

# Mapping URLs to Documents

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## 1. URL Axioms

Lenya 2.0 is based on the following axioms:

- A URL is represented by exactly one document.
- A document can be represented by an arbitrary number of URLs.
- For each document, there is exactly one canonical URL.

This is reflected in the following methods:

- `DocumentBuilder.buildDocument(...)`
- `DocumentBuilder.buildCanonicalUrl(...)`

The concept of multiple URLs per document is typically used for language versions (`foo_{defaultlanguage}.html = foo.html`) and to support different URL suffixes (`foo`, `foo.htm`, `foo.html`, `foo.pdf`).

The site structure is tightly connected to the URL space. Link URLs are derived directly from the site structure. The bar node in the following example

```
<node id="foo">
  <node id="bar"/>
</node>
```

is accessed using an URL containing the snippet `/foo/bar`.

## 2. Language Versions

The different language versions of a document can either be accessed using suffixes (`foo_en`, `foo_de`), or by attaching them to different nodes with the same UUID attribute in the site structure. In the following example, the top-level nodes "en" and "de" are used as entry points for the respective language.

```
<site>
  <node id="en">
    <node id="welcome" uuid="def456...">
      <label xml:lang="en">Welcome</label>
    </node>
  </node>
  <node id="de">
    <node id="willkommen" uuid="def456...">
      <label xml:lang="de">Willkommen</label>
    </node>
  </node>
</site>
```

This results in the following URLs:

- `/en/welcome` - "Welcome"
- `/de/willkommen` - "Willkommen"