



# Backend Development - Introduction

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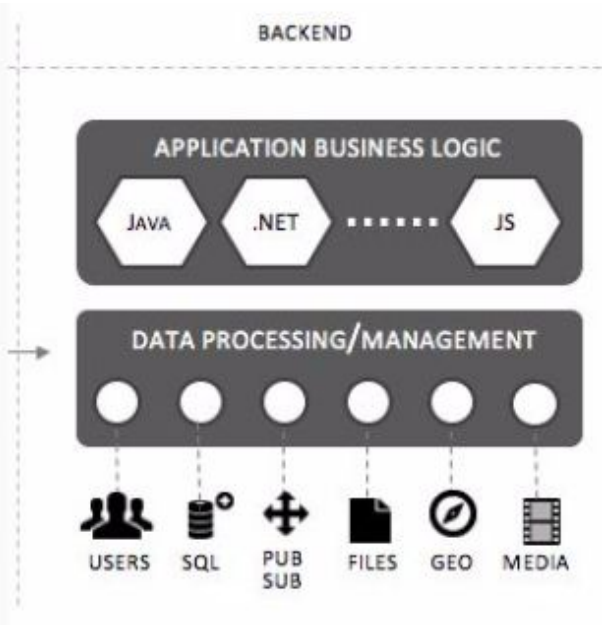
# **We will cover with the following concepts**

- 1) What, Why and How ?
- 2) Component of backend development
- 3) Future Prospects

# What is Backend Development?

- Backend is like the brain or central nervous system
- It has everything to do with the logical implementation of the system
- It also takes care of data storage and management by connecting to the database.
- It can combine various services to produce the desired resultant.

# Backend Development is more of a science



## Backend Business logic or application

Usually written in a server side programming language like PHP, Ruby, ASP.NET, JAVA or NodeJS

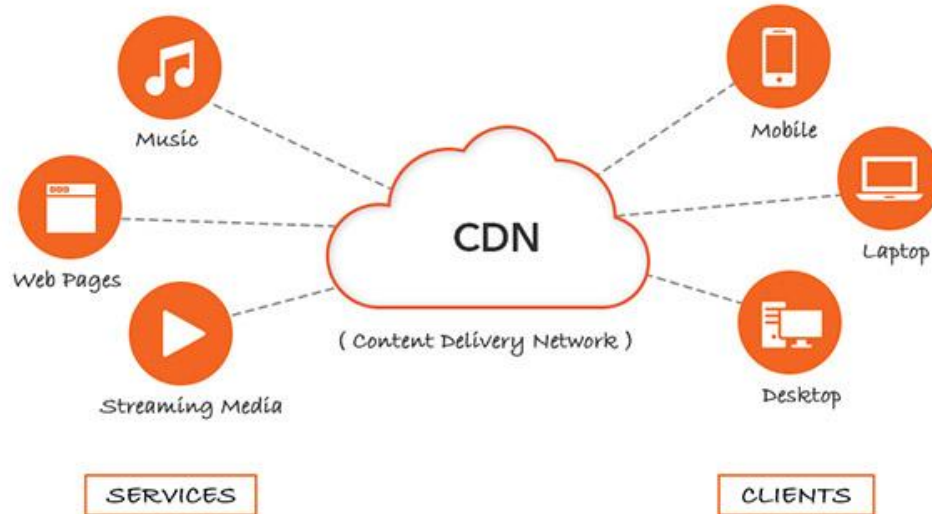
## Database layer

Contains the data stored by the web application. Usually deployed on a different server than application server. Eg. MySQL, PostgreSQL, Oracle server, MongoDB, Cassandra, CouchDB

## File Storage and File serving systems

This is where the media files (image, videos etc) are stored. They are serving using CDNs.

# What about hosting this content and images and other media

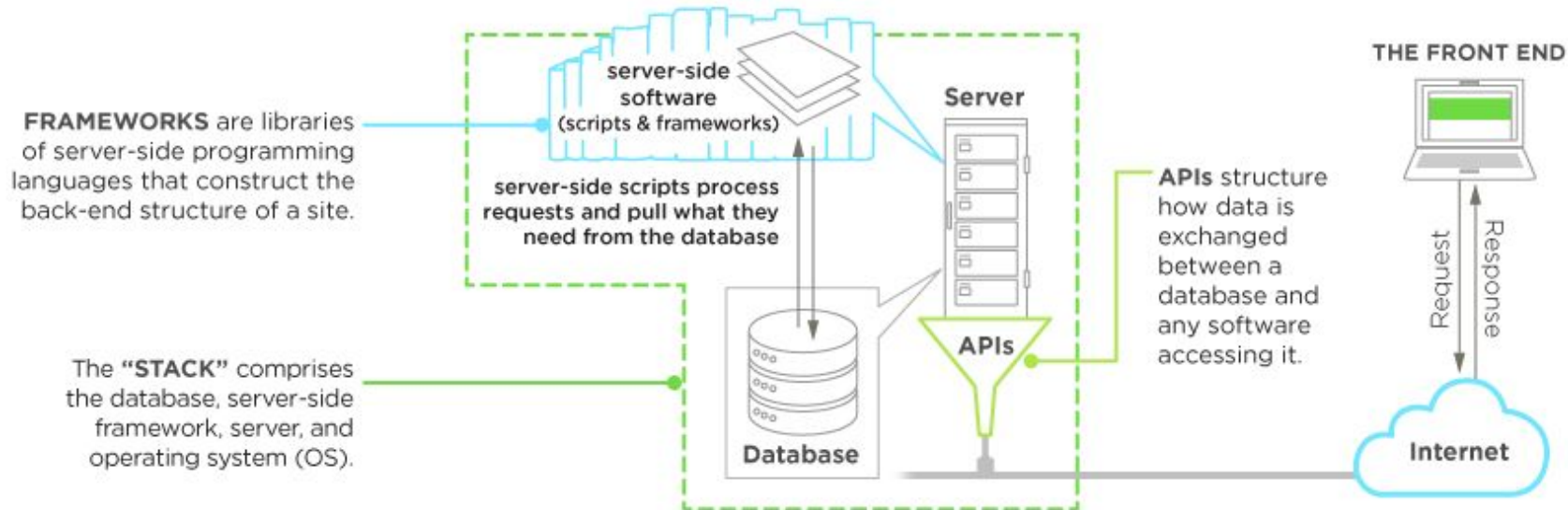


## Content Delivery Networks

CDN is short for content delivery network. A content delivery network (CDN) is a system of distributed servers that deliver pages and other Web content to a user, based on the geographic locations of the user, the origin of the webpage and the content delivery server.

# The overall architecture looks like something like this...

## BACK-END DEVELOPMENT & FRAMEWORKS IN SERVER SIDE SOFTWARE



# Three major areas you can master

## Backend Business logic or application

Old Technologies -  
PHP, Perl, Ruby

New Technologies -  
NodeJS , Django etc

## Database Technologies

Old Technologies -  
MySQL, Sql Server

New Technologies -  
Postgres SQL,  
MongoDB,  
cassandra, Neo4j

## Architecture and Design patterns

Cloud, VM,  
containers and  
sandboxes,  
microservice  
architecture.

# How do modern APIs look like?

- Let me give you a few examples of public modern APIs



# Backend (Nodejs) developers get a relatively high starting salary

- <https://www.payscale.com/research/IN/Skill=Node.js/Salary>
- <https://www.indeed.com/salaries/Javascript+Node+Js+Developer-Salaries,-United+States>
- You can also become a full stack or MEAN stack developer and earn a starting salary of 4-6 LPA in India

# The next steps are ...

Scope of the program