NYU TANDON SCHOOL OF ENGINEERING

Lab 7
Websites

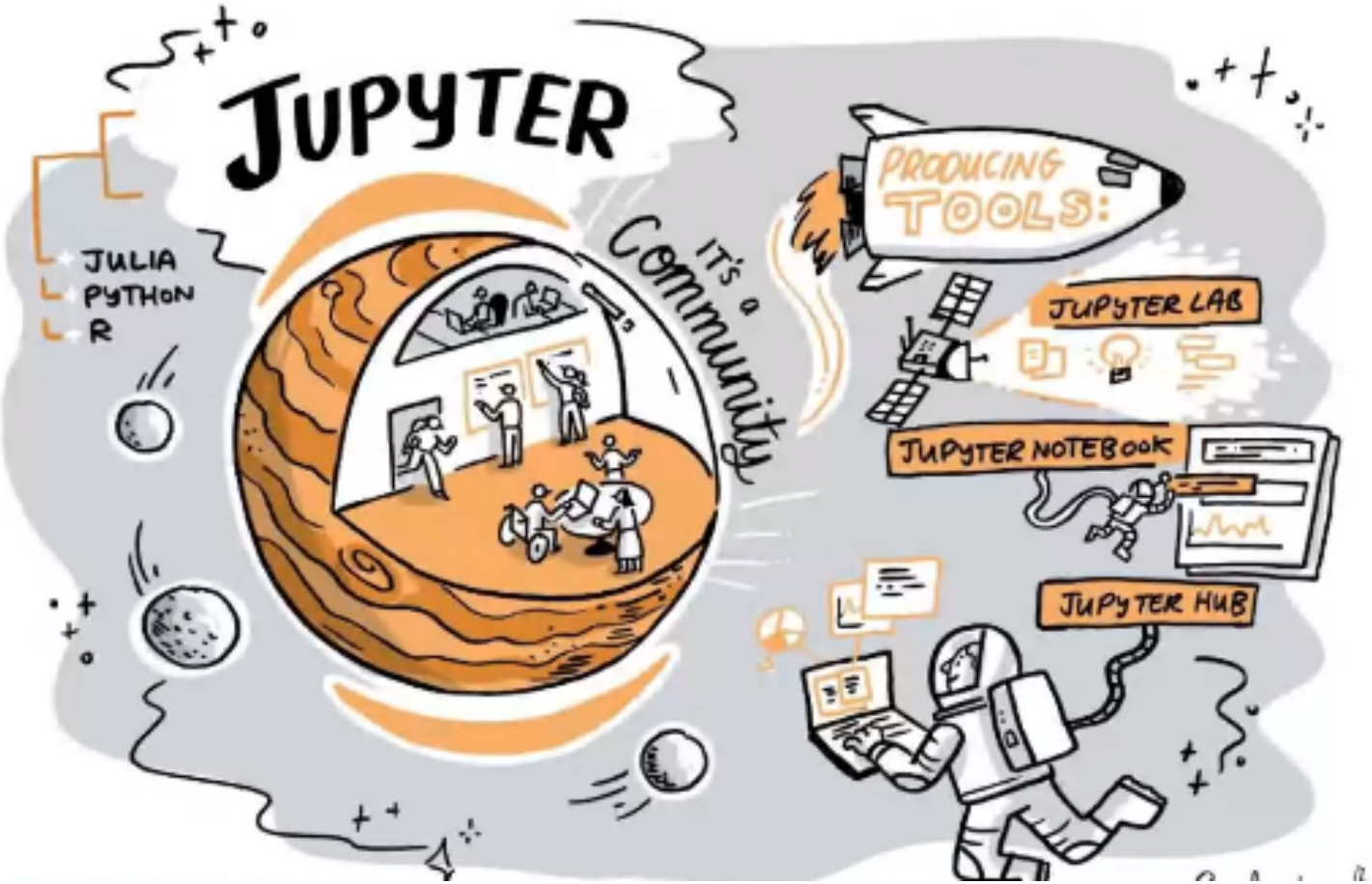
Programming for Business Analytics
MG-GY 8401

NYU TANDON SCHOOL OF ENGINEERING

Agenda

- Accessing Internet Data
- Parsing Data with XPath

Question & Answer



- Describe the learning objectives.
- Summarize the relevant take-aways.
- Ask about unclear information.

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The European Central Bank is the central bank of the European Union consisting of nineteen member countries using the euro.

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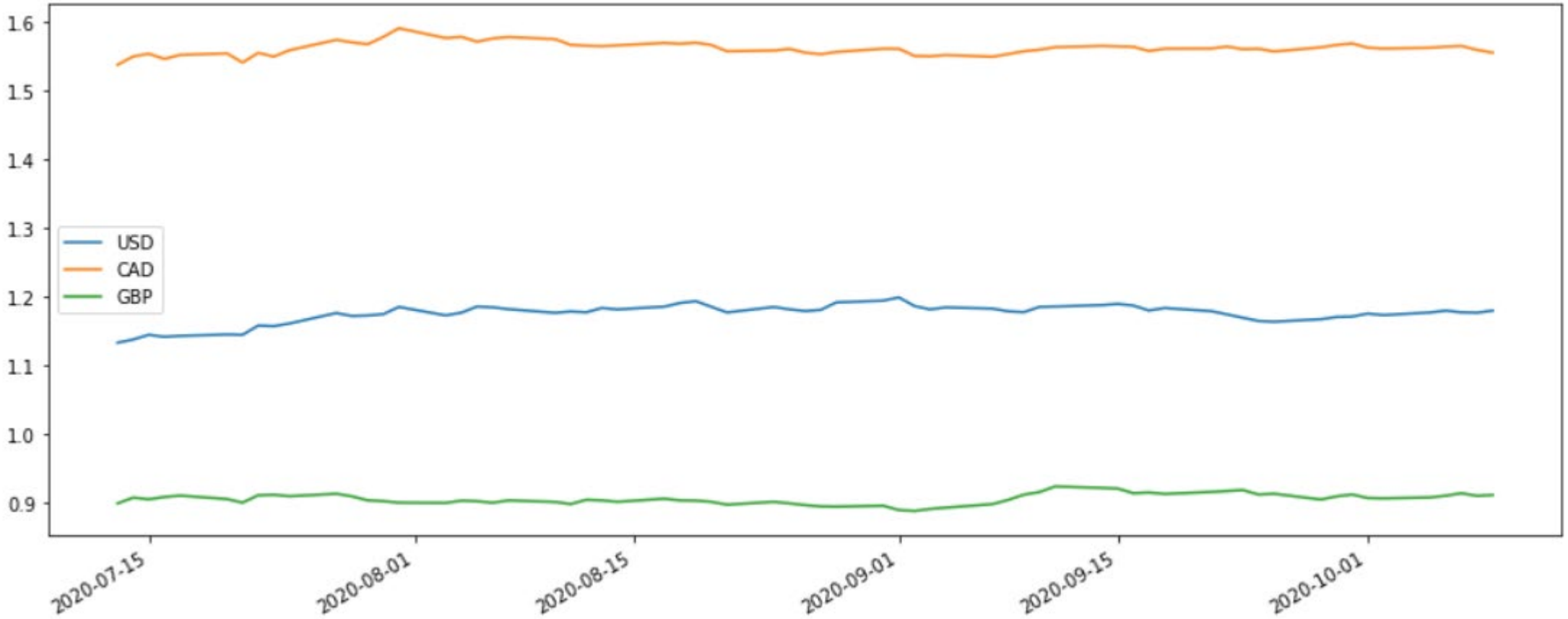
Case Study



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eXtensible Markup Language is a protocol for formatting data with a tree-like structure

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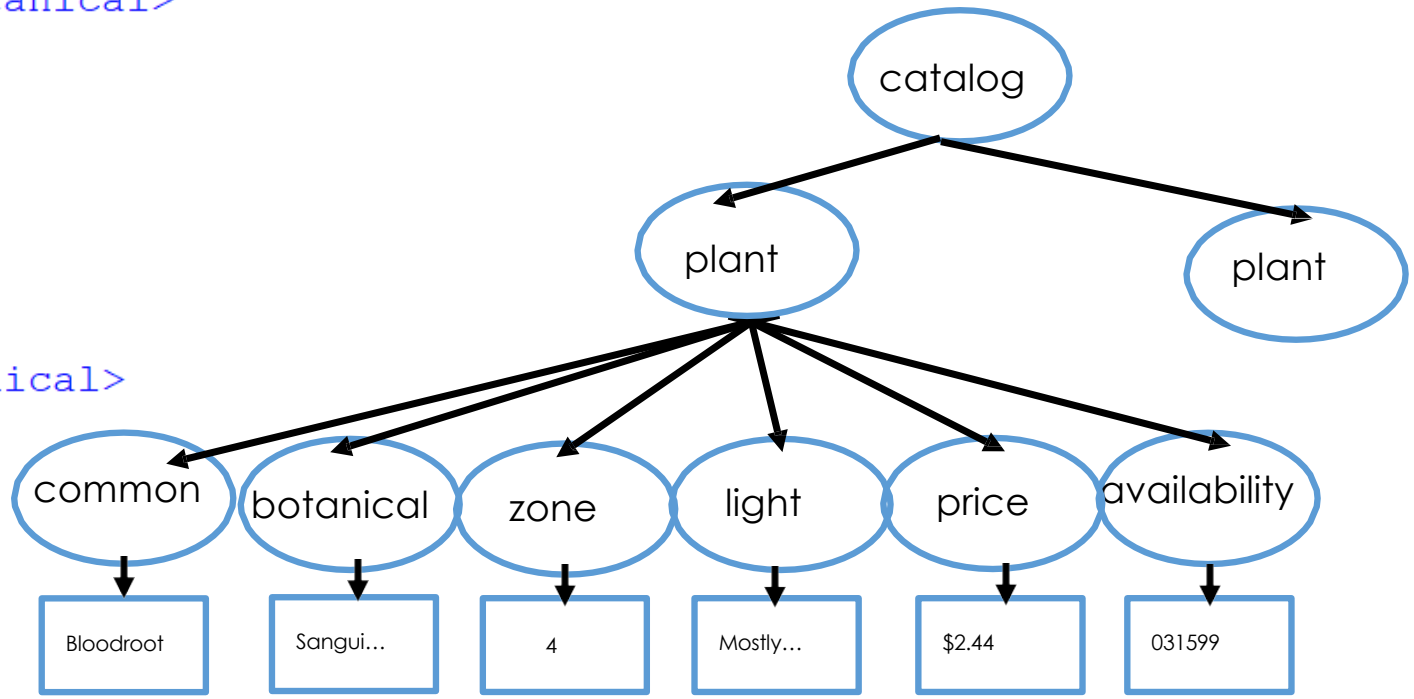
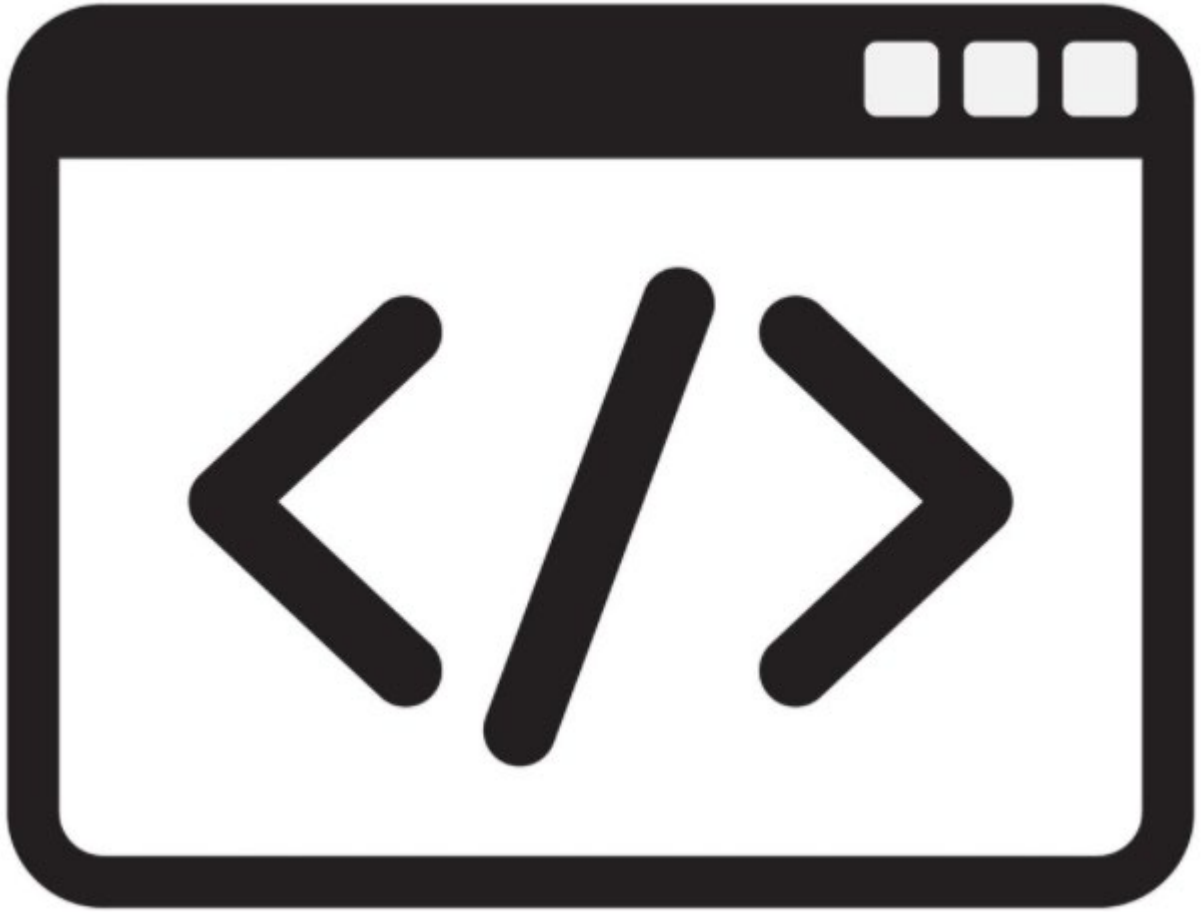
```
<catalog>
    <plant>
        <common>Bloodroot</common>
        <botanical>Sanguinaria canadensis</botanical>
        <zone>4</zone>
        <light>Mostly Shady</light>
        <price currency="USD">$2.44</price>
        <availability>031599</availability>
    </plant>
    <plant>
        <common>Columbine</common>
        <botanical>Aquilegia canadensis</botanical>
        <zone>3</zone>
        <light>Mostly Shady</light>
        <price currency="USD">$9.37</price>
        <availability>030699</availability>
    </plant>
    <plant>
        <common>Marsh Marigold</common>
        <botanical>Caltha palustris</botanical>
        <zone>4</zone>
        <light>Mostly Sunny</light>
        <price currency="CAD">$6.81</price>
        <availability>051799</availability>
    </plant>
</catalog>
```



Extraction tool designed for locating content in an XML file or HTML file



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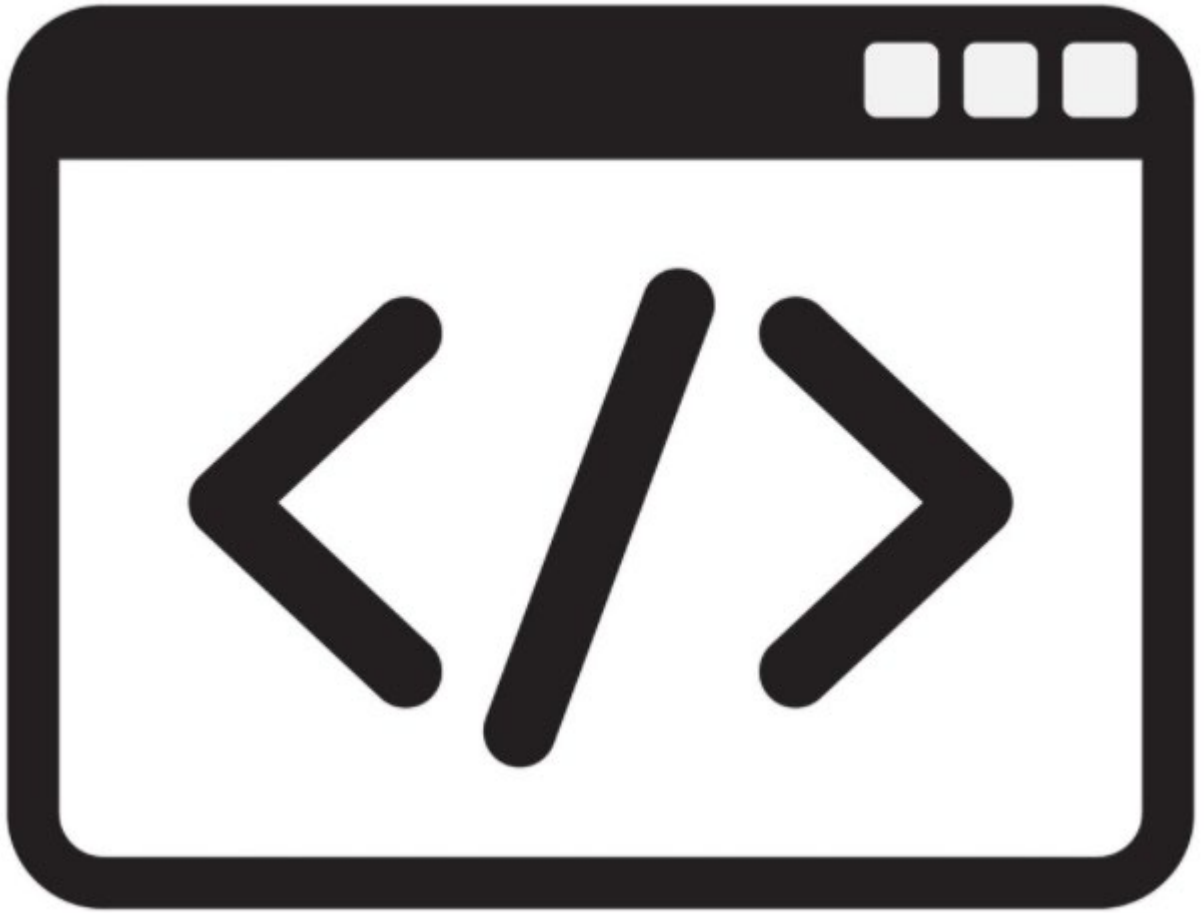
Expressions contain three components

- Direction
- Element Information
- Logical Expression



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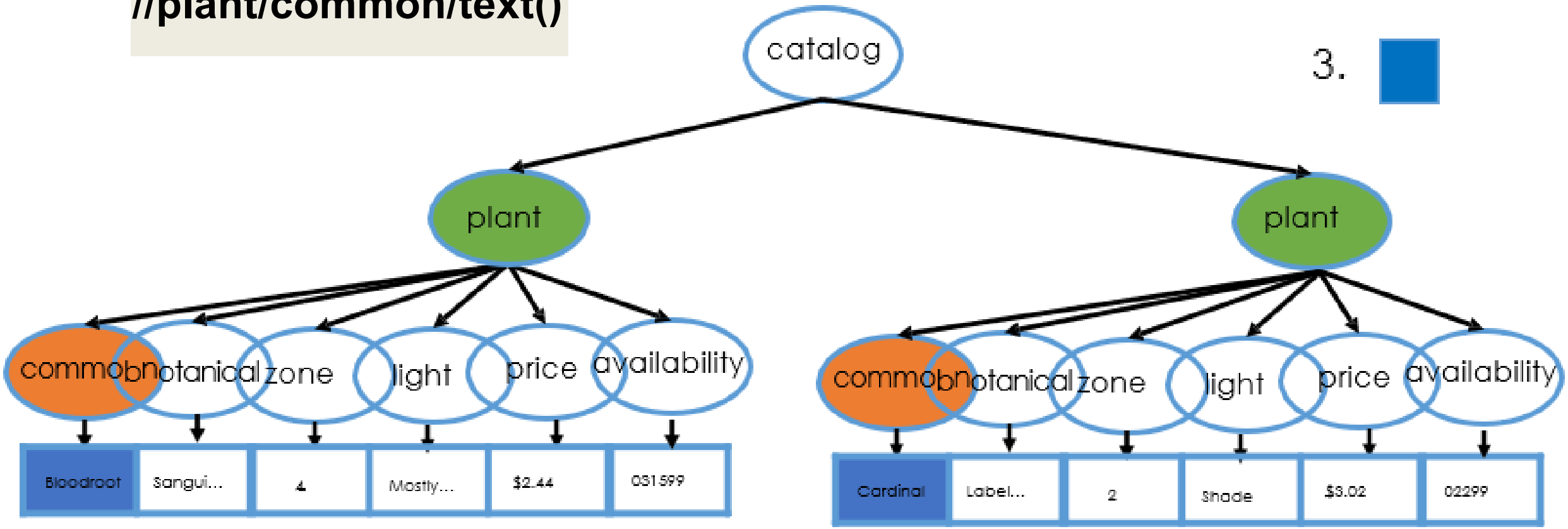
Example

Retrieve common names of all plants

//plant/common/text()

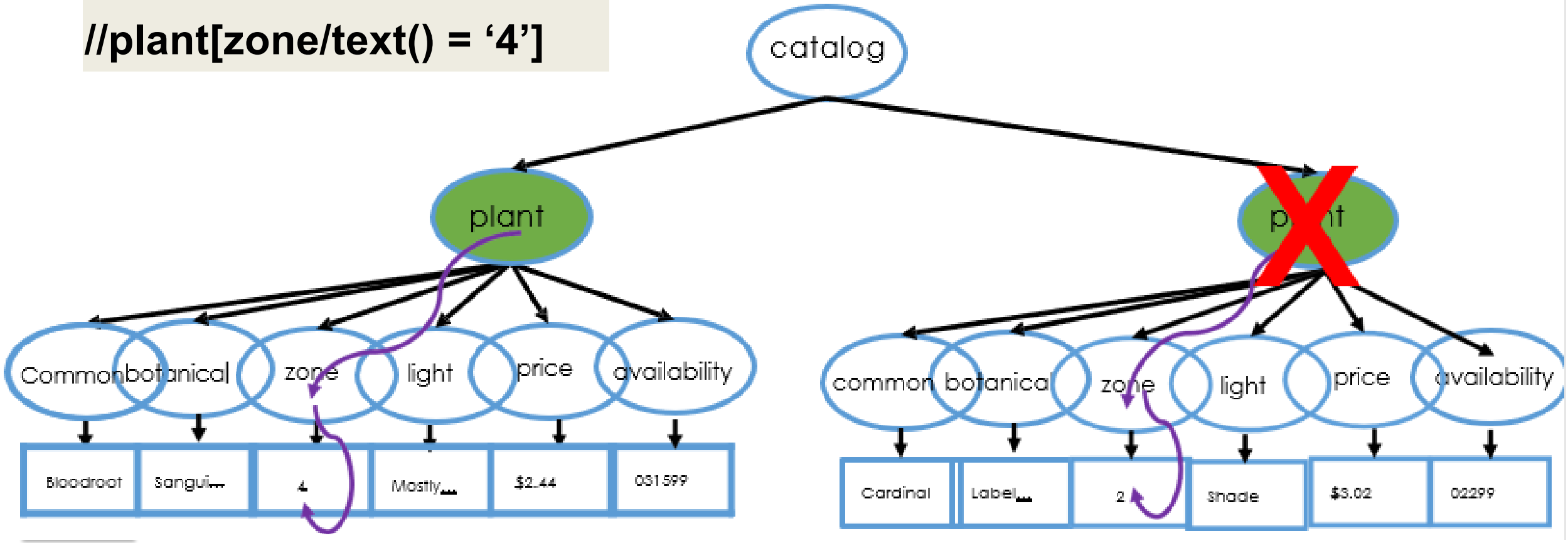
1.
2.
3.



Example

Retrieve plants that grow in zone 4

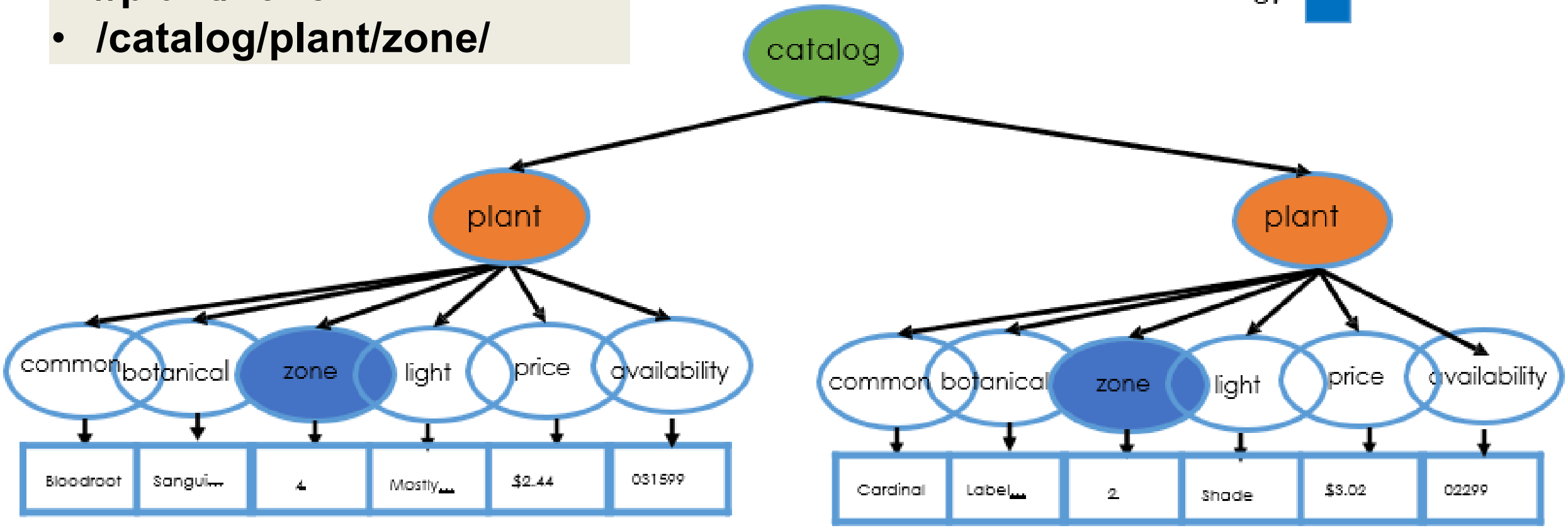
//plant[zone/text() = '4']

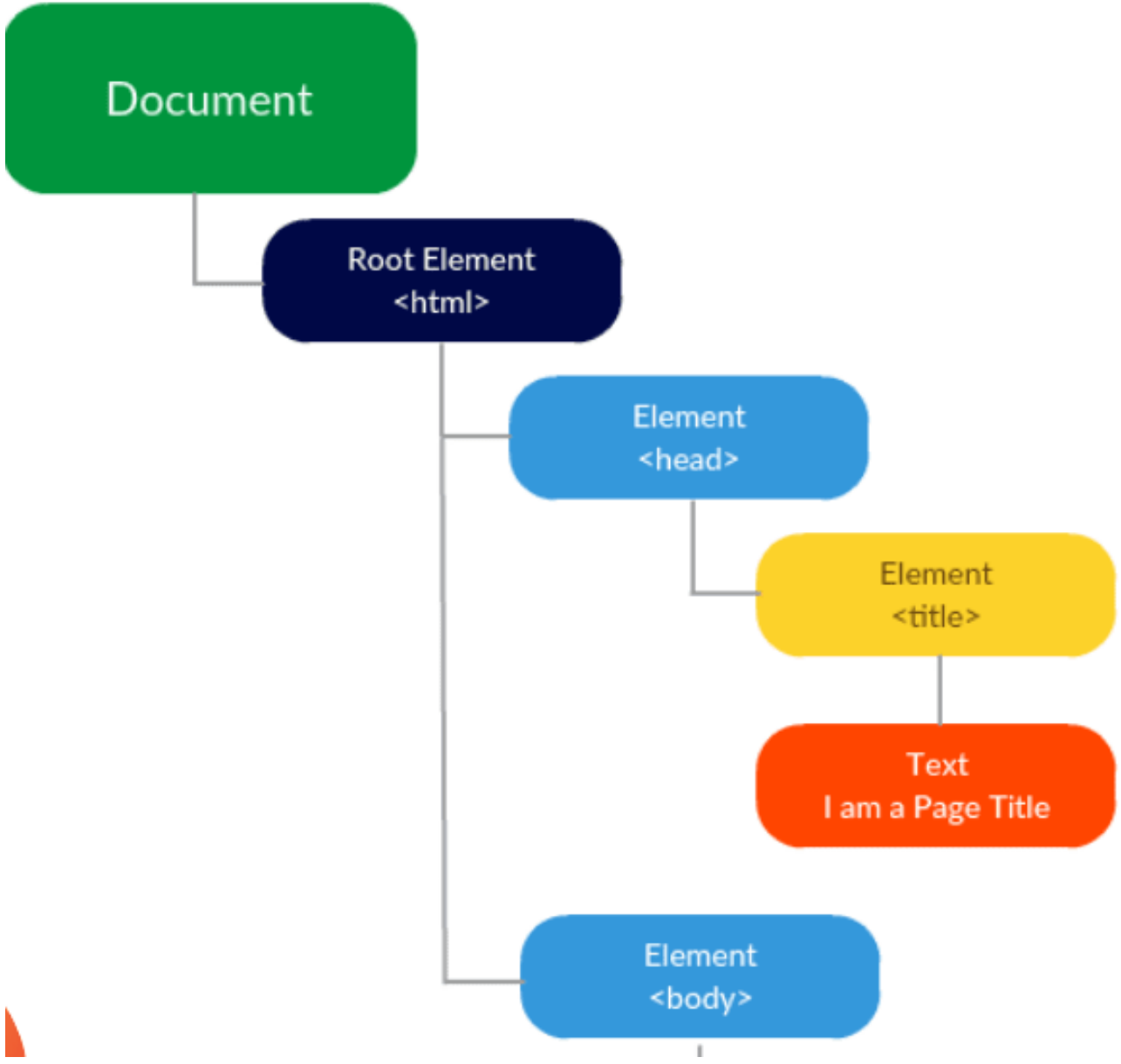


Three ways to access zone

- **//zone**
- **//plant/zone**
- **/catalog/plant/zone/**

1.
2.
3.





Directions

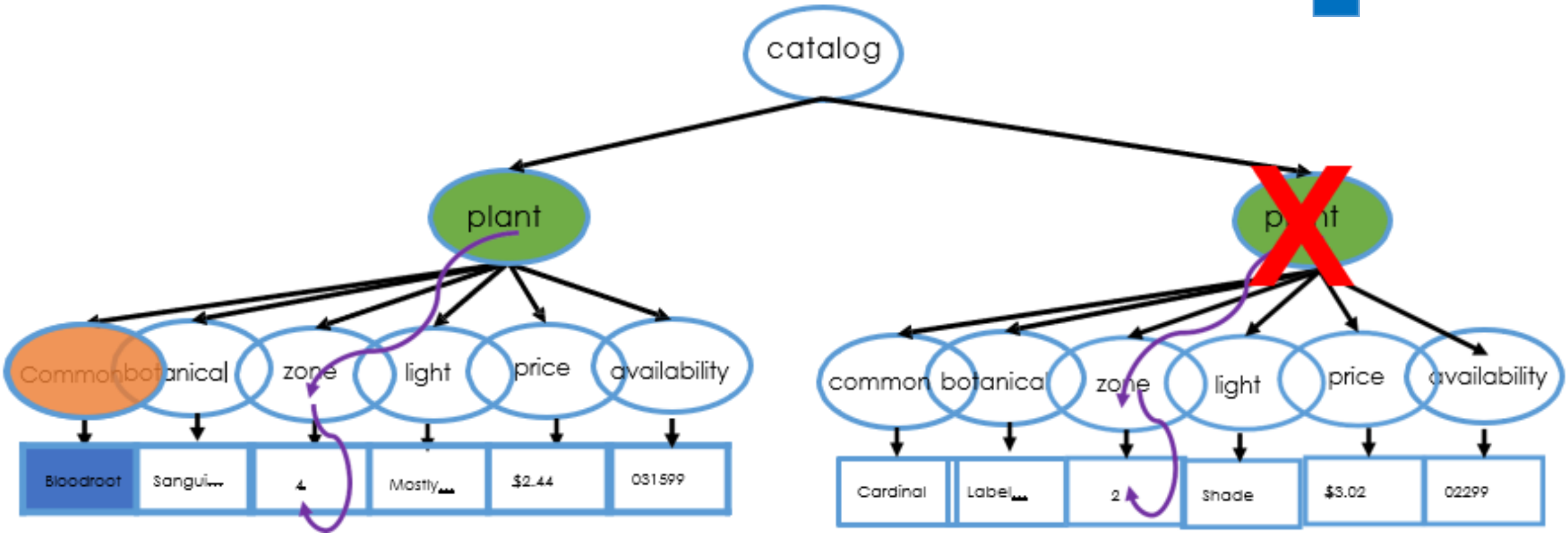
- Child /
- Descendent //
- Self .
- Parent ..

Example

Retrieve common names of plants that grow in zone 4

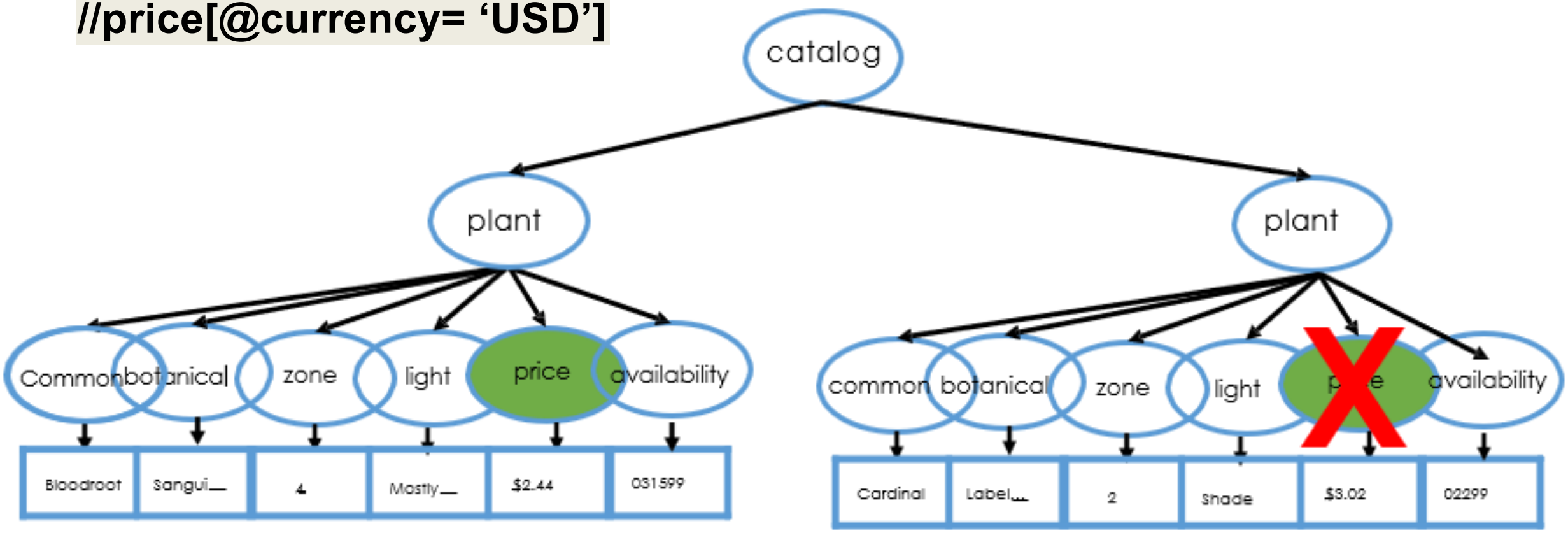
//common[../zone/text() = '4']/text()

1.
2.
3.

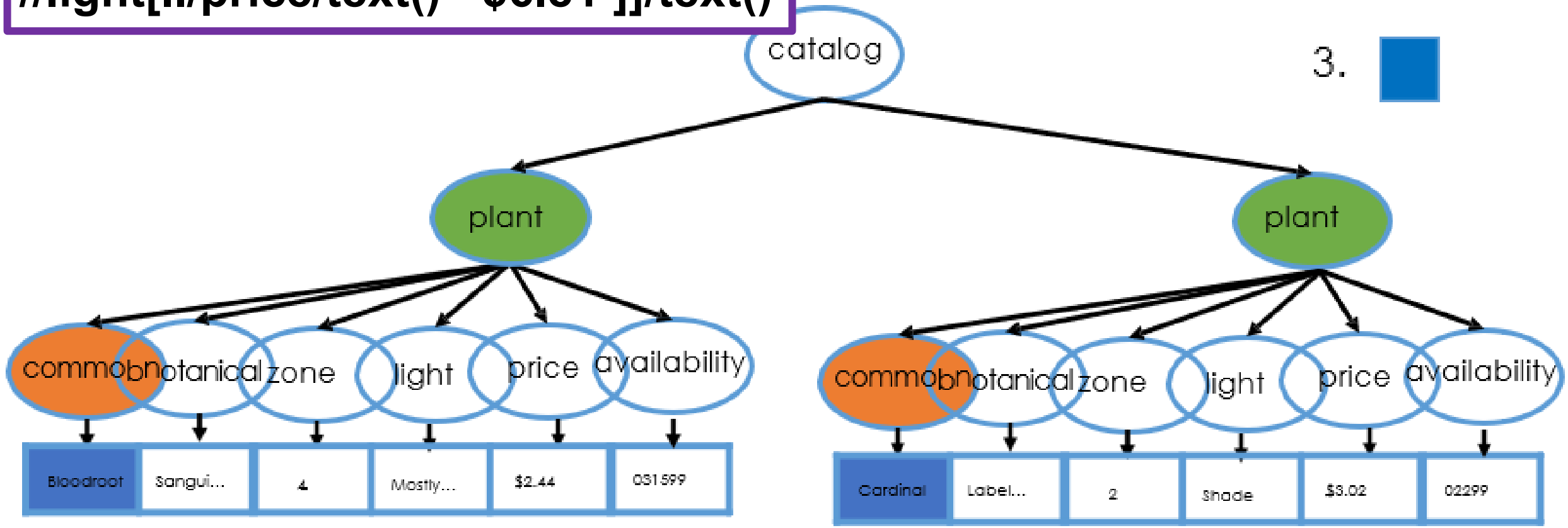


Retrieve prices of plants whose prices are listed in USD

//price[@currency= 'USD']



What is the result of the following Xpath query?

//light[../price/text()='$6.81']]/text()

1.
2.
3.