

A7B36XML, AD7B36XML: **XML Technologies**

Practical Classes 3 and 4:

XPath

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Path Expressions

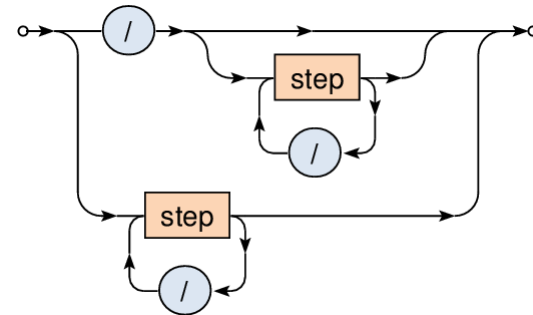
- **Paths**

- **Absolute**

- $/\text{Step}_1/\text{Step}_2/\dots/\text{Step}_N$

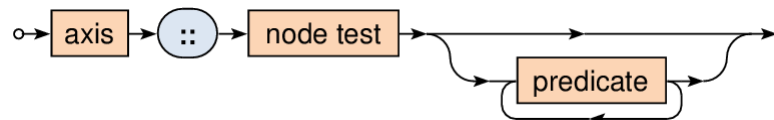
- **Relative**

- $\text{Step}_1/\text{Step}_2/\dots/\text{Step}_N$

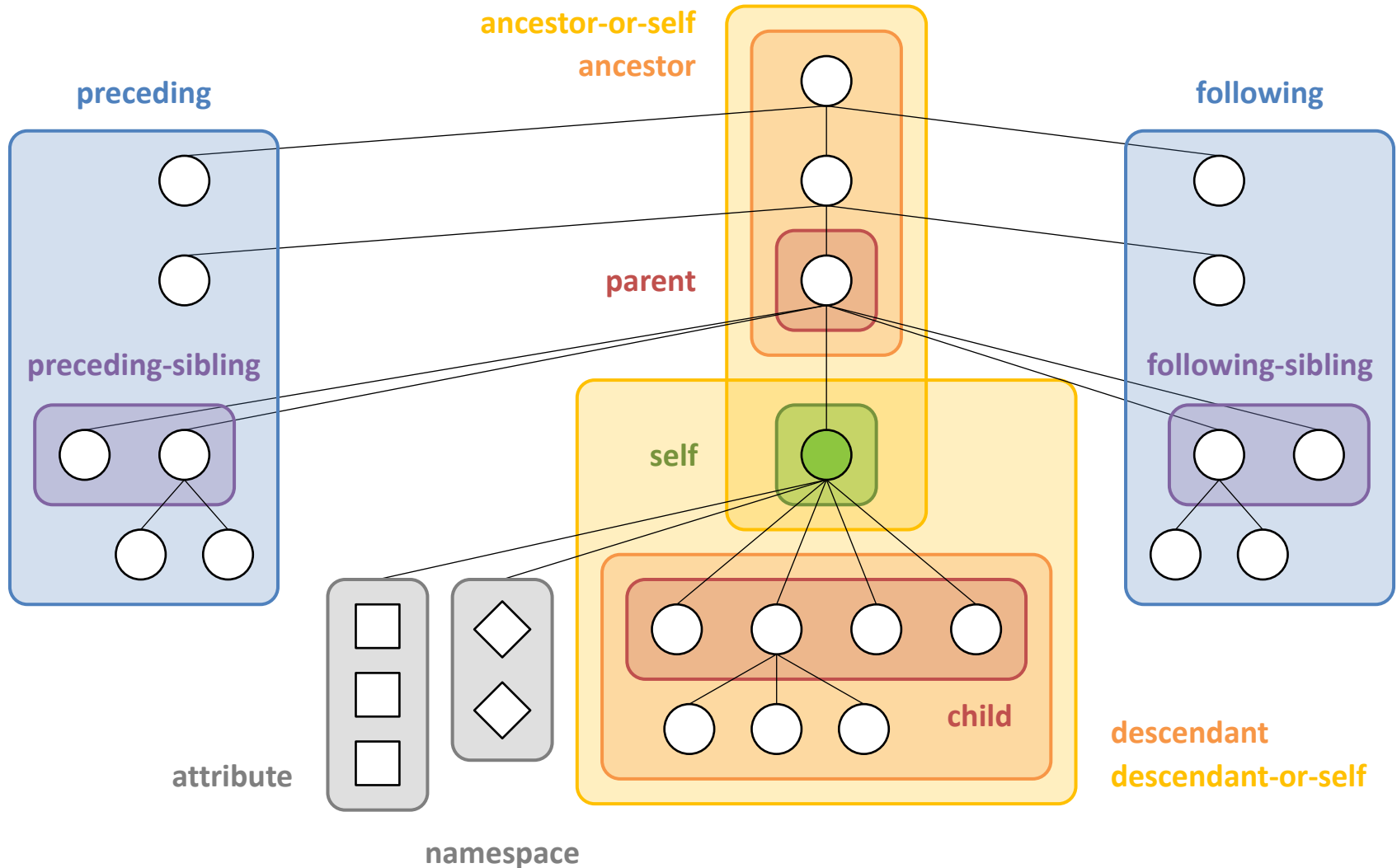


- **Steps**

- $\text{axis}::\text{test} \text{ predicate}_1 \text{ predicate}_2 \dots$



Axes



Axes

- **Forward axes**
 - self, child, descendant(-or-self), following(-sibling)
- **Reverse axes**
 - parent, ancestor(-or-self), preceding(-sibling)
- **Attributes**
 - attribute
- **Namespace declarations**
 - namespace

Node Tests

- Tests
 - `node()` – all nodes selected by the axis
 - `text()` – all text nodes
 - *name* – elements / attributes of the given *name*
 - `*` – all elements / attributes selected by the axis
 - `comment()`
 - `processing-instruction()`

Path Expressions

- **Abbreviations**

- `.../... <=> .../child::...`
- `.../@... <=> .../attribute::...`
- `.../. ... <=> .../self::node()...`
- `.../..... <=> .../parent::node()...`
- `...//... <=> .../descendant-or-self::node()/...`

Predicates

- **Predicates**



- **Conditions**

- Path expressions: both relative and absolute
- Comparisons: = ≠ < ≤ ≥ >
- Positions

Functions

- **A few useful functions...**
 - `position()`, `last()`
 - `count()`
 - `sum()`, `avg()`, `min()`, `max()`
 - `data()`
 - `name()`
 - `distinct-values()`
 - `normalize-space()`
 - ...