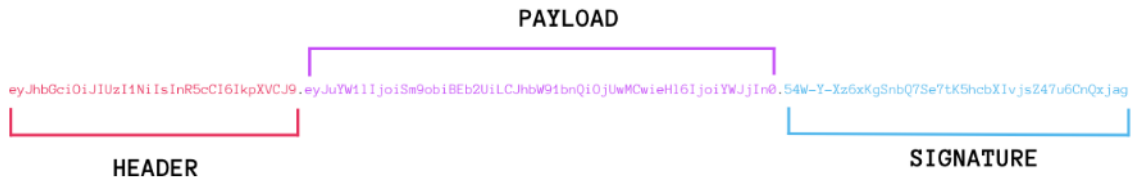
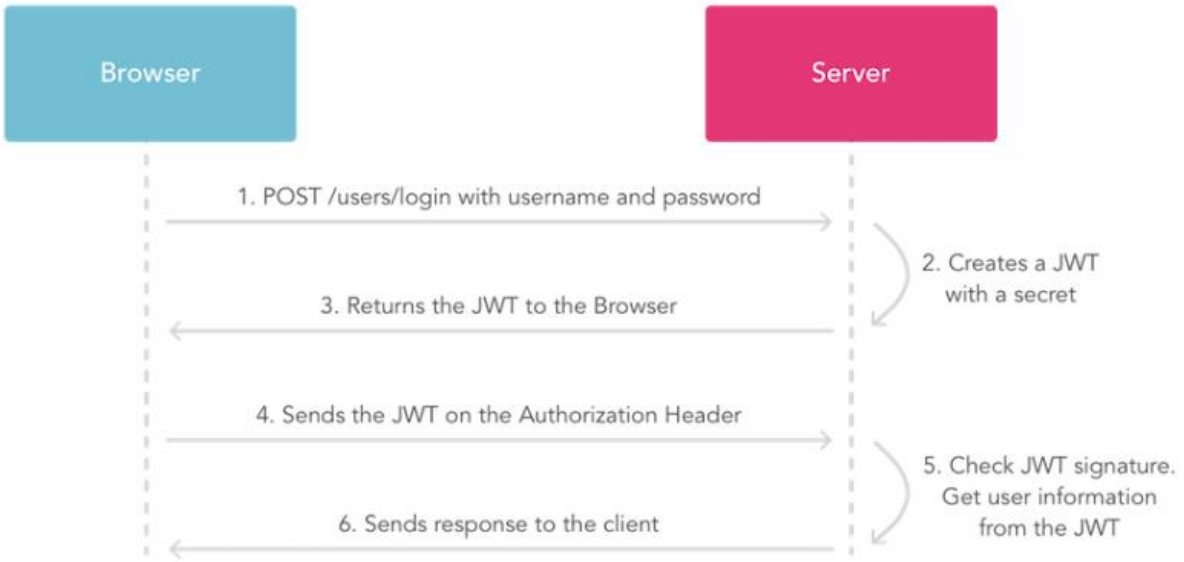
Auth JWT

What is JWT (Json Web Token)?

JSON Web Token (JWT) is a token based authentication between two servers. In this a JSON object that is digitally signed using JSON Web Signature (JWS) and encrypted using JSON Web Encryption (JWE).



Authentication sequence for JWT



What is Auth JWT?

Auth JWT is a helper to achieve JWT authentication in ASP.Net Core applications in an easy and flexible way.

Hashing Algorithms Used

- SHA1
- SHA256
- SHA384
- SHA512

Components of Auth JWT

- TokenRequestModel `is a class which contain properties for Auth JWT payload.`
  - [Note: All properties are not mandatory.]
  - ***Issuer***
  - ***ExpiryInSeconds***
  - ***UserId***
  - ***User***
  - ***Role***
  - ***Audience***
  - ***JwtId***
  - ***Subject***
  - ***CustomProperty***
- AlgorithmType `is constant class to get the algorithm details`
  - ***SHA1***
  - ***SHA256***
  - ***SHA384***
  - ***SHA512***
- JWTModule `is a class which contains all the interfaces for Auth JWT.`
  - ***CreateToken(<TokenRequestModel>, <secrect>, <AlgoritmType>)*** `-> Function creates the token`
  - ***VerifyToken(<token>, <secrect>, <ValidateModel Optional>)*** `-> Function verifies the token.`
- TokenResponseModel `is a class which contains the Status and Content of the Auth JWT response.`
  - ***Status***
  - ***Content***
- ValidateModel `is a class which contain properties to be verified in the VerifyToken() function.`
  - [Note: All properties should match the TokenRequestModel.]
  - ***Issuer***
  - ***UserId***
  - ***User***
  - ***Role***
  - ***Audience***
  - ***JwtId***
  - ***Subject***
  - ***CustomProperty***

Configuration of Auth.JWT

Step 1:

Add the service to the **ConfigureServices(IServiceCollection services)** function.

```
services.AddAuthService();
```

```
0 references | 0 changes | 0 authors, 0 changes
public void ConfigureServices(IServiceCollection services)
{
    services.AddAuthService();
}
```

Step 3

Implement Constructor injection in the required classes, to get the object of Auth.JWT.

```
private readonly JWTModule _module;
private readonly TokenRequestModel _reqModel;
private readonly ValidateModel _validateModel;

0 references
public TestAuthJwt(JWTModule module, TokenRequestModel reqModel, ValidateModel validateModel)
{
    _module = module;
    _reqModel = reqModel;
    _validateModel = validateModel;
}
```

Sample Code Snippet

In the below code, I have used Auth.JWT to create and validate the token in a simple class for better understanding.

```
class TestAuthJwt
{
private readonly JWTModule _module;
private readonly TokenRequestModel _reqModel;
private readonly ValidateModel _validateModel;

public TestAuthJwt(JWTModule module, TokenRequestModel reqModel, ValidateModel
validateModel)
{
_module = module;
_reqModel = reqModel;
_validateModel = validateModel;
}
public void Execute()
{
string secrect = "F4760D";

_reqModel.Issuer = "authjwt_team";
_reqModel.ExpiryInSeconds = "1000";
_reqModel.UserId = "U1324322";
_reqModel.User = "sambeet";
_reqModel.Role = "admin";
_reqModel.Audience = "authjwt_app";
_reqModel.JwtId = "J4433421";
_reqModel.Subject = "authjwt_subject";
_reqModel.CustomProperty.Add("CustomField1","auth_custom1");
_reqModel.CustomProperty.Add("CustomField2", "auth_custom2");
```

```
var result = _module.CreateToken(_reqModel, secrect, AlgorithmType.SHA256);

Console.WriteLine("************* Create Token Result***************");
Console.WriteLine(Newtonsoft.Json.JsonConvert.SerializeObject(result));

_validateModel.Issuer = "authjwt_team";
_validateModel.UserId = "U1324322";
_validateModel.User = "sambeet";
_validateModel.Role = "admin";
_validateModel.Audience = "authjwt_app";
_validateModel.JwtId = "J4433421";
_validateModel.Subject = "authjwt_subject";
_validateModel.CustomProperty.Add("CustomField1", "auth_custom1");
_validateModel.CustomProperty.Add("CustomField2", "auth_custom2");

var verifyResult = _module.VerifyToken(result.Content, secrect, _validateModel);

Console.WriteLine("************* Verify Token Result***************");
Console.WriteLine(Newtonsoft.Json.JsonConvert.SerializeObject(verifyResult));

Console.ReadKey();
}
}
```