

NPRG036: XML Technologies

Practical Classes 3 and 4:

# XPath: Exercises

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# Exercise 1

- Express the following XPath queries
  - Select all owners (with their entire subtrees)
  - Select names of all agencies (just text content)
  - Select owner countries without duplicate values
  - Select name of owner with id o2

# Exercise 2

- Express the following XPath query
  - Select postal codes of all owners from the *United States*

# Exercise 3



- Express the following XPath query
  - Select rate values of flats with a comfort level  $C$  from all properties other than  $p2$

# Exercise 4

- Express the following XPath query
  - Select the third feature of the first property

# Exercise 5



- Express the following XPath query
  - Select names of properties without owners and with at least two features

# Exercise 6

- Express the following XPath query
  - Select owners without any properties

# Exercise 7

- Express the following XPath query
  - Select flats with rates below average



# Exercise 8

- Express the following XPath query
  - Select names of owners who own a flat with a bath

# Exercise 9

- Express the following XPath query
  - Select the overall sum of rates of flats of comfort levels of *C* or *D* from properties of owner *o1*

# Exercise 10



- Express the following XPath query
  - Select names of the very first and very last flat in the entire document, including recursively nested flats (i.e. with respect to the document order)

# Exercise 11



- Express the following XPath query
  - Given an identifier of a particular flat, select the top level flat that (recursively) contains it
    - E.g. select flat f4 when f4a1, f4a or f4 queried

# Exercise 12

- Express the following XPath query
  - Select distinct countries of owners of flats with comfort level *A* or rent greater than *20000*

# Exercise 13

- Express the following XPath query
  - Select comfort levels of top level flats, but only when they do not contain any other flats

# Exercise 14



- Express the following XPath query
  - Select elements with value *46001*, but only when their name does not start with *d* and their depth is equal to at least 5

# Exercise 15



- Express the following XPath query
  - Select distinct names of countries where owners reside
    - Do not use *distinct-values()* function



# Exercise 16

- Express the following XPath query
  - Select employees that are not responsible for any property in *New York*
    - First, assume that family names alone are sufficient for the required identification of employees
    - Second, what if the full names are needed instead?

# Exercise 17

- Express the following XPath query
  - Names of flats from properties that have at least 2 top level flats listed within the *flats* element
    - What about arbitrary  $n > 2$ ?