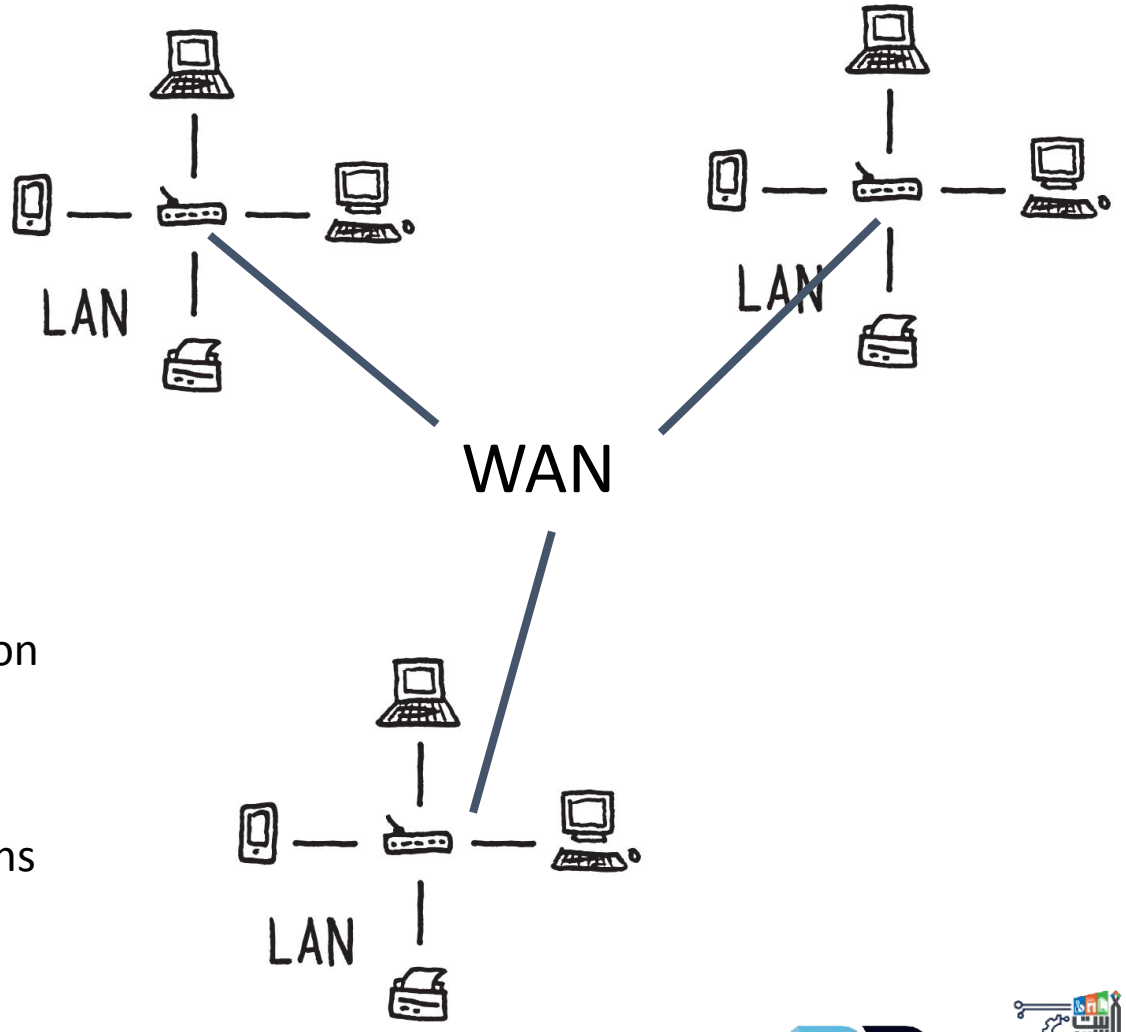
Connects computers and devices within a limited area for local, fast data exchange.

EXAMPLE: A network within an office building, a network within a university campus to connect computers of different departments.

## WAN (Wide Area Network)

Spans large geographic areas, linking multiple LANs for communication between distant locations.

EXAMPLE: Internet is the largest WAN that connects millions of computers worldwide. It is connecting thousands of LAN's and millions of PCs around the world.



# So… What is Internet?

The Internet is a vast computer network that connects computers worldwide, forming a global web of information

OR

The internet is a global network connecting computers worldwide, enabling communication and information sharing.

OR

Interconnection of computers and computer networks using TCP/IP communication protocol.

Example:

sending emails, browsing websites, and streaming videos are common activities facilitated by the internet.

# Protocols - The Language of the Internet:

## TCP/IP

The backbone. It ensures data gets from one place to another without errors.

A protocol is a set of rules and conventions that govern how data is transmitted and received between devices on a network. It defines the format, timing, sequencing, and error checking of data exchange.

OR

A protocol is a set of rules defining communication between system.

Example: The Internet Protocol (IP) is a fundamental protocol that enables communication between devices on the internet by assigning unique addresses to each device.

# Protocols - The Language of the Internet:

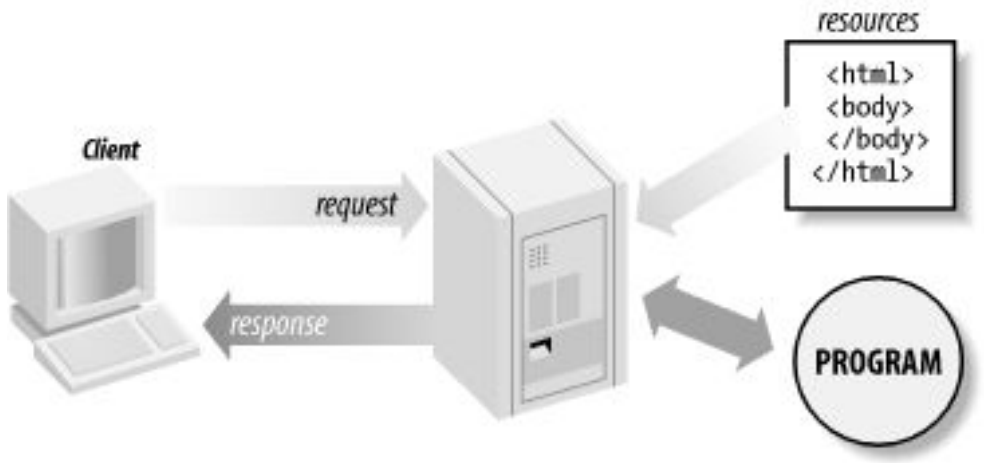
## HTTP/HTTPS

These are like the protocols of politeness. They dictate how web browsers and servers communicate.

There are alot of protocols, but they are not required to complete our course.

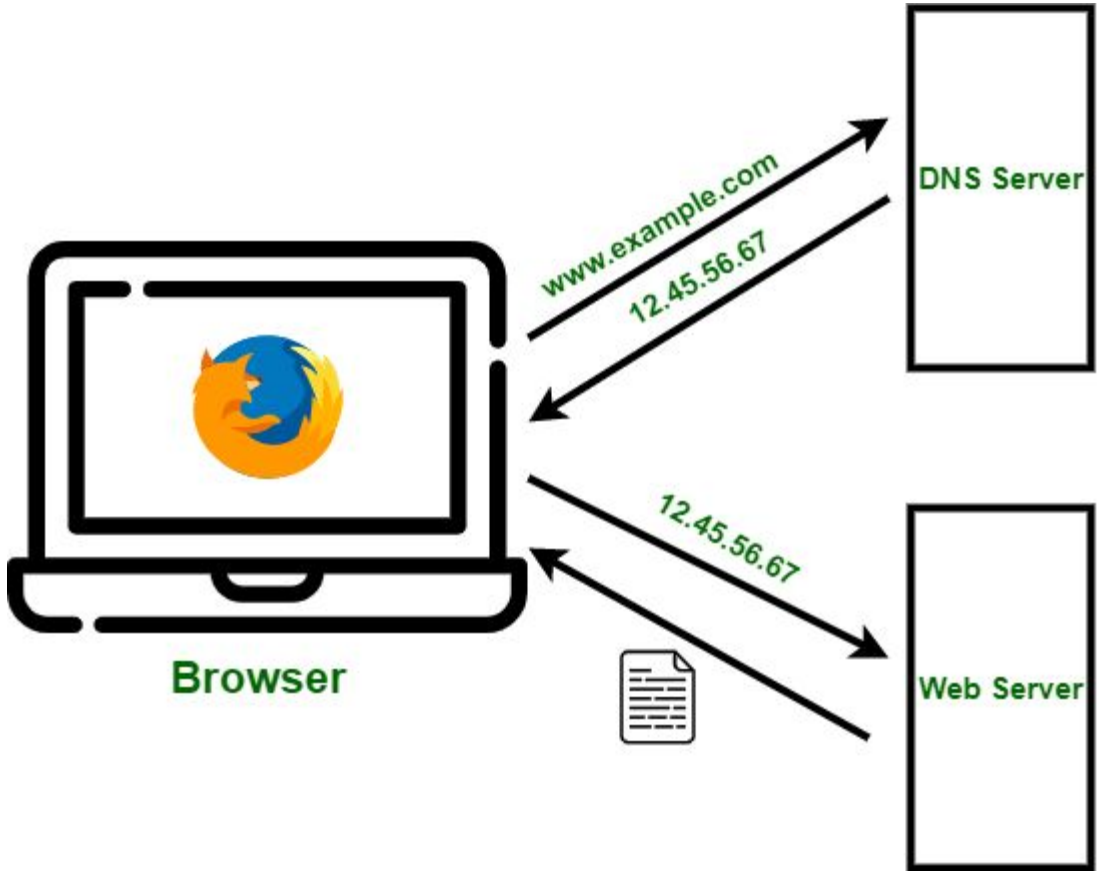
# Basic Network Infrastructure for Web Requests/Responses

When you click on a link or enter a website address, your device sends a request to a server through the internet. The server processes the request and sends back the webpage you wanted. It's like asking for a book from a library, and the librarian brings it to you.



# DNS - Your Digital Address Book

DNS, or Domain Name System, is like a phone book for the internet. It translates human-friendly website names (like www.example.com) into IP addresses that computers understand.



# What is WEB

BAITUSSALAM
—TECH PARK—

# What is WEBSITE

The World Wide Web or simply the Web, is like a vast digital playground connecting people, information, and experiences.

“A website is a group of connected web pages hosted on the Internet. These web pages are linked together to provide a seamless online experience for users to navigate, explore, and access a variety of information, services, or resources.”

# Let’s dive into web history & its future

# WEB 1.0 (The Static Web - 1980 to around 2000)

Think of it as the read-only web. We could view information, but interaction was limited.

Characteristics:

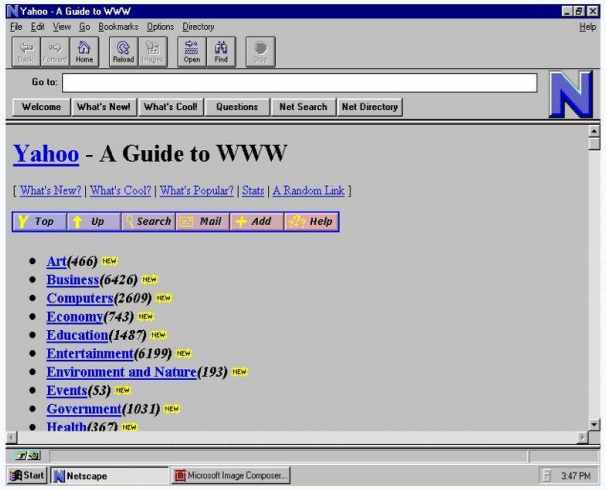
- Information was static and presented in a read-only format.
- Limited user interaction and participation.
- Basic HTML websites with minimal interactivity.

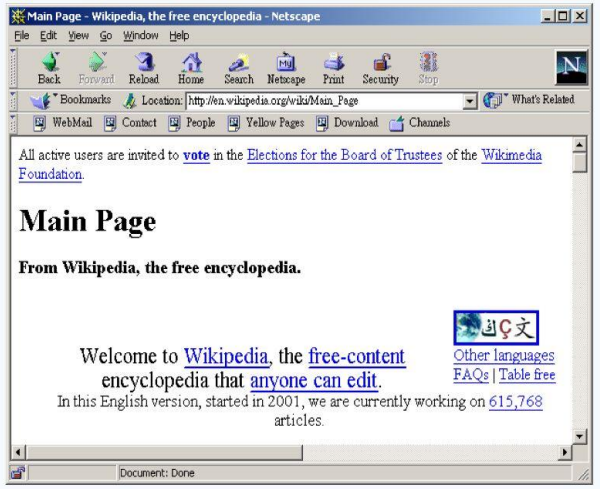
Key Technologies:

- HTML (Hypertext Markup Language) for document structure.
- Early web browsers (e.g., Mosaic, Netscape Navigator).

Notable Milestones:

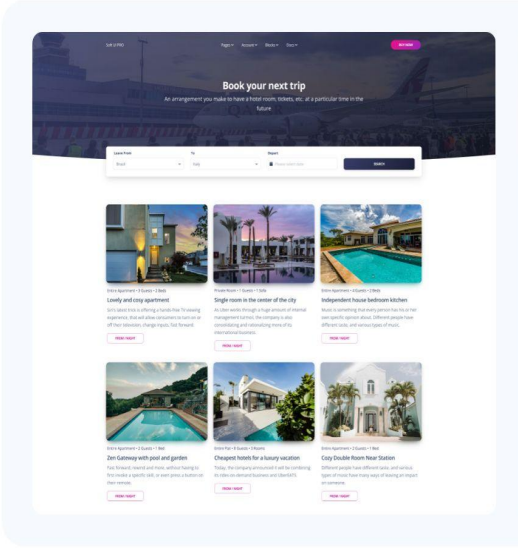
- Introduction of the World Wide Web (1991).
- Early commercialization of the internet.



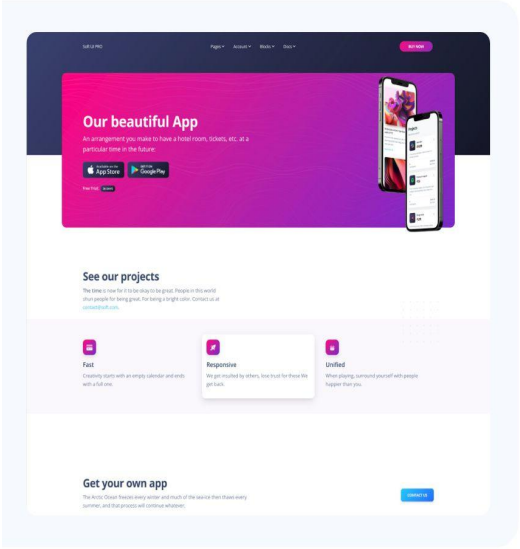
# WEB 2.0 (The Dynamic Web - 2000 onwards)

Now we're talking! This is the interactive web. Social media, online collaboration, and dynamic content became possible.




Characteristics:

- Dynamic, interactive, and user-generated content.
- Social media platforms, blogs, and wikis.
- Collaboration and sharing became prominent.




Key Technologies:

- CSS (Cascading Style Sheets) for improved web design.
- JavaScript for client-side interactivity.
- Rich Internet Applications (RIAs) for enhanced user experiences

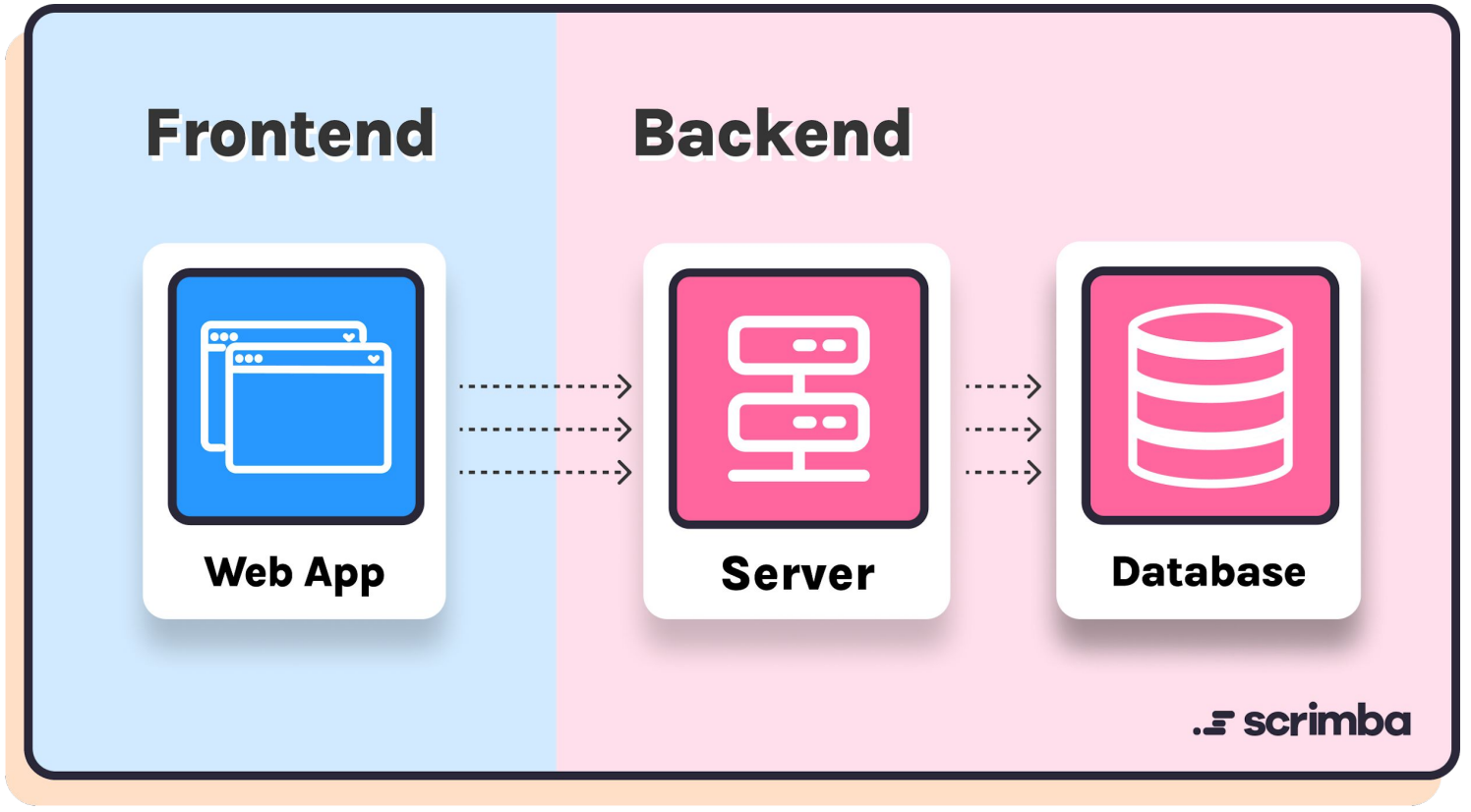
Notable Milestones:

- Rise of social media (e.g., Facebook, Twitter).
- Introduction of Web 2.0 terminology.
- Growth of user-generated content and online collaboration.

# WEB 3.0 (The Intelligent Web - 2010 onwards)

The future! Artificial intelligence, advanced interactivity, and personalized experiences. Imagine a web that truly understands you.

# Every website has TWO parts



# Frontend

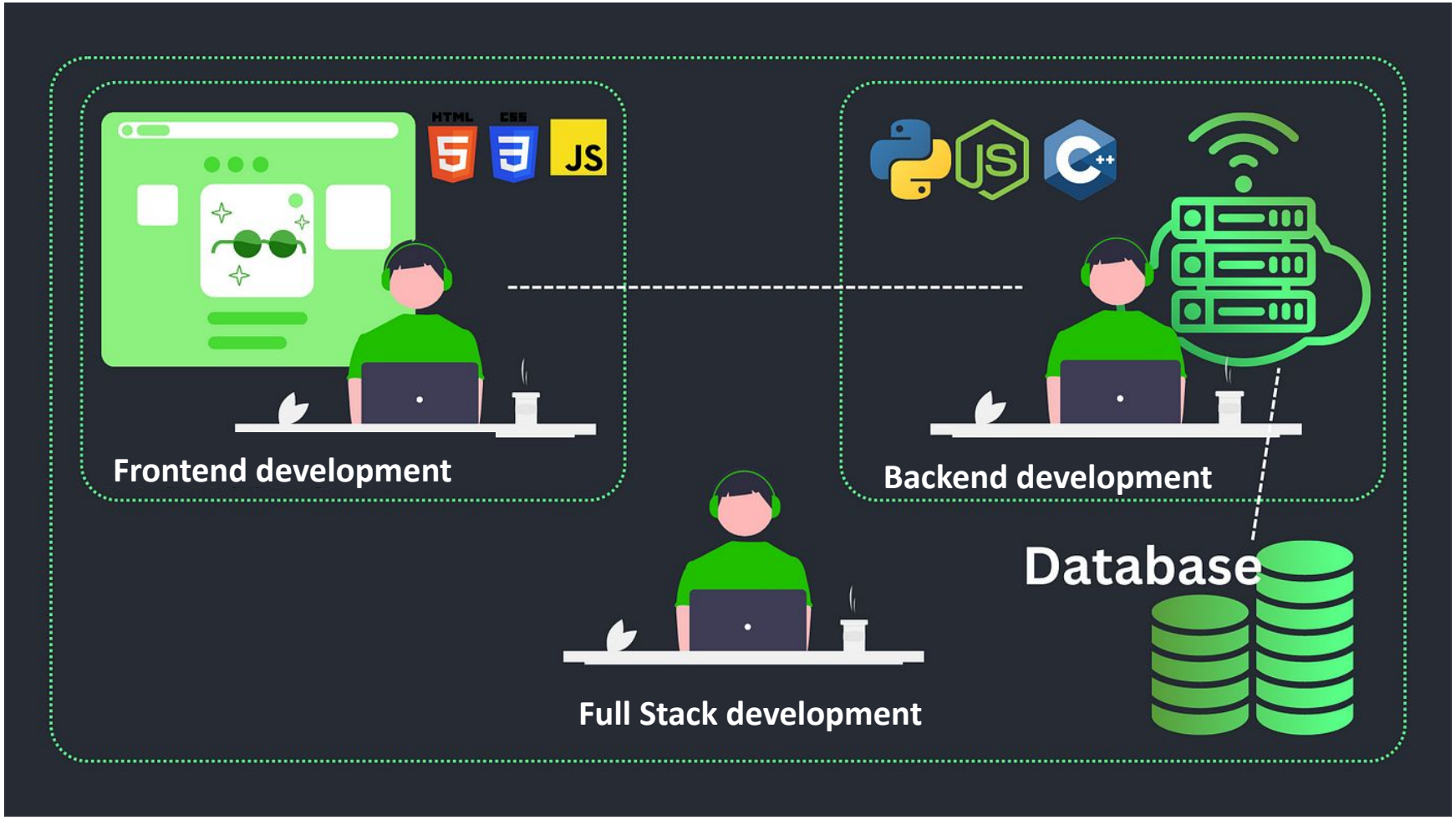
This is the visual presentation of a website. The part that you see in your browser and also interact with it.



# Backend

The backend is the part that stores and manages data that you receive and provide it to frontend

# THREE main categories...



# Development Environment

BAITUSSALAM
—TECH PARK—

# Why Linux?

## Introduction to Ubuntu

Ubuntu is a user-friendly flavor of Linux. Imagine it as a friendly guide in the digital world, offering a smooth and intuitive interface. It's like having a personal assistant that helps you navigate and get things done.


## Basic Usage

Let’s start the engines…

# Tools to install

Let’s setup our dev environment & install some required tools:

- Browser
- VS code
- Github desktop
- Nodejs

- we may install more when required

# The End

BAITUSSALAM
—TECH PARK—