



## **Map Module**

Namespace: <u>FSharp.Collections</u> Assembly: FSharp.Core.dll

Contains operations for working with values of type  $\underline{\mathsf{Map}}$ .

## **Functions and values**

Function or value	Description	
<u>Map.add key</u> value table	Returns a new map with the binding added to the given map. If a binding with the given key already exists in the input map, the existing binding is replaced by the new binding in the result map.	
Map.change key f	Returns a new map with the value stored under key changed according to f.  •	<b>○</b> XML MD
Map.containsKey key table	Tests if an element is in the domain of the map. ▶	CO XML MD
Map.count table	The number of bindings in the map. ▶	○ XML MD
<u>Map.empty</u>	The empty map. ▶	○ XML MD
Map.exists predicate table	Returns true if the given predicate returns true for one of the bindings in the map.	CO XML MD

Function or value	Description •	
<pre>Map.filter predicate table</pre>	Builds a new map containing only the bindings for which the given predicate returns 'true'.  •	<b>○</b> XML MD
Map.find key table	Lookup an element in the map, raising  KeyNotFoundException if no binding exists in the map.  •	<b>○</b> XML MD
Map.findKey  predicate table	Evaluates the function on each mapping in the collection.  Returns the key for the first mapping where the function returns 'true'. Raise KeyNotFoundException if no such element exists.	<b>○</b> XML MD
Map.fold folder state table	Folds over the bindings in the map  •	<b>○</b> XML MD
Map.foldBack folder table state	Folds over the bindings in the map.  •	<b>○</b> XML MD
<pre>Map.forall predicate table</pre>	Returns true if the given predicate returns true for all of the bindings in the map.	<b>○</b> XML MD

Function or value	<b>Description</b>	
<u>Map.isEmpty</u> table	Is the map empty? ▶	Ç XML MD
Map.iter action	Applies the given function to each binding in the dictionary  •	Ç XML MD
<u>Map.keys table</u>	The keys in the map. The sequence will be ordered by the keys of the map.  •	<b>○</b> MD
Map.map mapping table	Builds a new collection whose elements are the results of applying the given function to each of the elements of the collection. The key passed to the function indicates the key of element being transformed.	<b>○</b> XML MD
<u>Map.maxKeyValue</u> table	Returns binding for the largest key in the map. Raise KeyNotFoundException when map is empty.  •	Ç XML MD
Map.minKeyValue table	Returns binding for the smallest key in the map. Raise KeyNotFoundException when map is empty.  •	Ç XML MD

Function or value	Description	
Map.ofArray elements	Returns a new map made from the given bindings.	<b>○</b> ML MD
Map.ofList elements	Returns a new map made from the given bindings.	Ç XML MD
Map.ofSeq elements	Returns a new map made from the given bindings.	<b>○</b> XML MD
<pre>Map.partition predicate table</pre>	Builds two new maps, one containing the bindings for which the given predicate returns 'true', and the other the remaining bindings.	<b>○</b> XML MD
Map.pick chooser table	Searches the map looking for the first element where the given function returns a Some value. Raise  KeyNotFoundException if no such element exists.	<b>○</b> XML MD
Map.remove key table	Removes an element from the domain of the map. No exception is raised if the element is not present.	<b>○</b> XML MD
Map.toArray table	Returns an array of all key-value pairs in the mapping. The array will be ordered by the keys of the map.	<b>○</b> XML MD
Map.toList table	Returns a list of all key-value pairs in the mapping. The list will be ordered by the keys of the map.	○ XML MD

Function or value	Description	
<u>Map.toSeq table</u>	Views the collection as an enumerable sequence of pairs. The sequence will be ordered by the keys of the map.	○ ML MD
Map.tryFind key table	Lookup an element in the map, returning a Some value if the element is in the domain of the map and None if not.	<b>○</b> XML MD
Map.tryFindKey predicate table	Returns the key of the first mapping in the collection that satisfies the given predicate. Returns 'None' if no such element exists.	<b>○</b> XML MD
Map.tryPick chooser table	Searches the map looking for the first element where the given function returns a Some value.	<b>○</b> XML MD
<u>Map.values table</u>	The values in the map, including the duplicates. The sequence will be ordered by the keys of the map.  •	<b>○</b> XML MD