Practical Class 3

XPath

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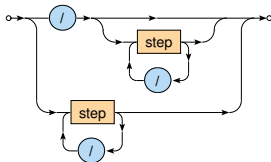
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Charles University, Faculty of Mathematics and Physics
NDBI040: **Big Data Management and NoSQL Databases**

Path Expressions

Path expression

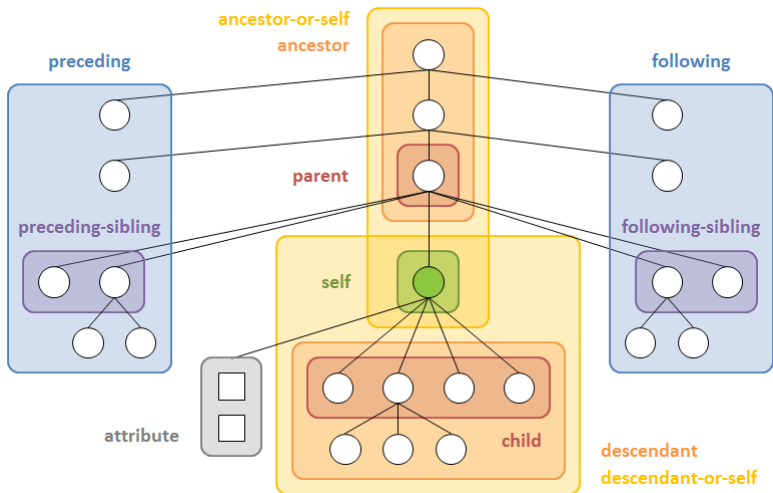- Absolute / relative paths

Path Expressions

Steps of path expressions

- **Axis**
  - Specifies the **relation of nodes** to be selected for a given node
- **Node test**
  - **Basic condition** the selected nodes must further satisfy
- **Predicates**
  - **Advanced conditions** the selected nodes must further satisfy

Path Expressions: Axes

Exercise 1

Express the following XPath queries

- **Names of all airline companies** (whole `airline` elements)
- **Full names of all airports** (just text content)
- **Codes of all airports** (their values)
- **The last ticket of the third flight** (in the document order)
- **Distinct codes of flight ticket classes** (without duplicities)

Exercise 2

Express the following XPath query

- **Flight numbers operated by *A6-EOQ* aircraft on *2017-10-13***

Exercise 3

Express the following XPath query

- **Flights with at least one first class ticket (*F*) or business class ticket (*C*)**

Exercise 4

Express the following XPath query

- **Flights without any first class ticket (*F*) as well as any business class ticket (*C*)**
  - Include only flights with at least one ticket

Exercise 5

Express the following XPath query

- **Numbers of flights that depart on *2017-10-18* or in the future and that have no aircraft assigned yet**

Exercise 6

Express the following XPath query

- **Lines with duration above the overall average**

Exercise 7

Express the following XPath query

- **Overall number of flights heading to any airport in Germany (*DEU*) on *2017-10-18***

Exercise 8

Express the following XPath query

- **Passenger name on the very last ticket in the entire file**