Table Constructors

Table Constructors

◉ Constructors are expressions that build and set up tables. They represent a unique aspect of Lua and are among its most valuable and flexible mechanisms.

◉ The most basic constructor is the empty constructor, represented by `{}` as demonstrated earlier. Constructors can also initialize lists. For example:

```
days = {"Sunday", "Monday", "Tuesday", "Wednesday",
        "Thursday", "Friday", "Saturday"}

print(days[6])  --> Friday
```

Table Constructors

◎ Lua also offers a special syntax to initialize a record-like table.

◎ A record-like table in Lua refers to a table that is used to represent structured data with named fields or attributes. For example:

```
local person = {
  name = "John",
  age = 30,
  occupation = "Engineer"
}
```

A Note about Local and Global variables

```lua
-- Global variable
globalVar = "I am global"


function myFunction()
  -- Local variable
  localVar = "I am local"


  print(globalVar) -- Accessible within the function
  print(localVar)  -- Accessible within the function
end


myFunction()


print(globalVar) -- Accessible globally
print(localVar)  -- Error: localVar is not accessible outside the function
```

Table Constructors

◎ We can also mix record-style with list-style initializations. For instance:

```
polygon = { color = "blue",
            thickness = 3,
            npoints = 4,
            { x = 0 , y = 0},   -- polygon[1]
            { x = -20 , y = 0},   -- polygon[2]
            { x = -20 , y = 5},   -- polygon[3]
            { x = 0 , y = 5},   -- polygon[4]
        }
```