

Review:
Building Blocks of the Web

CSCI3110

Department of Computing, ETSU

Jeff Roach

Building Blocks of the Web

- A uniform notation scheme for addressing accessible resources (URI)
- A protocol for transporting messages (HTTP)
- A markup language for formatting hypertext documents (HTML)

URL

- Uniform Resource Locator
- A subset of URIs
- A URI is a URL when
 - it identifies the resource, and
 - it provide a means of locating that resource

URL

- **General notation:**

`scheme://host[:port]/path/.../[;url-params][?query-string][#anchor]`

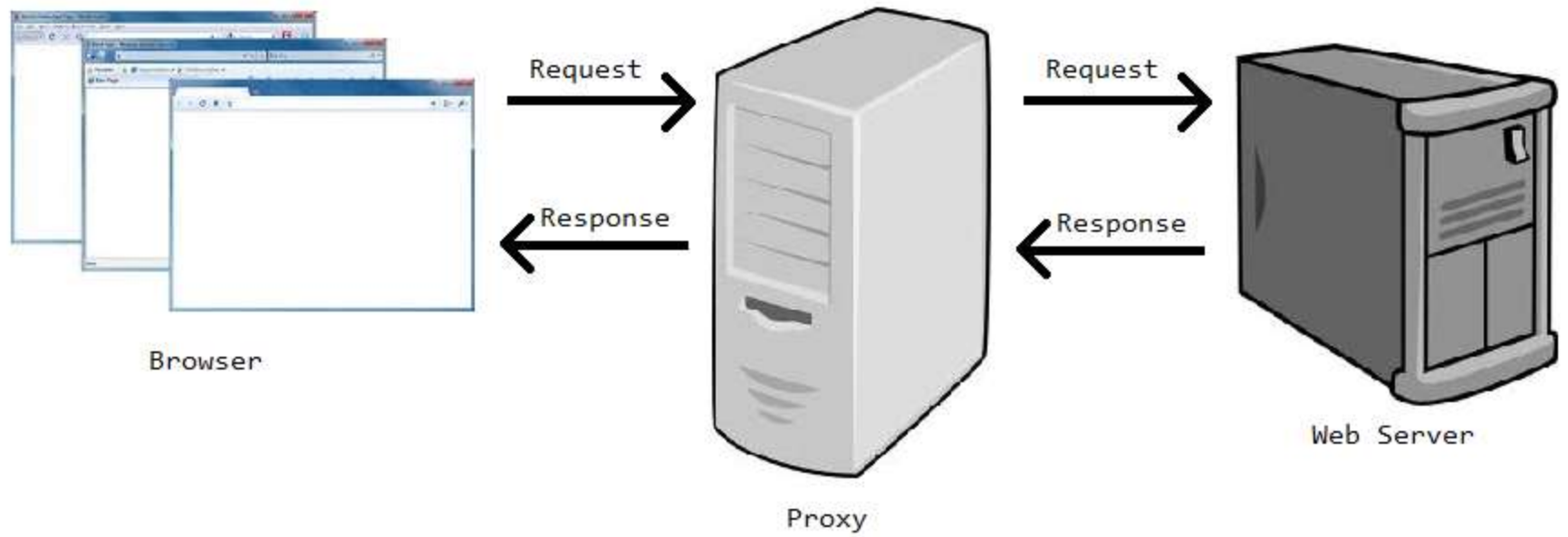
- **Example**

`http://www.website.com/sp/test;id=1234?num=2345&valid=true#middle`

URI examples

- `ftp://ftp.is.co.za/rfc/rfc1808.txt`
- `http://www.ietf.org/rfc/rfc2396.txt`
- `ldap://[2001:db8::7]/c=GB?objectClass?one`
- `mailto:John.Doe@example.com`
- `news:comp.infosystems.www.servers.unix`
- `tel:+1-816-555-1212`
- `telnet://192.0.2.16:80/`
- `urn:oasis:names:specification:docbook:dtd:xml:4.1.2`

HTTP



HTTP Request

```
METHOD /path-to-resource HTTP/version-number
```

```
Header-Name-1: value
```

```
Header-Name-2: value
```

```
[optional request body]
```

HTTP Request Example

```
GET /sp/index.html HTTP/1.1
```

```
Host: www.website.com
```


HTTP Response

```
HTTP/version-number status-code explanation
```

```
Header-Name-1: value
```

```
Header-Name-2: value
```

```
[response body]
```

HTTP Response Simplified Example

```
HTTP/1.1 200 OK
```

```
Content-Type: text/html
```

```
Content-Length: 9934
```

```
<html>
```

```
<head>
```

```
<title>Some Title</title>
```

```
<body>
```

```
...
```

```
</body>
```

```
</html>
```

HTML

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8">
  <title>...</title>
</head>
<body>
  <header>...</header>
  <nav>...</nav>
  <article>
    <section>
      ...
    </section>
  </article>
  <aside>...</aside>
  <footer>...</footer>
</body>
</html>
```