



#### The Ultimate

# Curriculum





### Networking

- How web works
- Communication Protocols
- Rest APIs
  - Overview
  - HTTP Req/Res with Headers
  - HTTP Methods
  - HTTP Status Codes
  - Best Practices + Examples

#### GraphQL

- Overview
- Schema/Types
- Query/Mutation
- Resolver
- Working Examples

#### gRPC

- Overview
- Service Definition
- RPSC Methods
- IDL (Interface Definition Language)
- Code Generation
- Working Examples





#### Communication Techniques

- Module Introduction
- Akshay & Chirag's Experience
- Overview
- Short Polling
- Long Polling
- Web Sockets
- Server Side Events
- WebHooks
- Pros & Cons of each
- Working Examples
- Interview Questions





## Security

- Module Introduction
- Akshay & Chirag's Experience
- Overview
- Cross Site Scripting (XSS)
- Cross-Site Request Forgery (CSRF)
- iFrame Protection
- Authentication / Authorization
- Security Headers
- Client Side Security
- Secure Communication(HTTPS)
- Dependency Security
- Compliance & Regulation
- Input Validation and Sanitization
- Server-Side Request Forgery (SSRF)
- Server-side JavaScript Injection (SSJI)
- Feature Policy | Permissions-Policy
- Subresource Integrity (SRI)
- Cross-Origin Resource Sharing (CORS)
- Interview Questions





#### Performance

- Module Introduction
- Akshay & Chirag's Experience
- Overview
- Asset Optimization
- Network Optimization
- Build Optimization
- React Optimization
- JavaScript Optimization
- Performance Monitoring
- Performance Tools
- Rendering Pattern
- Interview Questions





### Database & Caching

- Module Introduction
- Overview
- Local Storage
- Session Storage
- Cookie Storage
- Indexed DB
- Normalization
- HTTP Caching
- Service Working Caching
- API Caching
- State Management
- Interview Questions





#### Testing

- Module Introduction
- Akshay & Chirag's Experience
- Overview
- Unit Testing
- Component Testing
- Integration Testing
- e2e Testing
- A/B testing
- Test Drive Development Overview
- Automation Testing
- Testing Tools & Libraries
- Interview Questions





## Low Level Design (LLD)

- Module Introduction
- Important Design Patterns
- Component Design
- State Management
- Routing
- SOLID Principles (Best Coding Practices)
- LLD Infinite Scroll
- LLD Nested Comments
- LLD Pagination
- LLD Image Carousel
- LLD Live Streaming Chat UI
- LLD Autocomplete/ Search Bar
- Interview Questions





# High Level Design (HLD)

- Module Introduction
- Overview
- HLD Social Media Feed (Facebook, Twitter)
- HLD Photo Sharing App(Instagram)
- HLD E commerce App(Amazon, Flipkart)
- HLD Video Streaming(Netflix, HotStar)
- HLD Google Docs
- HLD Google Sheets
- HLD Diagram Tools(Excalidraw)
- HLD Music Streaming (Spotify)
- HLD Live Commentry (CricInfo, Crickbuzz)
- HLD Cab Services(Uber, Ola)
- HLD Aanlytics Dashboard (Google Analytics)
- Interview Questions





## Offline Support

- Module Introduction
- Overview
- Progressive Web Applications (PWAs)
- Service Workers
- Interview Questions

#### Accessibility

- Overview
- Keyboard Accessibility
- Screen Reader
- Color Contrasts
- Interview Questions





# Logging & Monitoring

- Module Introduction
- Overview
- Telemetry
  - Error Logging
  - Feature Usage
  - User Tracking
  - Working with Tools
- Alerting
  - Performance
  - Infra Capacitty,
  - Error Threshold
  - API Failure
- Fixing
  - Priortization, Debugging
  - Mitigation
  - Prevention
- Interview Questions







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- Akshay & Chirag

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