

Courses

Syllabus

Complete 0-1

Syllabus

Foundation

- 1. Foundation Javascript, async nature of JS
- 2. Node.js and its runtime=
- 3. Databases (NoSQL/SQL)
- 4. Mongo and Postgres deep dive
- 5. Typescript beginner to advance
- 6. Backend
- 7. Backend communication protocols
- 8. Express basic to advance
- 9. ORMs
- Middlewares, routes, status codes, global catches
- 11. Zod
- 12. MonoRepos, turborepo
- 13. Serverless Backends
- 14. OpenAPI Spec



Courses

- 15. Autogenerated clients
- 16. Authentication using external libraries
- 17. Scaling Node.js, performance benchmarks
- 18. Deploying npm packages

Frontend

- Reconcilers and Frontend frameworks
- 2. React beginner to advance
- 3. Internals of state, Context API
- 4. State management using recoil
- CSS you need to know of, Flexbox, basic styling
- 6. Frontend UI frameworks, Deep dive into Tailwind
- 7. Containerization, Docker
- 8. Next.js
- 9. Custom hooks
- 10. In house auth using next auth



Courses

Basic Devops

- 1. Docker end to end
- 2. Deploying to AWS servers
- 3. Newer clouds like fly/Remix
- 4. Nginx and reverse proxies

Projects

- GSoC Project setting up and issue solving
- 2. Building Paytm/Wallet End to End

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Complete 1-100 Syllabus

Advanced Backend, System Design



Courses

- 1. Advanced backend communication
- 2. Message queues and PubSubs
- 3. Proxies, Load balancers
- 4. Redis Deep dive
- 5. Kafka Deep dive
- 6. Common Design Patterns in JS
- 7. Advanced DB concepts (Indexing, normalization)
- 8. Rate limitting
- 9. Captchas and DDoS protection
- 10. Sharding, Replication, Resiliency
- 11. Horizontal and vertical scaling
- 12. Polling and websockets
- 13. Grpc
- 14. Capacity Estimation
- 15. Load Balancers
- 16. CAP Theorem
- 17. Testing Node.js Apps in 2023
- 18. Real time communication, basics of WebRTC

Advanced Devops



Courses

- Container Orchestration, Docker
 Swarm
- 2. Kubernetes
- 3. CI/CD
- 4. Monitoring systems basics to advance
- 5. Promhetheus, Grafana
- 6. Newrelic as a paid service
- 7. Serverless Deep dive
- 8. AWS Constructs (EC2, S3, CDNs, LB, EKS)

Projects

- 1. Zerodha end to end
- 2. Zapier end to end
- 3. Real world open source projects