

Select Single
Row of Data

Methods to Return Single Row

- Search forward in collection until found
 - First()
 - FirstOrDefault()
- Search backward in collection until found
 - Last()
 - LastOrDefault()
- Search entire collection forward
 - Single()
 - SingleOrDefault()

Return Null if Not Found

**FirstOrDefault(
expression, [default])**

Search forward in collection

Returns null if no values found
or [default] value

**LastOrDefault(
expression, [default])**

Search backward in collection

Returns null if no values found
or [default] value

Exception Thrown if Not Found

First(expression)

Search forward in collection
Throws exception if no values
found

Last(expression)

Search backward in collection
Throws exception if no values
found

Search for Only a Single Item

Single(expression)

Throws exception if more than one element returned

SingleOrDefault(expression, [default])

Throws exception if more than one element returned

Otherwise, returns null or [default] value

First()/Last() vs. FirstOrDefault()/LastOrDefault()

First()/Last()

If you expect the element to be present

Want to handle/throw an exception if
not found

FirstOrDefault()/LastOrDefault()

If you are not sure if element is present

Don't want to handle an exception

Want to get back a null or other default
value

First() vs. Single()

First()

If you expect the element to be present

Want to handle/throw an exception if
not found

Only searches until it finds the element

Faster than Single()

Single()

If you expect the element to be present

Want to handle/throw an exception if
not found

Searches the entire list every time

Slower than First()

SingleOrDefault() vs. FirstOrDefault()

SingleOrDefault()

If you expect the element to be present

Want to handle/throw an exception if
not found

Must search the entire list every time

Slower than FirstOrDefault()

FirstOrDefault()

If you are not sure if element is present

Don't want to handle an exception

Searches only until it finds the element

Faster than SingleOrDefault()



- First() samples
- FirstOrDefault() samples