PyFoMaC – Language Comparison Cheat Sheet

	C	Fortran 90	Fortran 77	Python	Matlab
adds	`+`	`+`		`+`	`+`
substracts	`-`	`-`		`-`	`-`
multiplies	`*`	`*`		`*`	`*`
power	`#include <math.h>` `pow(a,b)`	`**`		`**`	`^`
divides	`/`	`/`		`/` or `//` (floor div)	`/`
modulus	`%`	`mod(a,b)`		`%`	`%`
increments	`i++`	`i = i+1`		`i += 1`	`i = i+1`
decrements	`i--`	`i = i-1`		`i -= 1`	`i = i-1`
equals	`==`	`==`	`.eq.`	`==`	`==`
not equals	`!=`	`/=`	`.ne.`	`!=`	`~=`
less than	`<`	`<`	`.lt.`	`<`	`<`
greater than	`>`	`>`	`.gt.`	`>`	`>`
$<$ or equal to	`<=`	`<=`	`.le.`	`<=`	`<=`
$>$ or equal to	`>=`	`>=`	`.ge.`	`>=`	`>=`
logical or	`||`	`.or.`		`or`	`||`
logical and	`&&`	`.and.`		`and`	`&&`
logical not	`!`	`.not.`		`not`	`~`
true	anything but `0`	`.true.`		`True`	`True`
false	`0`	`.false.`		`False`	`False`

if	`if (cond.)`
	`{`
	`  instr.;`
	`}`
	`else if (cond.)`
	`{`
	`  instr.;`
	`}`
	`else`
	`{`
	`  instr.;`
	`}`
		`if (cond.) then`
		`  instr.`
		`else if / elseif (cond.) then`
		`  instr.`
		`else`
		`  instr.`
		`endif / end if`
				`if cond.:`
				`  instr.`
				`elif cond.:`
				`  instr.`
				`else:`
				`  instr.`
					`if cond.`
					`  instr.`
					`elseif cond.`
					`  instr.`
					`else`
					`  instr.`
					`end`

for	`for (i=0,i<n,i++)`
	`{`
	`  instr.;`
	`}`
		`do i=1,n`
		`  instr.`
		`enddo`
			`do 10,i=1,n`
			`  instr.`
			`10 continue`
				`for i in range(n):`
				`  instr.`
					`for i=1:n`
					`  instr.`
					`end`

while	`while (cond.)`
	`{`
	`  instr.;`
	`}`
		`do while (cond.)`
		`  instr.`
		`end do`
			`do 10 while (cond.)`
			`  instr.`
			`10 continue`
				`while cond.:`
				`  instr.`
					`while cond.`
					`  instr.`
					`end`

next iteration	`continue;`	`cycle`		`continue`	`continue`
exits loop	`break;`	`exit`		`break`	`break`
exits program	`return 1;`	`stop`		`import sys` `sys.exit()`	`return`
multiple line statement	continue until next `;`	`&`		`\`	`...`
comment	`//` or `/* ... */`	`!`		`#`	`%`

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