Introduction To Backend API Development

What is API?

API which stands for Application Programming Interface, is a set of definitions and protocols for building and integrating applications software.

HTTP Protocol

Hypertext Transfer Protocol - this is the internet protocol that powers the web. It is how browsers and web servers communicate.

- It involves Requests and Responses
- It also includes what we called **header** and **body**

Rest (Restful)

Rest or Restful stands for Representational State Transfer Protocol. It's a style for building APIs. It provides us with a set of guidelines and principles when building APIs to help us deliver a standard and easy to consume API.

It heavily relies on HTTP methods and status codes.

By standard, Rest APIs uses JSON data format/structure for it's requests and response data.

Other types of API standards/protocols for building APIs are:

1. Soap - which uses XML for it's data structure. SOAP is more strict than rest, and older than rest.
2. Graphql - which was brought to us by Facebook, is another type of technology and standards for building APIs.

JSON

Json stands for JavaScript Object Notation, and its basically a lightweight data structure for transfering data over APIs. You will usually see or use JSON when you are working with APIS.

HTTP Methods

They are also referred to HTTP verbs. There are 2 standard methods that are used by browsers, **GET** and **POST**.

1. GET - to retrieve/query data from the server
2. POST - to submit data to the server
3. PUT - to replace an existing resource/data on the server
4. PATCH - to update the fields of an existing resource/data on the server
5. DELETE - to delete a data/resource from the server

HTTP Status Codes

1. 200
2. 201
3. 204
4. 302
5. 304
6. 400
7. 401
8. 403
9. 404
10. 500
11. 503