Introduction to JWT as an Absolute Beginner

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1. JWT stands for **JSON Web Token**

- It's a token that is used to authenticate and authorize users in an application.
- "authenticate" means who they're.
- "authorize" means what they can access.
- The token itself contains, all the necessary information about the user, like user ID and role, etc, in a JSON.

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- JWT tokens are typically generated by the server and sent to the client after a successful login.

- The client can then use the JWT token (with each request) to authenticate and authorize itself to the server.

- Typically the token looks like this:

```
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.
eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkpvaG4
gRG9lIiwiaXNTb2NpYWwiOnRydWV9.
4pcPyMD09olPSyXnrXCjTwXyr4BsezdI1AVTmud2fU4
```

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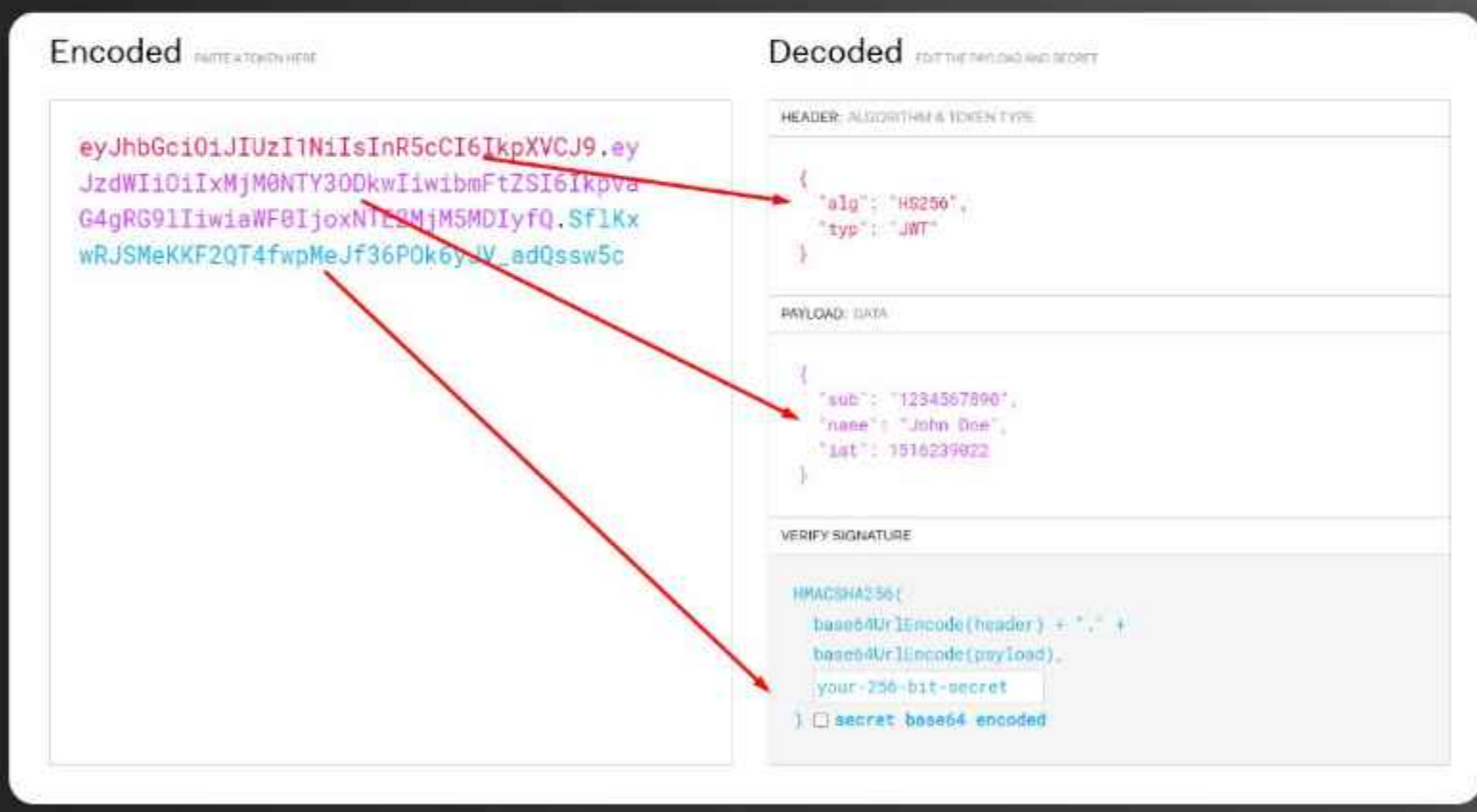
2. JWT has three parts:

- Header (highlighted in red below)
- Payload (highlighted in pink below)
- Signature (highlighted in blue below)

→ On left you can see the encoded token, on right we can see decoded JSON object with 3 parts.



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- The header typically consists of two parts: the type of the token, which is usually JWT, and the signing algorithm being used, such as HMAC SHA256 or RSA.

HEADER: ALGORITHM & TOKEN TYPE

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

- The payload contains the claims, which are statements about an entity (typically, the user) and additional metadata.

- Claims are typically represented as key-value pairs and can include information such as the user's ID, name, email, and roles.

PAYLOAD: DATA

```
{
  "sub": "1234567890",
  "name": "John Doe",
  "iat": 1516239022
}
```

- The signature is used to verify that the sender of the JWT is who it says it is and to ensure that the message has not been tampered with.

- That's a quick introduction to JWT!

- We will see more in-depth concepts of JWT in the upcoming posts.

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❤️ **Thanks** for reading !

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