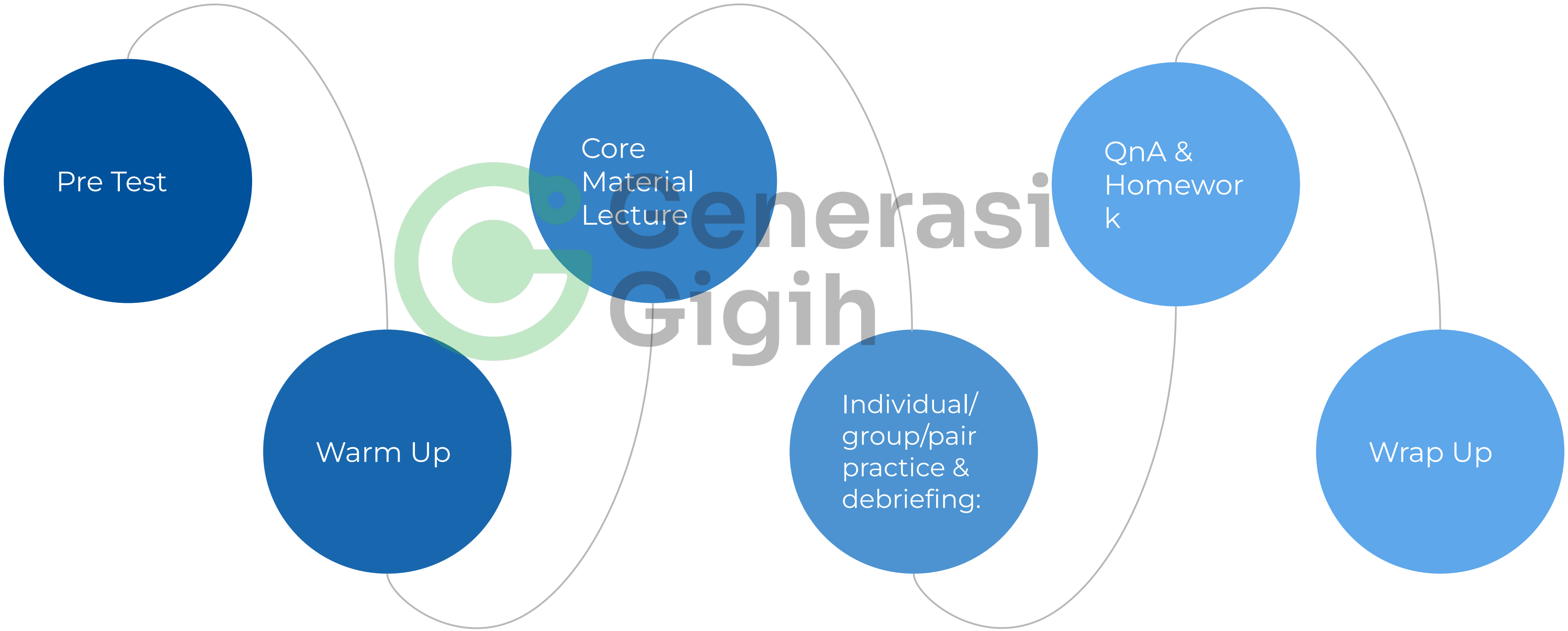
Full Stack Engineer

Module 6.1: Connecting React with Express + MongoDB

Our Agenda



Pre Test

Warm Up

Core Material Lecture

Individual/ group/pair practice & debriefing:

QnA & Homewor k

Wrap Up

Let’s Warm Up!

Let’s Discuss

[Session outline]

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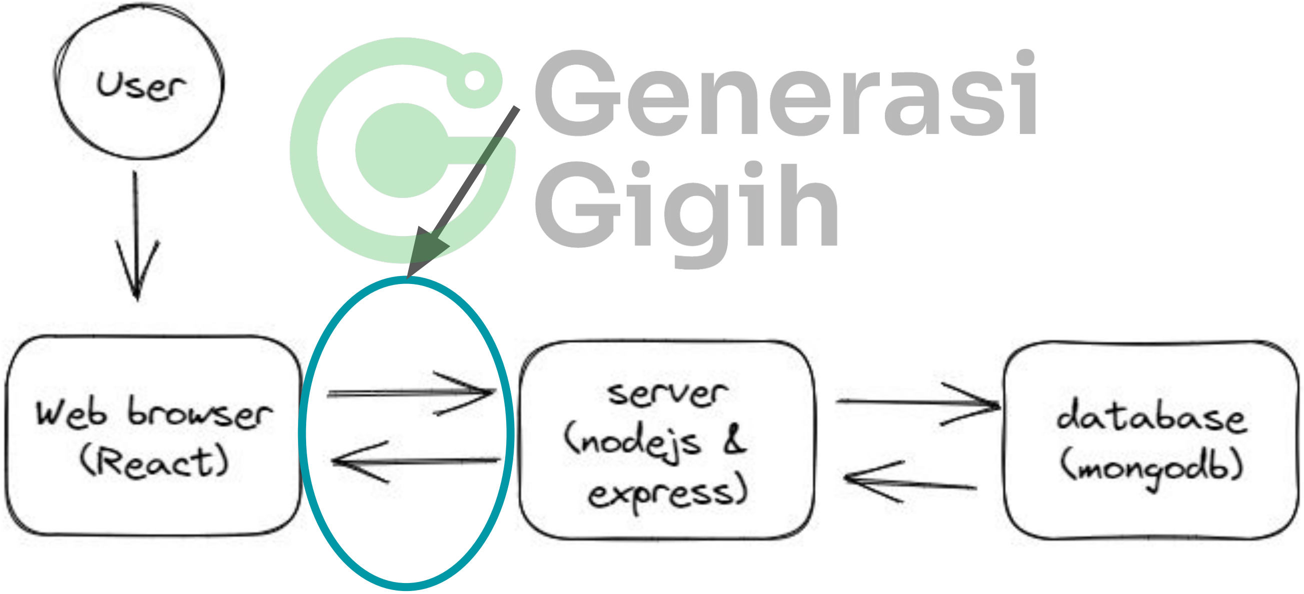
Let’s Talk About The Materials

Review: What we learn so far

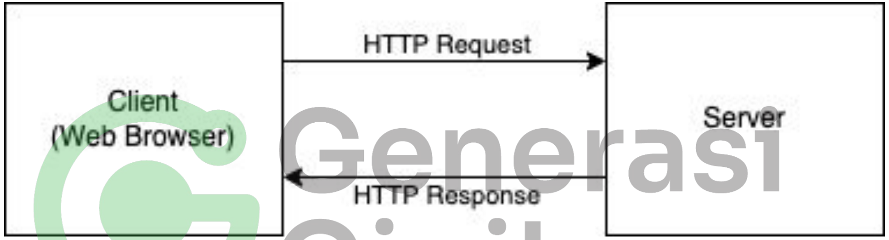
1. Creating a Backend app with Express
2. Connecting the Backend app with Mongo
3. Creating a Frontend app with React

What is the next step?

We need to connect our React app with the Express app



Review: HTTP call



HTTP (HyperText Transfer Protocol) is a protocol designed to standardize the communication between client and server

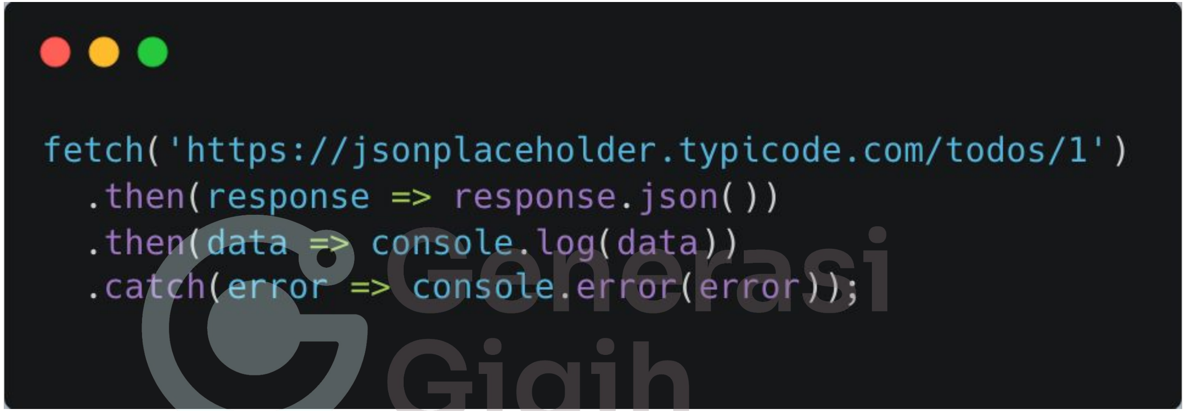
HTTP is built on top of TCP, a connection oriented protocol that provide reliable data transmission over the internet protocol.

HTTP Client

There are several HTTP Client in javascript

1. XMLHttpRequest
2. **fetch()**
3. Third party library, e.g., Axios

fetch()



```
fetch('https://jsonplaceholder.typicode.com/todos/1')
  .then(response => response.json())
  .then(data => console.log(data))
  .catch(error => console.error(error));
```

Code Sample

Quiz: translate the above code to async/await

CORS

- Cross-Origin Resource Sharing
- security feature implemented in web browsers that restricts web pages from making requests to a different domain than the one that served the web page.
- Reason why you *might* encounter this
  - Your React app runs in localhost:3000
  - Your Express backend runs in localhost:5000
  - Since both of the URL is different, your React App is blocked to call Express backend

Why browser implement CORS

- Designed to mitigate the risk of cross-site request forgery (CSRF or XSRF).
- CSRF: a type of attack where an attacker tricks a user into performing an action on a web application without their knowledge or consent.

How to avoid CORS issue

- In Development, you can use Proxy
  - Do not use this in Production
- Enable CORS on Express itself
  - https://expressjs.com/en/resources/middleware/cors.html

Next step

1. Run the express server alongside with the CRA application. Ensure that the port is different.
2. Open the React app.
3. Check if the React app is calling the Express Backend
   a. Go to dev tools
   b. See in the network tab, it should list the express API as one of the API called

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Discussion/Hands On Assignment/Study Case about the material

Now since we have both our React and Express ready, let's connect those two

- Whenever user plays the song, send API request to Express
- Replace the dummy Recommendation with the actual data from Backend
    - Use the Get list of songs to be sorted by most played API
- (Bonus) connect the rest of features if not yet done

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Showcase Time!

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Q&A!

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Finally, Let’s Wrap Up!

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See you in the next session!