

Multi-dimensional indexing expressions in C

object	expression	type of result	value of result
<code>int single[7]</code>	<code>single[0]</code>	<code>int</code>	1st element
	<code>&single[0]</code>	address of <code>int</code> (= <code>int*</code>)	address of 1st element
	<code>single</code>	<code>int[7]</code>	address of 1st element
	<code>*single</code>	<code>int</code>	1st element
	<code>single[1]</code>	<code>int</code>	2nd element
	<code>single + 1</code>	address of <code>int</code> (= <code>int*</code>)	address of 2nd element
	<code>*(single + 1)</code>	<code>int</code>	2nd element
	<code>single[2]</code>	<code>int</code>	3rd element
	<code>single + 2</code>	address of <code>int</code> (= <code>int*</code>)	address of 3rd element
	<code>*(single + 2)</code>	<code>int</code>	3rd element
<code>int multi[5][10]</code>	<code>multi[0]</code>	<code>int[10]</code>	1st row array
	<code>&multi[0]</code>	address of <code>int[10]</code>	address of 1st row array
	<code>multi</code>	<code>int[5][10]</code>	address of array, 1st row array & 1st element
	<code>*multi</code>	<code>int[10]</code>	1st row array
	<code>multi[1]</code>	<code>int[10]</code>	2nd row array
	<code>multi + 1</code>	address of <code>int[10]</code>	address of 2nd row array
	<code>*(multi + 1)</code>	<code>int[10]</code>	2nd row array
	<code>multi[2]</code>	<code>int[10]</code>	3rd row array
	<code>multi + 2</code>	address of <code>int[10]</code>	address of 3rd row array
	<code>*(multi + 2)</code>	<code>int[10]</code>	3rd row array
	<code>multi[3][1]</code>	<code>int</code>	2nd element in 4th row array
	<code>*(multi + 3) + 1</code>	address of <code>int</code> (= <code>int*</code>)	address of 2nd element in 4th row array
	<code>*(*(multi + 3) + 1)</code>	<code>int</code>	2nd element in 4th row array
	<code>&multi[3][1]</code>	address of <code>int</code> (= <code>int*</code>)	address of 2nd element in 4th row array