

Implement Backend APIs and Introduction to JWT



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CO-FOUNDER AND ENGINEER

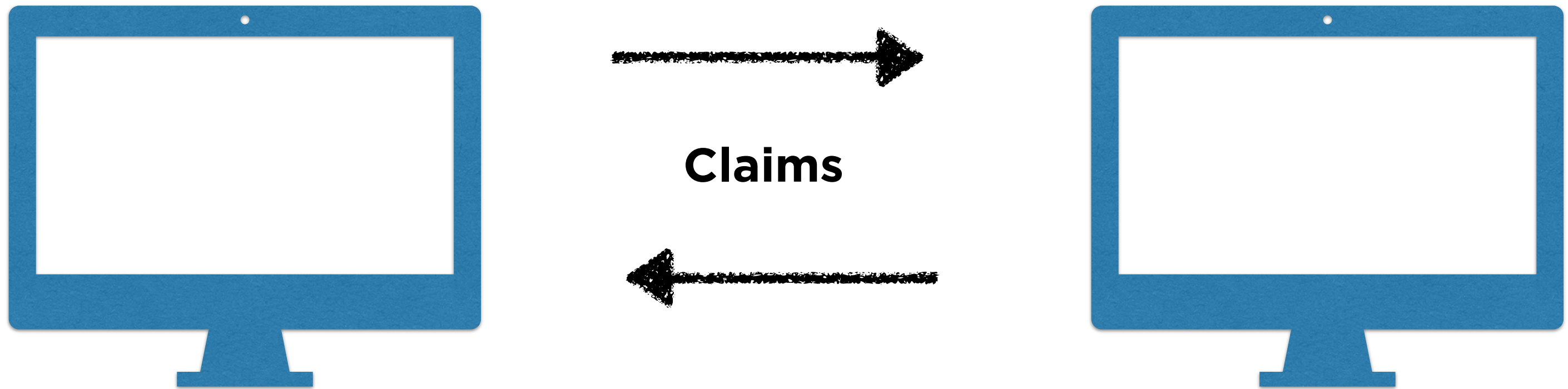
@deekshasharma25 www.bonsailabs.com

Agenda

- Implement backend api
- Hook up with front end code
- About JSON Web Token

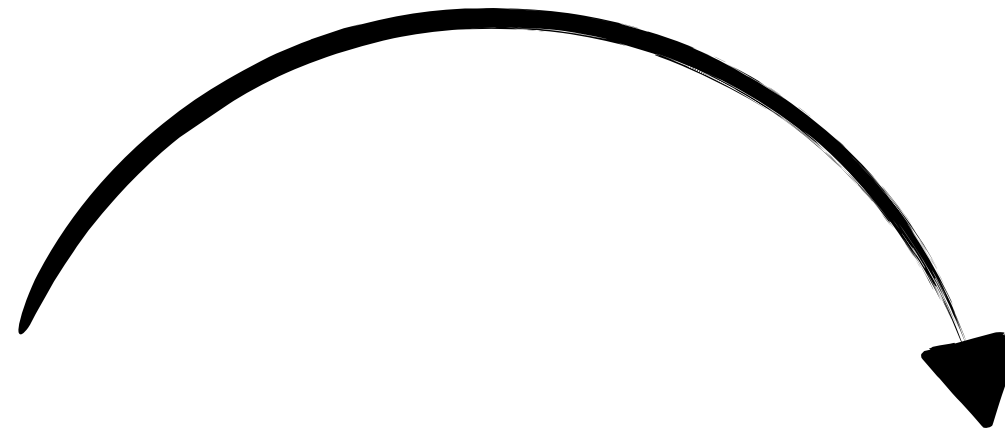
JSON Web Token (JWT)

JSON Web Token



Signed/Encrypted

JSON Web Token



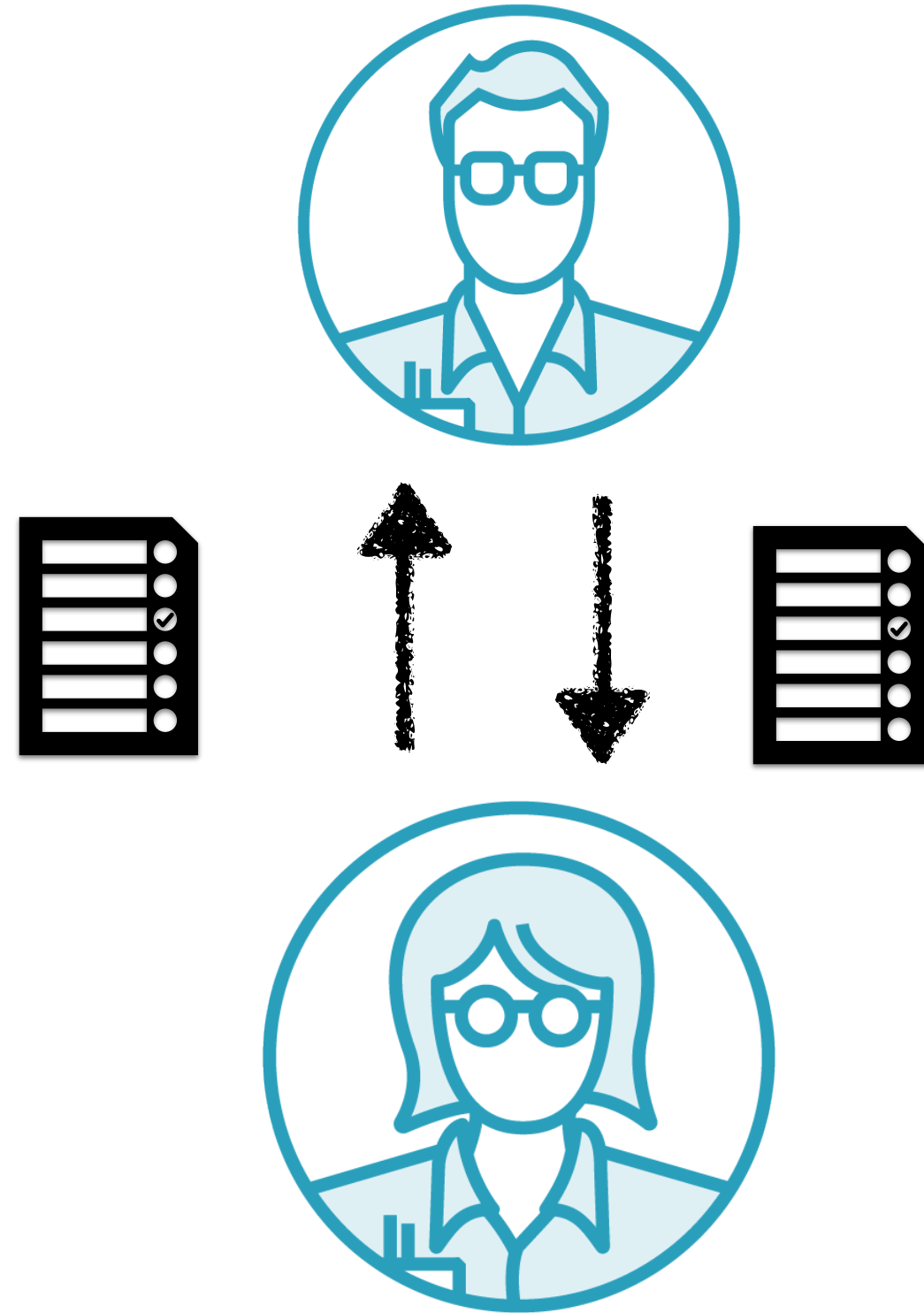
Signed JWT



**JSON Web Signature
(JWS)**

{ key: value }

Claim



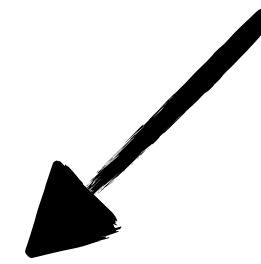
JWT Structure

eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.

eyJzdWUiOiIiMjM0NTY3ODkwIiwiaXNjaWkiOiJpvaG4g

RG9IliwiaWF0IjoxNTE2MjM5MDIyfQ.

SfIKxwRJSMeKKF2QT4fwpMeJf36POk6yJV_adQssw5c



Header

```
{  
  "alg": "HS256",  
  "typ": "JWT"  
}
```

eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.

eyJzdWUiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkpvaG4g

RG9IiwiaWF0IjoxNTE2MzIyMDIyfQ.

SflKxwRJSMeKKF2QT4fwpMeJf36POk6yJV_adQssw5c

Payload

```
{  
  "iss": "1379BEN",  
  "aud": "create",  
  "exp": "1h"  
}
```

eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.

eyJzdWIiOiIxMjM0NTY3ODkwIiwiaXNjaWkiOiJkb290IiwiaWF0IjoxNTE2MzkwMjQyLCJpc29udCI6ImFkb290In0.

RG9IliwiaWF0IjoxNTE2MzkwMjQyLCJpc29udCI6ImFkb290In0.

SflKxwRJSMeKKF2QT4fwpMeJf36POk6yJV_adQssw5c

HS256 - key

Base64URL (header)
Base64URL (payload)

=>

HMAC

Signature

Base64URL

eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.

eyJzdWwiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkpvaG4g

RG9IiwiaWF0IjoxNTE2MzIyMDUyLCJ1aWQiOiJhbm91dCJ9

.SfIKxwRJSMeKKF2QT4fwpMeJf36POk6yJV_adQssw5c

eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.

eyJzdWwiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkpvaG4g

RG9IiwiaWF0IjoxNTE2MjM5MDIyfQ.

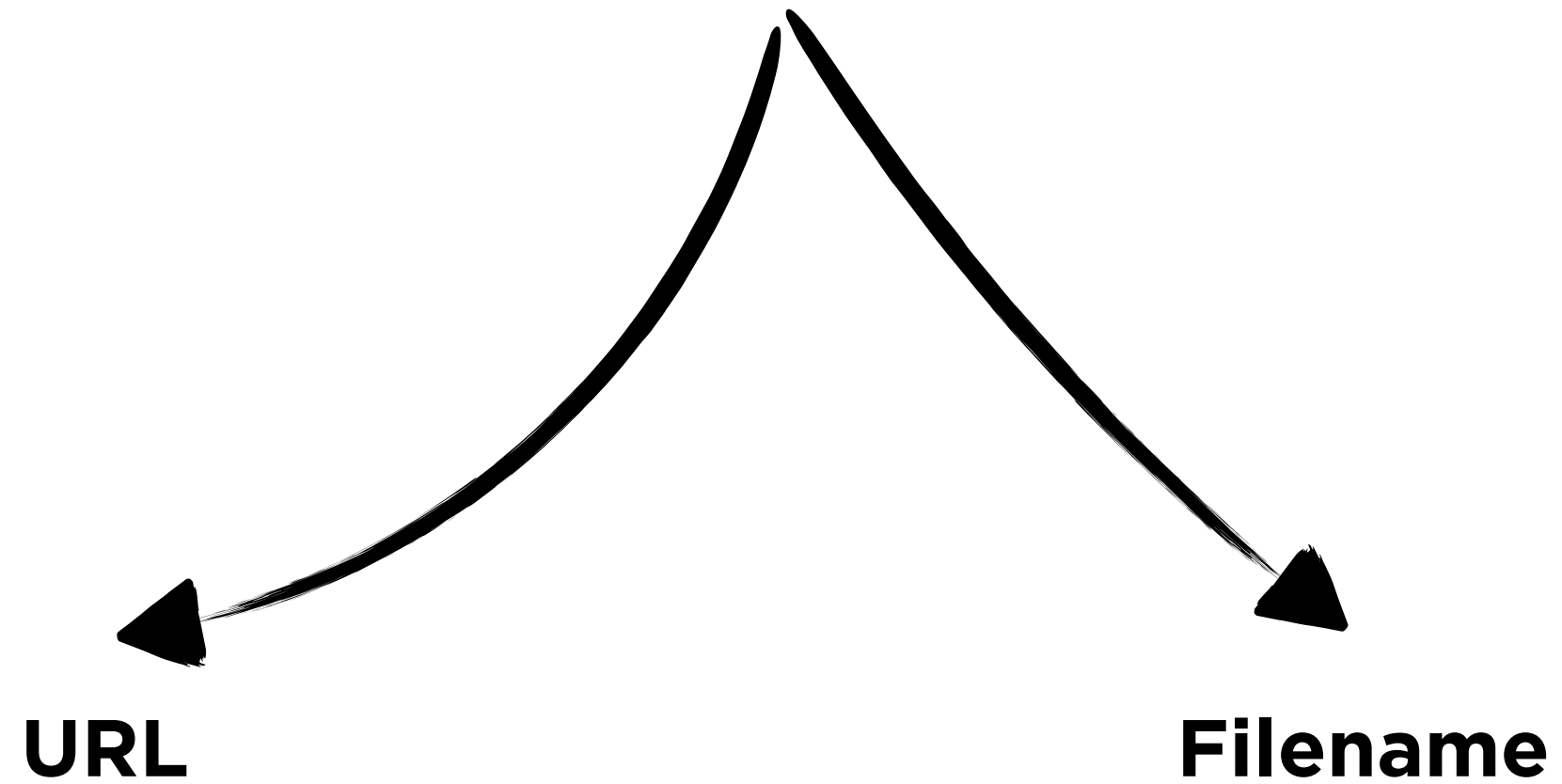
SflKxwRJSMeKKF2QT4fwpMeJf36POk6yJV_adQssw5c

header.payload.signature



JSON Web Token

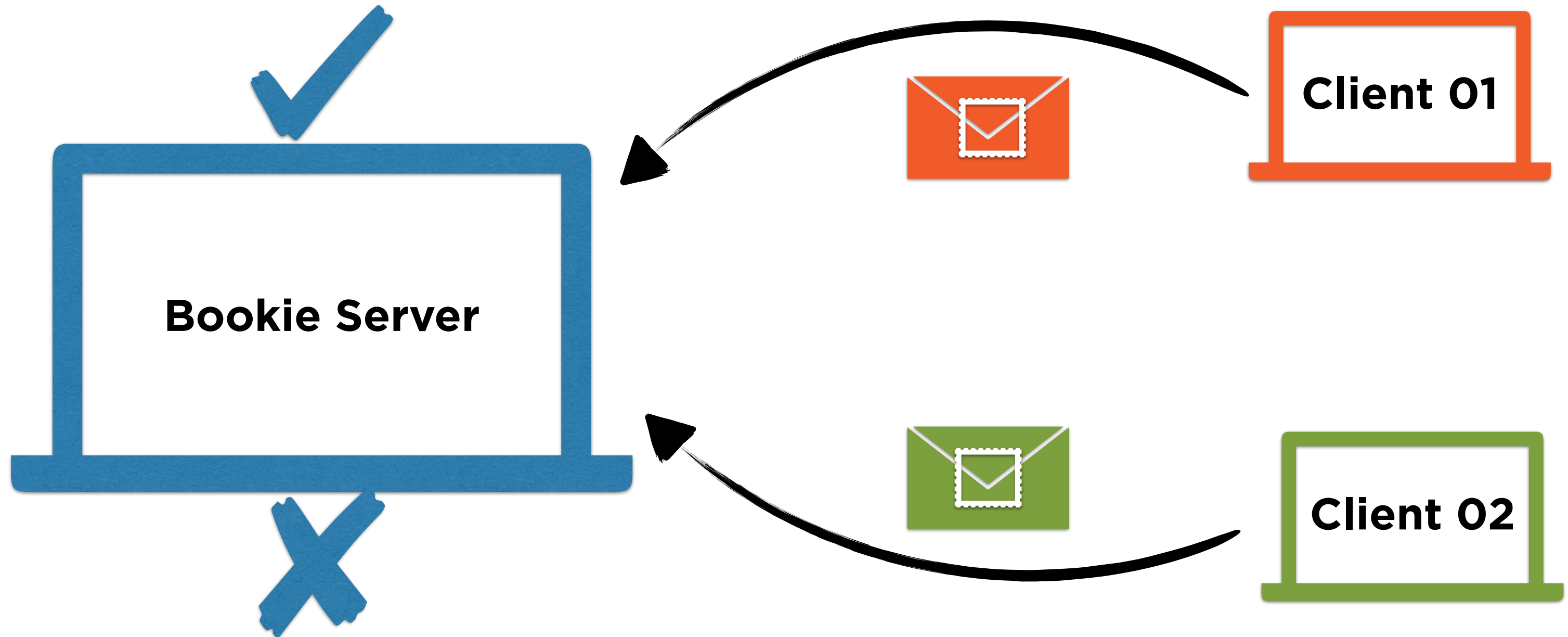
Base64URL Encoding



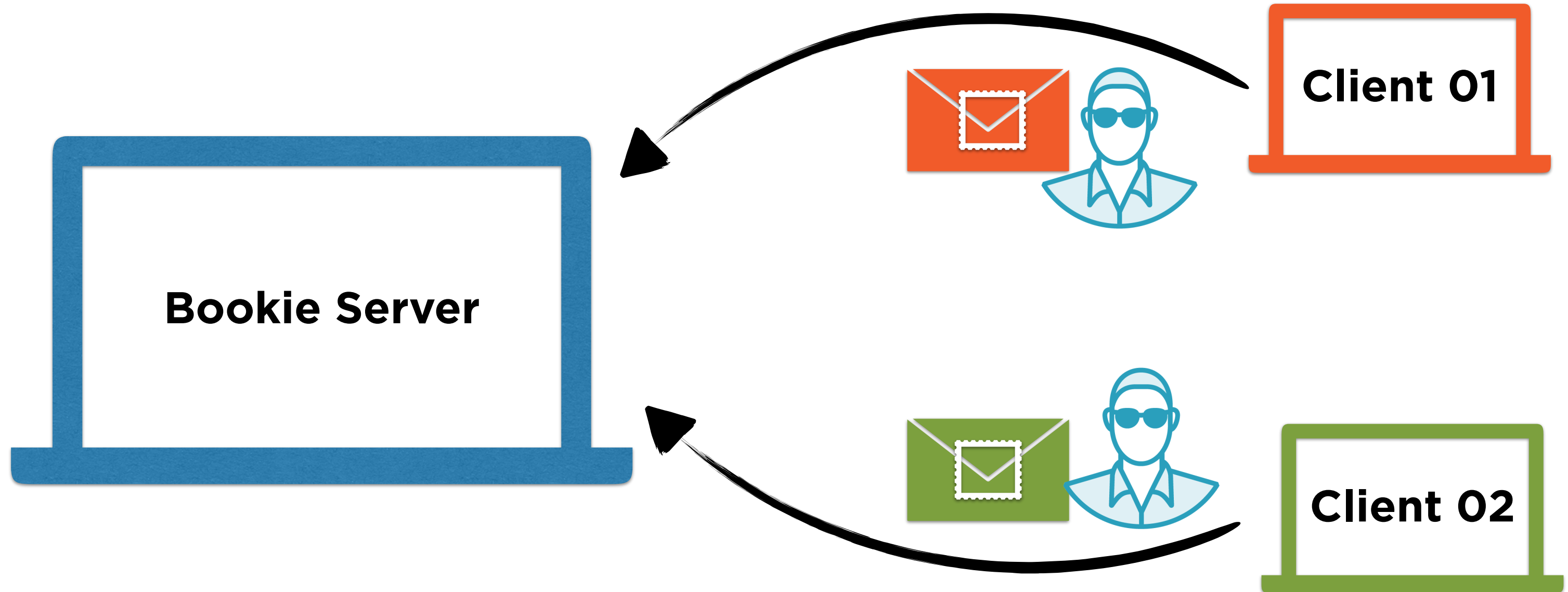
+ → "_"

/ → "_"

Digital Signature - JWT



Digital Signature - JWT



Digital Signature - JWT

Cannot modify



```
{  
  "alg": "HS256",  
  "typ": "JWT"  
}
```

```
{  
  "iss": "1379BEN",  
  "aud": "create",  
  "exp": "1h"  
}
```



jwt.io

Summary

- Backend api - books, users and add book
- Hook up with front end code
- About JSON Web Token