What is full stack development?

Full-stack development is the construction of both the front-end (client side) and the back-end (server side) of a web-based application or program. A full-stack developer is an employee who practises in all development stacks, i.e., should have the ability to design user interfaces, to implement business logic and to maintain databases that store application data.

Full-stack development involves working on several key components of a web application:

◊ Front-End (Client-slide)
The front end is everything the user interacts with directly in a web browser. It focuses on layout, design & user experience.
Common technologies include:
- HTML (Hyper Text Markup Language): Structure the content of web pages.
- CSS (Cascading Style Sheets): Styles & formats the appearance of content.
- JavaScript: Adds interactivity and dynamic features.
- Bootstrap Framework: Provides prebuilt responsive design components.

◊ Back-End (Server-side)
The back-end is responsible for the logic, server operations, & communication with the database. It processes user request & delivers the correct responses to the front-end.
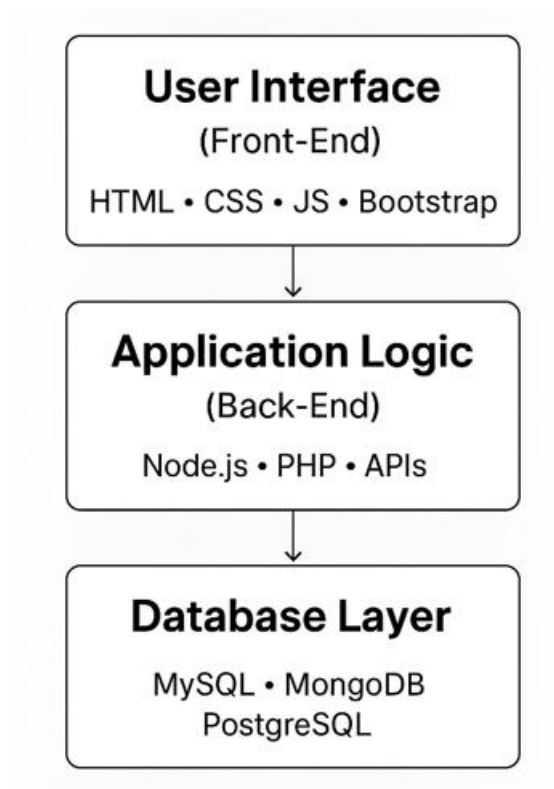Common technologies include:
- Node.js: JavaScript runtime for building scalable server applications.
- PHP: Widely used scripting language for dynamic websites.
- Databases (MySQL, MongoDB, PostgreSQL): Store & manage data used by applications.

Full-stack development are in great demand since they have the capability to interact with all aspects of specification and development.

→ Do end-to-end development – user interface structure to database.
→ Enhance teamwork – using an interface to reconcile front-end & back-end teams.
→ Be Versatile – can commit to many levels within a project.
→ Solving problems – know how various layers interact, so debugging & optimissation of applications is easier.

This is what makes full-stack developers an essential resource to start-ups, small teams & companies looking to create versatile & efficient development.

User Interface
(Front-End)

HTML • CSS • JS • Bootstrap

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Application Logic
(Back-End)

Node.js • PHP • APIs

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Database Layer

MySQL • MongoDB
PostgreSQL

The diagram gives evidence of understanding.