Fall 2007 **CSC 560:** Management of XML Data Alexander Dekhtyar

XQuery, Part IV
User-Defined Functions

# Function Declarations

User defined functions in XQuery are declared as follows:

```
declare function <namespace>:<name> ( <ArgumentList>) as <ReturnType>
  {
  <FunctionBody>
  };
```

Here,

- <namespace>:<name> is the full name of the function. Use local as namespace to produce a local function.
- <ArgumentList> consists of zero or more argument declarations. Each declaration has the following format:

  ```
  <VarName> as <Type>
  ```

  <Type> is either a built-in atomic type (e.g., xs:decimal), or an item (item()) or a node (node(), element(), etc...). Type modifiers +, ?, * are allowed to indicate a sequence of one or more, zero or one and zero or more items respectively.

  Same rules apply to <ReturnType>.
- <FunctionBody> is an XQuery expression which can use function arguments as variables and which must return a value of the designated return type.

**Example.**

```
declare function local:create-pair($first as (), $second as element())
         as node()
{
  return
       <pair>
          {$first,
           $second}
       </pair>
};
```