

Table Indices





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Each table can store values with different types of indices, and it grows as needed to accommodate new entries.



Representing Structures

In Lua we can represent structures with Tables.

Lua supports this representation by providing `t.name` as syntactic sugar for `t["name"]`.



```
t = {}  
t.x = 2      -- same as t["x"] = 2  
t.h = 10     -- same as t["h"] = 10  
t.x          --> 2    same as t["x"]
```



Representing Structures

A common mistake for beginners is to confuse `t.x` with `t[x]`. The first form represents `t["x"]`, that is, a table indexed by the string "x". The second form is a table indexed by the value of the variable `x`.

See the difference:



```
> t = {}  
> x = "y"  
> t[x] = 50    -- put 50 in field "y"  
> t[x] --> 50  -- value of field "y"  
> t.x --> nil  -- value of field "x" (undefined)  
> t.y --> 50   -- value of field "y"
```



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Finally, when used as a key, any float value that can be converted to an integer is converted. For instance, when Lua executes `a[5.0] = 10`, it converts the key `5.0` to `5`. Float values that cannot be converted to integers remain unaltered.