Lua101 cheat sheet

Lexical conventions

- `-- foobar` : comment until end of line
- variable name: `_`, letters, numbers (cannot start with a number)
- reserved names: `and break do else elseif end false for function if in local nil not or repeat return then true until while`

Types

Type	Literal
number	`123 -2 45.024 9.9e6`
string	`"Foo" 'Bar'`
boolean	`true false`
nil	`nil`

Operators

Number operator	Meaning
`a + b`	addition
`a - b`	subtraction
`a * b`	multiplication
`a / b`	division
`a % b`	modulo
`a ^ b`	exponentiation
`-a`	opposite

String operator	Meaning
`a .. b`	concatenation
`#a`	length

String operator Meaning

Comparison operator	Meaning
`a == b`	equal
`a ~= b`	different
`a < b`	strictly smaller
`a > b`	strictly greater
`a <= b`	smaller or equal
`a >= b`	greater or equal

Expressions

Expression	Example
literal	`1`
variable	`foo`
operation	`1 + foo`
(expr)	`(1 + foo)`

Statements

Statement	Meaning
`print(expression)`	print value of expression to standard output
`variable = expression`	assign value of expression to variable
`if` control structure	select block of code according to condition
numeric `for` loop	repeat block of code

Statement	Meaning
`break`	exit current loop

block: sequence of statements

`if` control structure

```
-- execute block associated with the first expression which is true
-- if all expressions are false, execute elseblock

if expression1 then
    -- block1
elseif expression2 then
    -- block2
elseif expression3 then
    -- block3
else
    -- elseblock
end
```

- `elseif` blocks: 0 or more
- `else` block: 0 or 1

Numeric `for` loop

```
-- repeat block with variable taking values
-- start, start + step, start + 2*step, start + 3*step, etc.
-- until it goes past finish

for variable = start,finish,step do
    -- block
end
```

`step` is optional and defaults to 1