**FILE 1**

Architecture of Web applications

Client Side and Server-Side Technologies

How Mobile apps make use of web backend.

Role of HTTP, DNS protocol in web

Meta tags, OG tags, h1, p, div

AdSense. RPM. Click rate, Factors important for RPM. calculating site worth.

Different types of revenue streams

Long Tail Keywords. Why to start long tail and move to broad keywords.

Form: action and method attributes

get and post difference and other http methods [GET, POST, PUT, DELETE]

why to understand how it work at protocol level?

What are headers in https?

Request headers: Host, User-Agent, Accept-Encodings, Connection,

Response Headers: Content-Type, Content-Length

File upload using POST. What is multipart form-data. multipart/form-data payload structure

Percent encoding.

What is scrapping? static vs dynamic?

Into to Data processing, parsing, crawling, integration, workflow automation and google Apps Script projects.

<https://chat.openai.com/share/74d85c9f-118d-4fea-894f-816670389121>

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**FILE 2**

**Intro to JS**

For-of and for-in loops

Creating objects, factory methods and constructor methods

Event Handling and different easy to bind.

Why to separate JS code from HTML

DOM manipulation to update style and innerHTML

HTML form manipulation

Creating HTML nodes programmatically

Helper methods, Array. map, filter….

JSON and XML and How to parse them, etc.

AJAX

jQuery (Use jQuery for DOM manipulation and AJAX calls)

What is Asynchronous JavaScript (Callbacks, Promises, Async Await)

Modules (is file that export a component to be imported/used by others is a module)

-export default, and export named components

-import components (import default component, named component, import all components from a file, avoid name collision using import alias)

Arrow functions, classes, spread operator, object destructuring

Important points to use sync and async function calls.

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**FILE 3**

**Express**

* http module
* Require express, define a handler, and start listening for HTTP requests.
* Express routing, define multiple routes.
* Send JS object as JSON and see HTTP headers. res.json() method
* Serve static files using middleware. app.use (express. static('public'))
* Why we need view engine? Set ejs as view engine. pass some dynamic data. use CSS and images in ejs files.
* Handle user registration form submitted using post method, using body-parser.
* Form Handling - GET and POST request handling, using body-parser.
* Read Query-String (HTTP Request) parameters.
* Redirect
* PRG Pattern
* Cookies
* Sessions - Concepts and code samples
* What is session-tracking and how to track-session when cookies are disabled in browser?
* Authentication | login form | session-based authentication POC
* How to pass data using session from one page to another e.g. messages, URLs?
* Restful API in express (CRUD)
* Server-side rendering
* Tokens
* Error handling using try catch.
* http status codes
* MVC Architecture

<https://chat.openai.com/share/d6c9a181-19f5-4991-98a6-81204cae36ee>

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**FILE 4**

**Npm node.js**

What is npm (Node Package Manager)?

Callback hell

require and export modules.

http module to handle web requests.

Handling request based on URL pattern.

Sending custom status code and headers in http response

Sending data reading a file in http response

<https://chat.openai.com/share/8d1197ac-e7dd-47a6-a8bc-163644f3abc5>

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**DNS + Hosting Server**

Root Zone Database

Root NS

TLD NS

Domain Name Registry

Domain Name Registrar

DNS Records

DNS Setting  
DNS protocol.

Hosting Server Types

What is whois server?

<https://chat.openai.com/c/86e04a2e-5d9b-4806-a70b-2b5bbf53d488>

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SEO - How search engine work?

Crawling [sitemaps, robots.txt]

<https://issitedownrightnow.com/sitemap.xml>

<https://lyricsmeanings.com/sitemap.xml>

Google Search Console - Demo. (Sitemaps, Performance, Crawling Stats, Crawling Errors, etc)

Indexing

Ranked Retrieval

Keyword Research

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**Quiz 3**  
Session Handling

What is REST API? Creating and Consuming REST API.

How DNS work?  
What is DNS resolver and how it works?  
Role of different type of name servers  
Types of NS records

**Quiz 4**

REST APIs (development and consumption)

Types of hosting servers

Crawling (what is sitemap, robots.txt, type of crawling errors, crawl budget, crawl depth, etc.)

Keyword Research fundamentals (broad and long-tail keywords, traffic, keyword difficulty, trend, etc.)

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**MongoDB (Mongoose)**

Models, Events

Database connectivity

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**React**

What is Virtual DOM

What is JSX?

Components in react.

React component life cycle (Mount Unmount, update(re-Rendering))

How to consume API'S in react

using fetch or axios, how to handle events like onClick in react

React state managment

UseState, Use effect

how to pass data from parent component to child using Props

form handling in react