Processing URL, QueryString and Paths

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https://www.example.com/products?id=123&page=1#overview

What are URLs?

URL stands for Uniform Resource Locator. It is a reference, or **an address used to locate resources on the internet**, such as web pages, images, documents, and other files.

Ex: https://www.google.com/search?q=Value+of+pi

A typical URL has the following components:

- **Protocol:** This indicates the protocol used to access the resource, such as HTTP, HTTPS, FTP, etc.
- **Domain**: This specifies the domain name or IP address of the server where the resource is hosted.
- **Path**: This is the specific location of the resource on the server's file system.
- **Query String:** This is optional and is used to pass parameters to the resource. It starts with a question mark (?) and consists of key-value pairs separated by ampersands (&).
- **Fragment:** Also optional, this specifies a specific section within the resource, typically used in HTML documents to navigate to a specific part of a webpage.

https://www.example.com/products?id=123&page=1#overview

- **Protocol**: https://

- **Domain**: www.example.com

- **Path**: /products

- **Query String**: id=123&page=1

- **Fragment**: overview

Processing URLs:

```javascript
const url = require('url');

const urlString =
'http://example.com/path?foo=bar&baz=qux';
const parsedUrl = url.parse(urlString,true);

console.log(parsedUrl.pathname); // Outputs: '/path'
console.log(parsedUrl.query);    // Outputs: { foo:
'bar', baz: 'qux' }
```

Processing QueryString

```javascript
const querystring = require('querystring');

const queryString = 'foo=bar&baz=qux';
const parsedQuery = querystring.parse(queryString);

console.log(parsedQuery); // Outputs: { foo: 'bar',
baz: 'qux' }
```

Create a Node.js application that utilizes the stream and URL modules to handle data submitted through a form on the '/submit' route using the 'GET' method, ensuring that the received data is saved into a file on the backend?

```javascript
const http =require('http');
const fs=require('fs');
const url=require('url');

http.createServer((req,res)=>{
    let parsedURL=url.parse(req.url,true);
    console.log(parsedURL);
    console.log(parsedURL.query.name);
    if(parsedURL.pathname=='/'){
        let readableStream=fs.createReadStream('public/index.html');
        readableStream.pipe(res);
    }else if(parsedURL.pathname=='/submit' && req.method=="GET"){
        let writableStream = fs.createWriteStream('form_data.txt');
        let query = parsedURL.query;
        writableStream.write(query.name+'\n');
        writableStream.write(query.email);
        writableStream.on('finish',() => {
            console.log("Form has been saved Successfully");
        });
        writableStream.end();
        res.end("Data has been successfully saved");
    }
}).listen(4000);
```