

Roadmap for becoming Back-End Developer in 2023

Learn the basics of Internet

1. How does the internet work?
2. What is HTTP & HTTPS?
3. What is Domain Name?
4. What is IP Address?
5. DNS and how it works?
6. What is hosting?

Basics of front-end languages

1. HTML
2. CSS
3. JavaScript

Learn a back-end language

1. PHP
2. NodeJS
3. Ruby On Rails
4. Python
5. Go
5. C#
6. Java

Just learn anyone of the above language but make sure you have in-depth understanding of that language.

Learn Version Control System

1. Basic Git Commands
2. Repo hosting services
 - I. GitHub
 - II. Gitlab
 - III. Bitbucket

Learn about Relational Databases

1. MySQL
2. PostgreSQL
3. MariaDB
4. MS SQL
5. Oracle

MySQL is the most popular one.

Learn about NoSQL databases

1. MongoDB
2. RethinkDB
3. CouchDB
4. DynamoDB

NoSQL are very popular databases. Many startups are opting for NoSQL databases instead of SQL databases.

Learn About APIs

1. REST
2. JSON APIs
3. HATOAS
4. Open API Spec and Swagger
5. Authentication
6. GraphQL

Learn about caching

1. CDN (Cloud Delivery Network)
2. Server-side caching
 - I. Redis
 - II. Memcached
3. Client-side caching

Web Servers

1. Nginx
2. Apache
3. Reverse Proxy

Understand web security

1. Hashing Algorithm
 - I. MD5
 - II. SHA Family

III. Scrypt

IV. Bcrypt

2. HTTPS

3. CORS

4. SSL/TLS

Learn testing

1. Integration Testing

2. Unit Testing

3. Functional Testing

Containerization / Virtualization

1. Docker

2. Kubernetes

3. rkt

Architectural Patterns

1. Monolithic

2. Microservices

3. Serverless

4. Scaling (Horizontal & Vertical)

5. Load Balancers