Backend Developer RoadMap



Choose Your Language

JavaScript (Node.js):

Event-driven, Asynchronous programming.

Python:

Event-driven, Asynchronous programming.

Other Option

Ruby (Ruby on Rails), PHP (Laravel).



Understand Data Storage

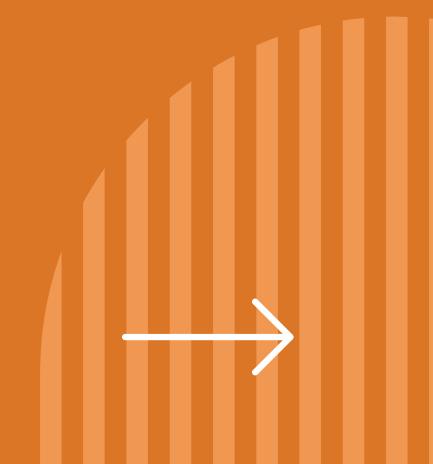
Relational Databases:

SQL, PostgreSQL, MySQL - ACID properties, Joins, Indexes.

NoSQL Databases:

MongoDB, Redis - Document-based, Key-Value pairs.





Web Servers and APIs

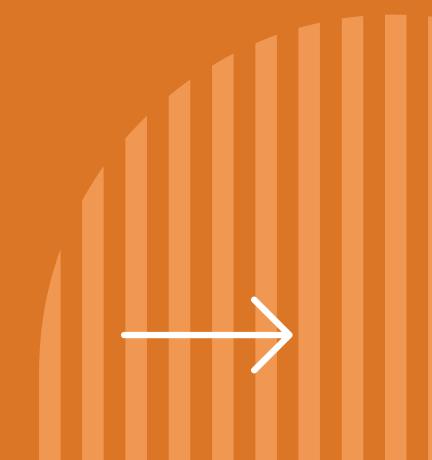
Web Servers:

Express.js, Nginx, Apache.

RESTful APIs:

HTTP Methods, Status Codes, JSON.





Authentication & Security

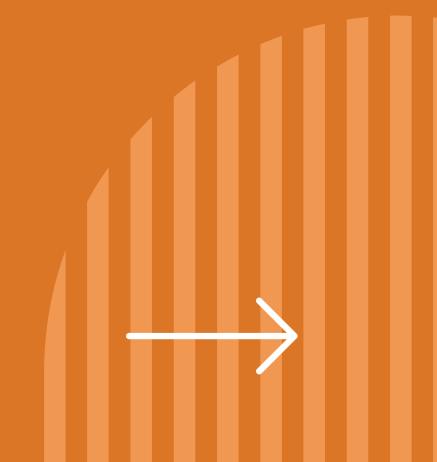
Authentication:

JWT, OAuth2.

Security Best Practices:

HTTPS, CORS, SQL Injection prevention, XSS prevention.





Caching & Performance Optimization

Caching:

Redis, Memcached - In-memory data storage.

Load Balancing:

Round-robin, Sticky sessions.

Performance Optimization:

Lazy loading, Database indexing, Query optimization.



Testing and Debugging

Unit Testing:

Mocha, Chai, JUnit.

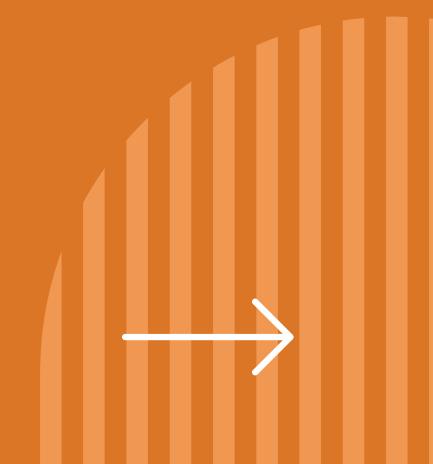
Integration Testing:

Postman, Swagger.

Debugging Tools:

Node.js Debugger, PyCharm Debugger.





Deployment & Monitoring

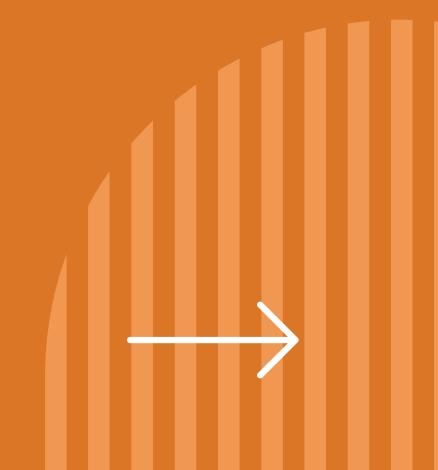
Deployment Platforms:

AWS, Heroku, Docker - Containers, Serverless.

CI/CD:

Jenkins, GitHub Actions, Travis Cl.





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@Zaman Habib

