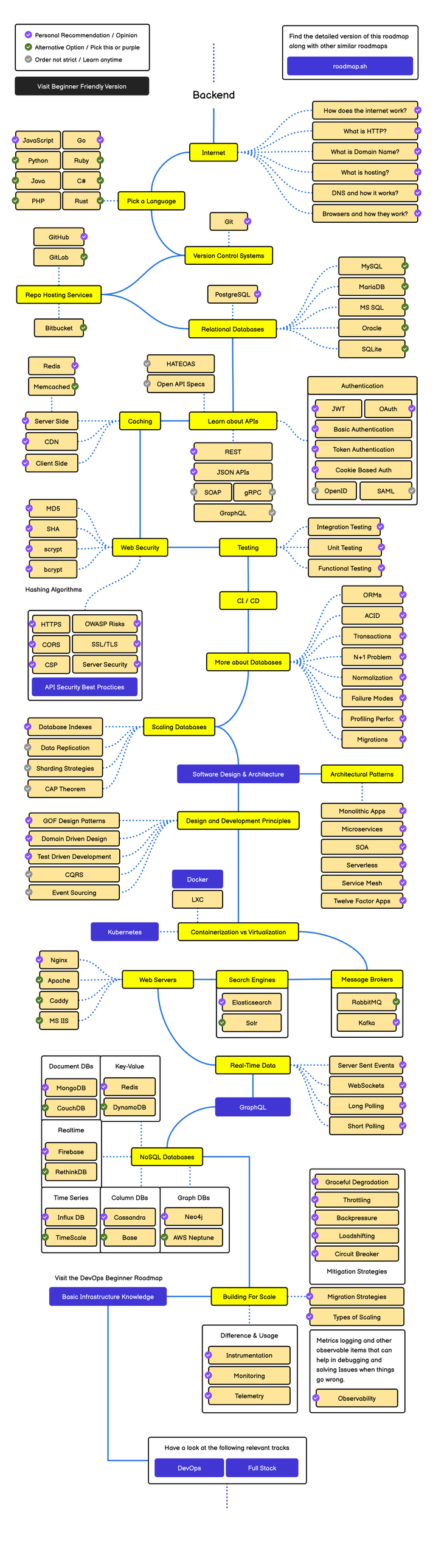
Personal Recommendation / Opinion
Alternative Option / Pick this or purple
Order not strict / Learn anytime
Visit Beginner Friendly Version
Find the detailed version of this roadmap along with other similar roadmaps
roadmap.sh
Backend
Internet
How does the internet work?
What is HTTP?
What is Domain Name?
What is hosting?
DNS and how it works?
Browsers and how they work?
Pick a Language
JavaScript
Go
Python
Ruby
Java
C#
PHP
Rust
Version Control Systems
Git
Repo Hosting Services
GitHub
GitLab
Bitbucket
Relational Databases
PostgreSQL
MySQL
MariaDB
MS SQL
Oracle
SQLite
Caching
Redis
Memcached
Server Side
CDN
Client Side
Learn about APIs
HATEOAS
Open API Specs
REST
JSON APIs
SOAP
gRPC
GraphQL
Authentication
JWT
OAuth
Basic Authentication
Token Authentication
Cookie Based Auth
OpenID
SAML
Web Security
MD5
SHA
scrypt
bcrypt
Hashing Algorithms
HTTPS
OWASP Risks
CORS
SSL/TLS
CSP
Server Security
API Security Best Practices
Testing
Integration Testing
Unit Testing
Functional Testing
CI / CD
More about Databases
ORMs
ACID
Transactions
N+1 Problem
Normalization
Failure Modes
Profiling Perfor.
Migrations
Scaling Databases
Database Indexes
Data Replication
Sharding Strategies
CAP Theorem
Software Design & Architecture
Architectural Patterns
Monolithic Apps
Microservices
SOA
Serverless
Service Mesh
Twelve Factor Apps
Design and Development Principles
GOF Design Patterns
Domain Driven Design
Test Driven Development
CQRS
Event Sourcing
Docker
LXC
Kubernetes
Containerization vs Virtualization
Web Servers
Nginx
Apache
Caddy
MS IIS
Search Engines
Elasticsearch
Solr
Message Brokers
RabbitMQ
Kafka
Real-Time Data
Server Sent Events
WebSockets
Long Polling
Short Polling
GraphQL
NoSQL Databases
Document DBs
MongoDB
CouchDB
Key-Value
Redis
DynamoDB
Realtime
Firebase
RethinkDB
Time Series
Influx DB
TimeScale
Column DBs
Cassandra
Base
Graph DBs
Neo4j
AWS Neptune
Graceful Degradation
Throttling
Backpressure
Loadshifting
Circuit Breaker
Mitigation Strategies
Visit the DevOps Beginner Roadmap
Basic Infrastructure Knowledge
Building For Scale
Migration Strategies
Types of Scaling
Difference & Usage
Instrumentation
Monitoring
Telemetry
Metrics logging and other observable items that can help in debugging and solving Issues when things go wrong.
Observability
Have a look at the following relevant tracks
DevOps
Full Stack