

Naming Things with Hashes

ce81da1ea2d1401e623d5f8ca2a4abcf1f145674

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sw@core.io 77a476e029d03facc31fc89da8744654003ac393

HELLO

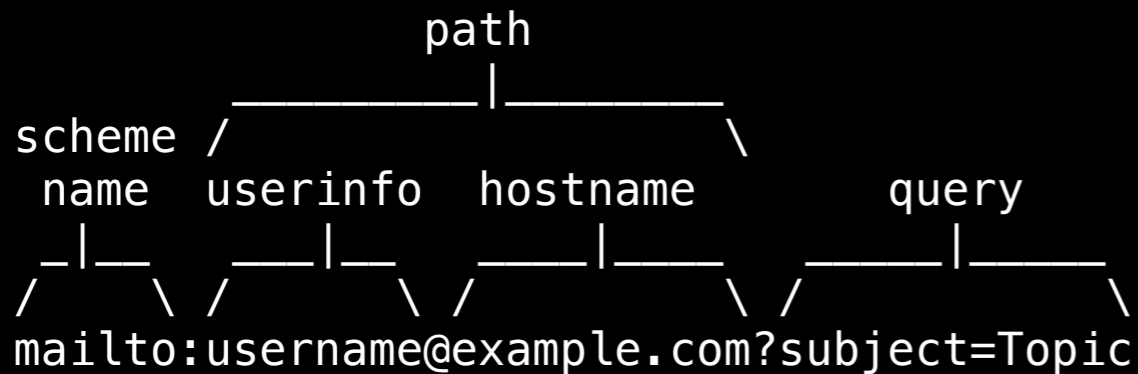
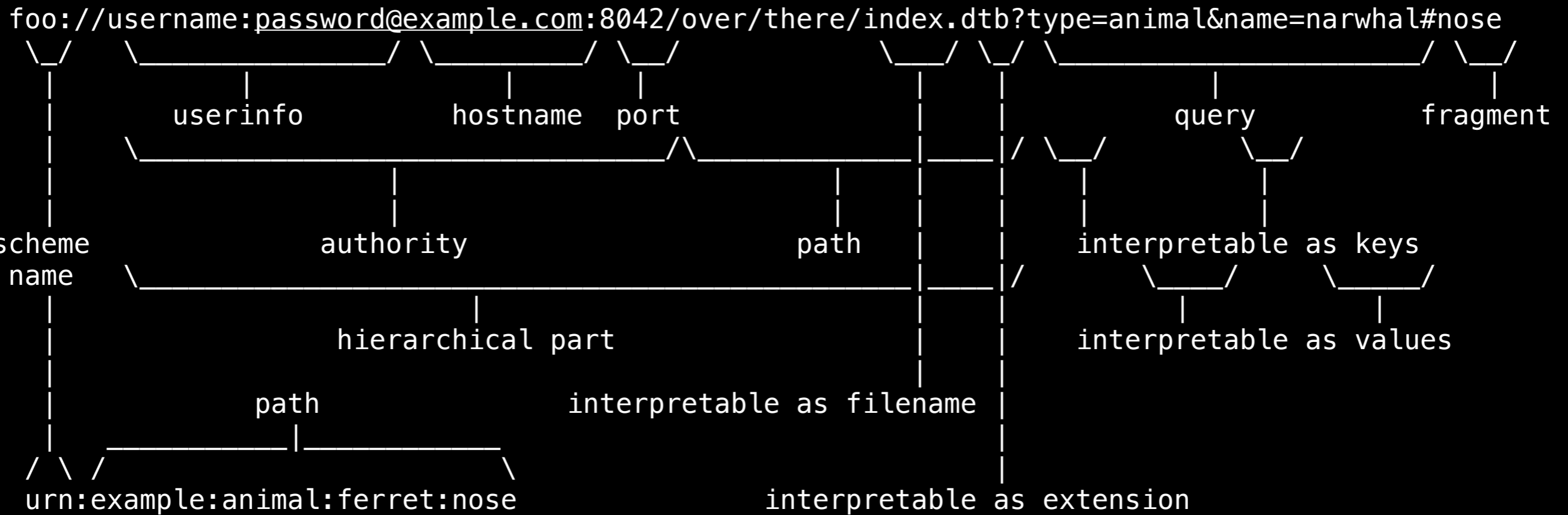
my name is



URI = URL + URN

- <http://www.wikipedia.org>
- http://en.wikipedia.org/wiki/URI_scheme#Examples
- <file:///Users/wiedi/Documents/slides.pdf>
- <mailto:sw@core.io>
- <xmpp:wiedi@freamware.net>
- <urn:isbn:978-3548225623>
- <urn:ietf:rfc:6920>
- <urn:uuid:6e8bc430-9c3a-11d9-9669-0800200c9a66>

URIs



Hashing

```
In [1]: sum([ord(c) for c in "Hello World"]) % 256
```

```
Out[1]: 28
```

```
In [2]: hashlib.sha1("Hello World").hexdigest()
```

```
Out[2]: '0a4d55a8d778e5022fab701977c5d840bbc486d0'
```

Named Information URIs

`ni:///sha-256;UyaQV-Ev4rdLoHyJJWCi110HfrYv9E1aGQA1M02X_-Q`

`magnet:?xt=urn:sha1:YNCKHTQCWBTRNJIV4WNAE52SJUQCZ05C`

Named Information URIs

```
<html>
  <head>
    <title>ni: relative URI test</title>
    <base href="ni://example.com">
  </head>
  <body>
    <p>
      Please check <a href="sha-256;f40xZX...">this document</a>.
      and <a href="sha-256;UyaQV...">this other document</a>.
    </p>
  </body>
</html>
```

.well-known URI

ni:///sha-256;f40xZX_x_F05LcGBSKHWXfwtSx-j1ncoSt3SABJtkGk

ni://example.com/sha-256;f40xZX_x_F05LcGBSKHWXfwtSx-j1ncoSt3SABJtkGk

http://example.com/.well-known/ni/sha-256/f40xZX_x_F05LcGBSKHWXfwtSx-j1ncoSt3SABJtkGk

RFC 6920 – Thanks!

„Naming Things with Hashes“

Use for:

- Caching
- Content Addressable Storage
- Distributed Systems / P2P
- often nicer than UUIDs

Not so good for:

- things that change

Die Datei hat
immer Recht.