NodeJS

Agenda

01 Events

02 Steps in Writing Event Driven Code

03 EventEmitter

04 Registering Callbacks

05 Emitting Events

06 Emit and Respond to Events

07 Benefits of Event Driven Programming

08 Streams

09 Types of Streams

10 Read Data from a file using streams

Agenda

11 Write Data to a file using streams

12 Stream Events

13 Process Stream Events

HTTP

What is HTTP?

What is HTTP?

HTTP stands for Hypertext Transfer Protocol. It is a hypertext protocol that is used on the internet

The communication between clients and servers on the web is done on the internet using the HTTP protocol

HTTP Headers

HTTP Headers

HTTP headers are used to enable the client and the server to pass additional information with an HTTP request or response.

An HTTP header can be thought of as a key-value pair which consists of a case-insensitive key followed by a colon (:), then by its value.

HTTP Response Status Codes

HTTP Response Status Codes

HTTP Status Codes are 3 digit numeric codes that are sent by the server to the client within the response. They indicate whether a response was completed successfully

The first digit of the response code define the class of response

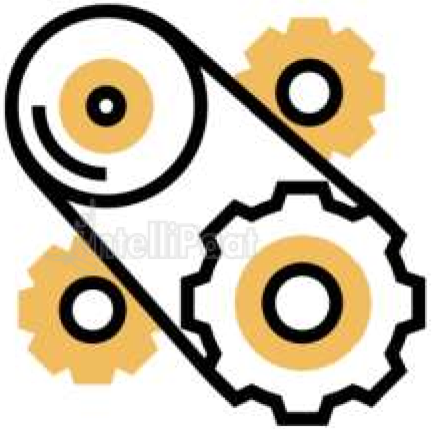
HTTP Response Classes

HTTP Response Classes

There are 5 HTTP Response Classes

- 1xx
- 2xx
- 3xx
- 4xx
- 5xx

Request has been received and the process is continuing



HTTP Response Classes

There are 5 HTTP Response Classes

- 1xx
- 2xx
- 3xx
- 4xx
- 5xx

Action was successfully received, understood, and accepted

HTTP Response Classes

There are 5 HTTP Response Classes

- 1xx
- 2xx
- 3xx
- 4xx
- 5xx

Further action must be taken in order to complete the request

HTTP Response Classes

There are 5 HTTP Response Classes

1xx

2xx

3xx

4xx

5xx

The request contains incorrect syntax or cannot be fulfilled

HTTP Response Classes

There are 5 HTTP Response Classes

- 1xx
- 2xx
- 3xx
- 4xx
- 5xx

The server failed to fulfill an apparently valid request

Node HTTP Module

Node HTTP Module

Node.js has a built-in module called HTTP, which allows Node.js to transfer data over the Hyper Text Transfer Protocol (HTTP)

The http module can be used to create an http server that can listen to requests on a specified port and respond to those requests

Demo: Create an HTTP Server

HTTP Form Data

HTTP Form Data

Using the http protocol users can also send data submitted via a from

This form might be used to submit login credentials, a complaint and so on. This form data is sent to the server inside the request and can be parsed by the server to extract the user submitted data

HTTP Form Data Request Type

HTTP Form Data Request Type

There are 2 types of requests you can use to submit a form using HTTP protocol

GET

POST

A GET request gets the data from the form encodes it in the URL as query string parameters and sends it to the server. Data sent using GET request is visible in the URL

HTTP Form Data Request Type

There are 2 types of requests you can use to submit a form using HTTP protocol

GET

POST

A POST request gets the data from the form encodes it sends it to the server in the request. Data sent using POST request is not visible in the URL

Demo: Process Form Data

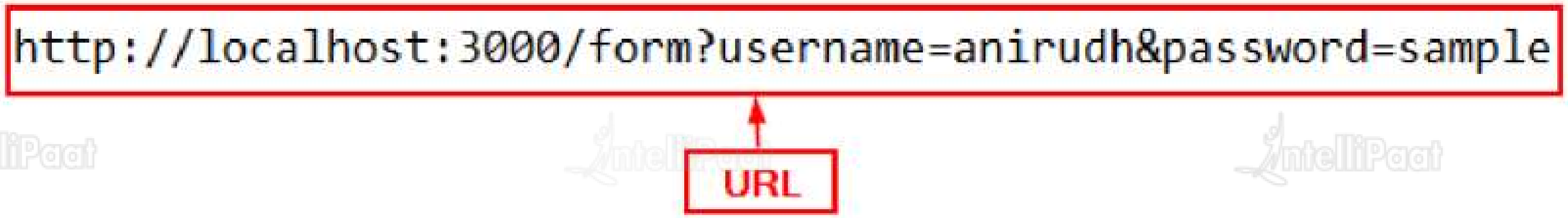
Query string

Node Query string Module

Processing Form Data using HTTP Module

We can process the from data submitted to our server using the HTTP module

We do this by registering an event handler on the response object for the event ‘data’, and when we hit the ‘end’ request we can now process the from data

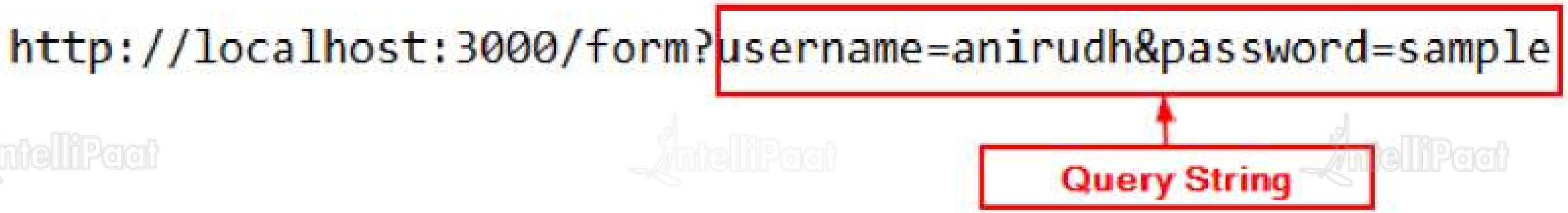


```
http://localhost:3000/form?username=anirudh&password=sample
```

Processing Form Data using HTTP Module

Query strings are used to pass data from client to server by encoding data in the URL

Query strings can be thought of as key-values pairs that are encoded in the url

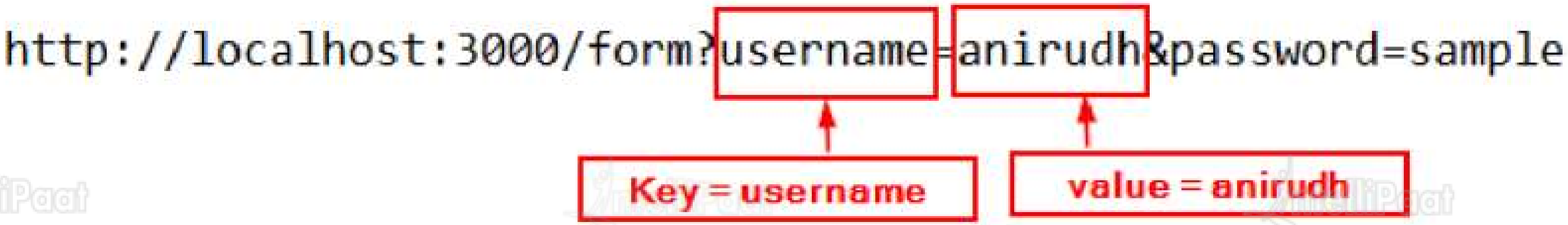


```
http://localhost:3000/form?username=anirudh&password=sample
```

Processing Form Data using HTTP Module

Query strings are appended at the end of the of the URL as key value pairs in the format ‘key=value’

Query strings in URL begin after the URL and a question mark followed by key=value and multiple key-values are separated by the ampersand sign ‘&



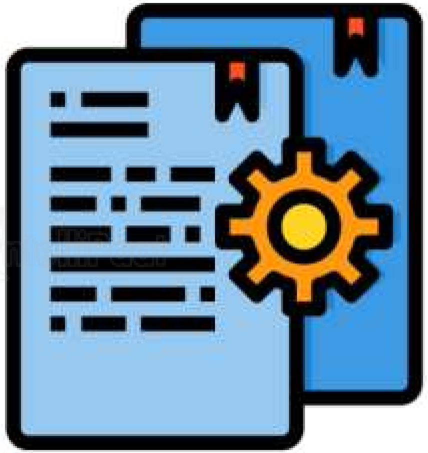
```
http://localhost:3000/form?username=anirudh&password=sample
```

Querystring module

Querystring module

Node js comes with an in-built querystring module that allows you to deal with querystrings inside your node application

The querystring module contains a number of in-built methods that deal with encoding and decoding urls



Querystring methods

HTTP Response Classes

There are six important querystring methods

- encode
- decode
- escape
- parse
- stringify
- unescape

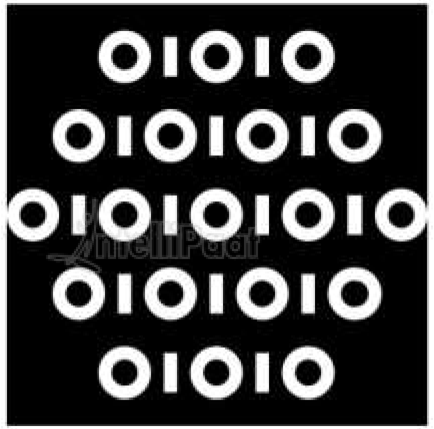
encode method produces a URL query string from a given object by iterating through the object

HTTP Response Classes

There are six important querystring methods

- encode
- decode
- escape
- parse
- stringify
- unescape

decode method parses a URL query string into a collection of key and value pairs



HTTP Response Classes

There are six important querystring methods

- encode
- decode
- escape
- parse
- stringify
- unescape

escape method performs URL encoding on the given string. It is used internally by stringify and encode methods

HTTP Response Classes

There are six important querystring methods

- encode
- decode
- escape
- parse
- stringify
- unescape

It is just an alias for the decode method of the querystring module

HTTP Response Classes

There are six important querystring methods

- encode
- decode
- escape
- parse
- stringify
- unescape

It is just an alias for the encode method of the querystring module

HTTP Response Classes

There are six important querystring methods

- encode
- decode
- escape
- parse
- stringify
- unescape

unescape method performs URL decoding on the given string. It is used internally by parse and decode methods

Encode Querystring

Decode Querystring

Quiz

Quiz

1. Which method is used to read file synchronously?

A readFileSynchronously

B readFileSync

C readFS

D readFile

Quiz

1. Which method is used to read file synchronously?

A	readFileSynchronously
[✓ B]	[✓ readFileSync]
C	readFS
D	readFile

Quiz

2. Which method is used to read file asynchronously?

A readFileAsynchronously

B readFileAsync

C readFAS

D readFile

Quiz

2. Which method is used to read file asynchronously?

A readFileAsynchronously

B readFileAsync

C readFAS

[✓ D readFile]

Quiz

3. Which constant is NodeJS is used to refer to absolute path of the current file?

A	__filename
B	__dirname
C	__absoule_file_path
D	__abs_filename

Quiz

3. Which constant is NodeJS is used to refer to absolute path of the current file?

A __filename

B __dirname

C __absoule_file_path

D __abs_filename

Quiz

4. Which constant is NodeJS is used to refer to absolute path of the current directory?

A __filename

B __dirname

C __absoule_dir_path

D __abs_directory

Quiz

4. Which constant is NodeJS is used to refer to absolute path of the current directory?

A __filename

[✓ B __dirname]

C __absoule_dir_path

D __abs_directory

Quiz

5. Which property of the filestats object can be used to determine the time the file was last accessed?

A	access_timestamp
B	birthname
C	atime
D	uid

Quiz

5. Which property of the filestats object can be used to determine the time the file was last accessed?

A access_timestamp

B birthname

C atime

D uid

☎ India: +91-7847955955

US: 1-800-216-8930 (TOLL FREE)

✉ support@intellipaat.com

24/7 Chat with Our Course Advisor