

Clarusway



Backend Workshop -1-

Workshop

Subject:

- Introduction to Backend Development

Learning Goals

- Having general information about the backend.

Introduction

- As developers, we should also be able to express what we know. This study was prepared to support this purpose.

Prerequisites

- We will use the VSCode you are familiar with.
- At the same time, we need to install Nodejs on our computer.

Lets start

1. What Is Backend Development ?

Answer:

Backend development covers server-side web application logic and integration and activities, like writing APIs, creating libraries, and working with system components instead of frontend development, which focuses on customer-facing services and programs. Backend developers build code that allows a database and an application to communicate with one another. Backend developers take care and maintain the backend of a website, including databases, servers, and apps, and they control what you don't see.

2. What is skills a backend developer must have ?

Answer:

- Back-End Programming Language
- Knowledge of Front-End Technology
- Knowledge of Backend Frameworks
- Version Control System
- Knowledge of Databases
- Knowledge of API

It would be nice to have these

- Server Handling
- Data Structures and Algorithms
- Problem Solving
- Communication Skills

3. Why backend is important ?

Answer:

Backend development in the software development describe the programming and coding behind the user interface. Backend includes all of the functionality that happens on the server side, such as

- database interactions,

- business logic,
- routing.
- building the APIs
- services all of these that make up the backbone of web and mobile applications.

4. Why learning backend coding is important ?

Answer:

- **Server-side logic:** Backend coding allows you to handle the server-side logic of an application. This includes processing user inputs, interacting with databases, handling authentication and authorization, and managing the application's business logic. Backend code ensures that the application functions correctly and securely.
 - **Data management:** Backend coding enables you to handle data management tasks. This involves storing, retrieving, and manipulating data in databases, implementing data validation and data integrity checks, and ensuring efficient data handling. Backend developers work with technologies such as SQL or NoSQL databases to manage data effectively.
 - **Security and authentication:** Backend coding plays a vital role in implementing security measures and user authentication. Backend developers can implement encryption, secure communication protocols, and access control mechanisms to protect sensitive data and ensure secure interactions with the application.
 - **Scalability and performance:** Backend coding is crucial for building scalable and high-performance applications. Backend developers optimize code, database queries, and server configurations to improve the application's speed and efficiency. They can implement caching mechanisms, load balancing, and other techniques to handle increased traffic and user demand.
 - **API development:** Backend coding is essential for building application programming interfaces (APIs). APIs enable different software systems to communicate and interact with each other. Backend developers design and develop APIs that allow front-end applications, mobile apps, or third-party services to access and utilize the application's functionality and data securely.
 - **Integration with external services:** Backend coding allows for integration with various external services, such as payment gateways, social media platforms, email services, or cloud storage providers. Backend developers can implement APIs and webhooks to connect the application with these services and enable seamless interactions.
 - **Collaboration with front-end developers:** Backend coding and front-end coding go hand in hand. Backend developers work closely with front-end developers to ensure proper communication between the client-side and server-side components of an application. By understanding backend development, you can collaborate effectively with front-end developers to build robust and cohesive applications.
- Overall, learning backend coding equips you with the skills and knowledge necessary to build dynamic, secure, and scalable applications that handle complex business logic, interact with databases, and provide a seamless user experience. It expands your understanding of the full-stack development process and enables you to work on a wide range of projects and technologies.