

Session 06

Web API what is it?

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Agenda

- Attendance
- Branches
- What is an Web API?
- API Paradigm
- Assignment

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Attendance

- Change in attendance
- Take attendance for every 45 min time slot
- 1 Attendance Form
- 2 Quiz
- 3 GitHub

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Branches and Feedback

- Demonstrate how branches works

What is an Web API

- Application programming interface
 - So a interface for programmer to use between systems
- Where are they used?
 - Everywhere
 - *Order fastfood*
 - *Weather*
 - *News*
 - Information system
 - *Backend*
 - *Frontend*
 - *Database*
 - Can also be a standalone product
- Who use them?
 - Everyday people without knowing
 - Programmers and developers
 - *Interaction between systems*
- What is a good API?
 - Usability
 - *Can the value be used*
 - Scalability
 - *Is it easy to scale*
 - Performance
 - *How is the performance of the API*
 - Documentation
 - *Is the documentation clear and easy to read*

API Paradigm

- Request-response
 - Exposed through HTTP(S)
 - User make a request the system respond
 - Typically
 - *GraphQL*
 - *RestFULL*
 - *Remote Procedure Call*
- Event-driven API
 - But what happens if we want to poll?
 - This is where event driven comes
 - *When a event happens get an update*
 - Typically
 - *WebHooks*
 - *WebSockets*
 - *HTTP Streaming*

REST

/ Person / Teachers
/ Person / Students

- REpresenting State Transfer

- Resource *endpoint*

- Entity that can be handled

- Use standard HTTP(S) method

- Get *← Read*
- Post *← Write*
- Put *← Write*
- Patch *← Update*
- Delete *← Delete*

CRUD

- Common rules

- Resource is a endpoint and a noun

- *1 for collections*
- *1 for items*

- Standard return code is used

- *4xx server error*

- Return JSON objects *←*

- Relationship between resource

- *Sub resource instead of another resource*

GraphQL

- Graph Query Language
- Endpoint
 - 1 endpoint – body containing query
- Use standard HTTP(S) method
 - Get *Read*
 - Post *Write*

/data

*{
 persons[
]
}*

Webhooks

- Endpoint
 - POST
- Returns data when updated – “real time” data
- Beaware of:
 - Failures and retries
 - *Should we spam failures?*
 - Security
 - *Open channel*
 - Firewalls
 - *Firewalls can block data*
 - Noise
 - *What happen if there is 1k event/second ????*

WebSocket

- Two-way streaming service
- Think messaging apps – send message and repond to message



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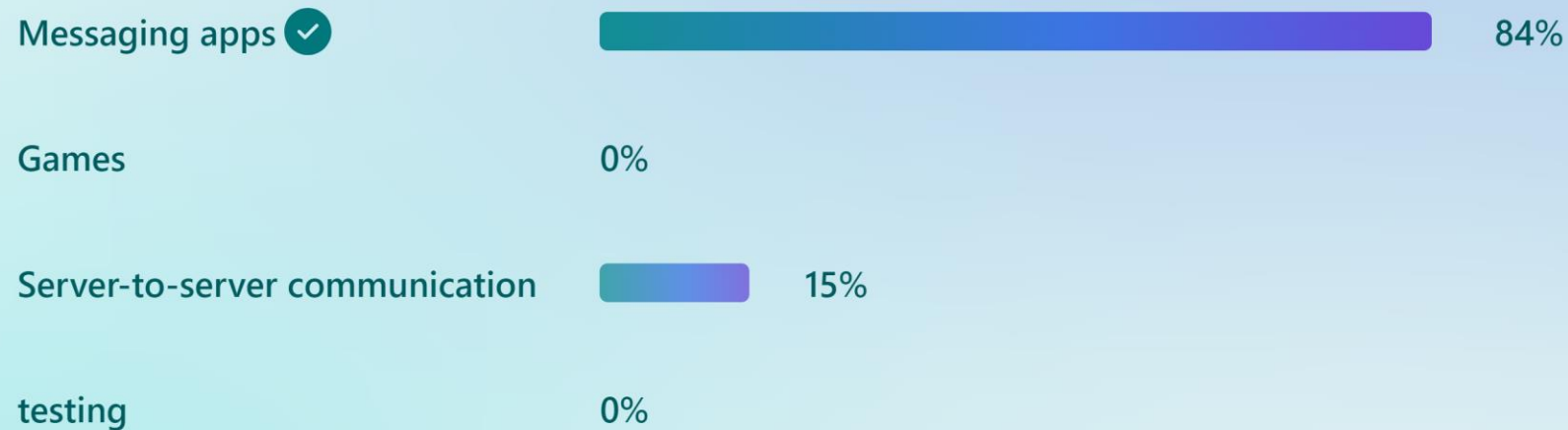


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19 indsendte svar

Where is WebSocket used?



Trækort

Søjle



15 af 15



Skjul korrekt svar

Assignment

- In your groups from Markus course, discuss which API can be used where in a SoMe Application
- After discussion individualle push your arguments and reasoning to GitHub NO LATER THAN 10:50