

XPath Methods with HTML Examples and Output

1. parent:: - Select the parent of a node

HTML:

```
<div class='form-group'>
  <input id='email' type='text' />
</div>
```

XPath Expression:

```
//input[@id='email']/parent::div
```

Output Explanation:

```
Selects: <div class='form-group'> (parent of input)
```

2. child:: - Select child elements of a node

HTML:

```
<div class='container'>
  <input type='text' />
  <button>Submit</button>
</div>
```

XPath Expression:

```
//div[@class='container']/child::input
```

Output Explanation:

```
Selects: <input type='text'> (child of div)
```

3. ancestor:: - Select all ancestors of a node

HTML:

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```
<form>
  <div>
    <section>
      <input id='email' />
    </section>
  </div>
</form>
```

XPath Expression:

```
//input[@id='email']/ancestor::form
```

Output Explanation:

```
Selects: <form> (ancestor of input)
```

4. self:: - Select the current node itself

HTML:

```
<input type='text' name='username' />
```

XPath Expression:

```
//input[@name='username']/self::input
```

Output Explanation:

```
Selects: <input> (itself)
```

5. descendant:: - Select all descendants of a node

HTML:

```
<div id='main'>
  <section>
    <input />
  </section>
```

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```
</div>
```

XPath Expression:

```
//div[@id='main']/descendant::input
```

Output Explanation:

Selects: <input> (nested inside section in div)

6. contains() - Select nodes where attribute contains value

HTML:

```
<button class='btn submit-btn'>Submit</button>
```

XPath Expression:

```
//button[contains(@class, 'submit')]
```

Output Explanation:

Selects: <button> (because class contains 'submit')

7. starts-with() - Attribute starts with specific text

HTML:

```
<input id='user_email' />  
<input id='admin_email' />
```

XPath Expression:

```
//input[starts-with(@id, 'user')]
```

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Output Explanation:

```
Selects: <input id='user_email'> (starts with 'user')
```

8. ends-with() workaround using substring

HTML:

```
<input id='username' />  
<input id='user_id' />
```

XPath Expression:

```
//input[substring(@id, string-length(@id)-3) = 'name']
```

Output Explanation:

```
Selects: <input id='username'> (ends with 'name')
```

9. text() - Match visible text content

HTML:

```
<a href='/login'>Login</a>
```

XPath Expression:

```
//a[text()='Login']
```

Output Explanation:

```
Selects: <a> (because text is 'Login')
```

10. preceding:: - Select elements before the node

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HTML:

```
<input id='email' />
<label for='email'>Email</label>
```

XPath Expression:

```
//label[text()='Email']/preceding::input
```

Output Explanation:

```
Selects: <input id='email'> (comes before label)
```

11. AND & OR - Combine multiple conditions

HTML:

```
<input type='text' name='username' />
<input type='submit' value='Login' />
```

XPath Expression:

```
//input[@type='text' and @name='username']
```

Output Explanation:

```
Selects: <input> where type is 'text' AND name is 'username'
```

12. following-sibling:: - Select next sibling element

HTML:

```
<label>Username</label>
<input type='text' />
```

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XPath Expression:

```
//label[text()='Username']/following-sibling::input
```

Output Explanation:

```
Selects: <input> (comes after the label)
```

13. preceding-sibling:: - Select previous sibling element

HTML:

```
<label>Email</label>  
<input id='email' />
```

XPath Expression:

```
//input[@id='email']/preceding-sibling::label
```

Output Explanation:

```
Selects: <label> (before the input on same level)
```

14. Absolute XPath - Full path from root node (not recommended)

HTML:

```
<html>  
  <body>  
    <div>  
      <form>  
        <input id='email' />  
      </form>  
    </div>  
  </body>  
</html>
```

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XPath Expression:

```
/html/body/div/form/input
```

Output Explanation:

```
Selects: <input> using full path from root
```

15. Relative XPath - Starts from anywhere using //

HTML:

```
<div>  
  <form>  
    <input id='email' />  
  </form>  
</div>
```

XPath Expression:

```
//input[@id='email']
```

Output Explanation:

```
Selects: <input> using relative path (recommended)
```

16. normalize-space() - Trim leading/trailing spaces and match text

HTML:

```
<button>  
  Login  
</button>
```

XPath Expression:

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```
//button[normalize-space(text()='Login']
```

Output Explanation:

```
Selects: <button> (ignores extra spaces around text)
```