

# XQuery Functions

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XQuery 1.0, XPath 2.0, and XSLT 2.0 share the same functions library.

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## XQuery Functions

XQuery is built on XPath expressions. XQuery 1.0 and XPath 2.0 share the same data model and support the same functions and operators.

[XPath Operators](#)

[XPath Functions](#)

You can also define your own functions in XQuery.

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## XQuery Data Types

XQuery shares the same data types as XML Schema 1.0 (XSD).

[XSD String](#)

[XSD Date](#)

[XSD Numeric](#)

[XSD Misc](#)

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## Examples of Function Calls

```
<name>{upper-case($booktitle)}</name>
```

Example 2: In the predicate of a path expression

```
doc("books.xml")/bookstore/book[substring(title,1,5)='Harry']
```

Example 3: In a let clause

```
let $name := (substring($booktitle,1,4))
```



## XQuery User-Defined Functions

If you cannot find the XQuery function you need, you can write your own.

User-defined functions can be defined in the query or in a separate library.

### Syntax

```
{  
  ...function code here...  
};
```

Notes on user-defined functions:

- Use the declare function keyword
- The name of the function must be prefixed
- The data type of the parameters are mostly the same as the data types defined in XML Schema
- The body of the function must be surrounded by curly braces

## Example of a User-defined Function Declared in the Query

```
declare function local:minPrice($p as xs:decimal?,$d as xs:decimal?)  
as xs:decimal?  
{  
  let $disc := ($p * $d) div 100  
  return ($p - $disc)  
};
```

Below is an example of how to call the function above:

```
<minPrice>{local:minPrice($book/price,$book/discount)}</minPrice>
```

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