Capítulo 8. Herramienta mix

Mix

-Es una herramienta de la línea de comandos (CLI)

-Permite:

 crear proyectos de Elixir

 mantenerlos

-Proporciona tareas para:

 documentar

 compilar

 depurar

 probar (test)

 manejar dependencias

Crear proyectos

```
C:\Users\ACER\tallerICI\Prog_funcional>mix new calcuuladora
* creating README.md
* creating .formatter.exs
* creating .gitignore
* creating mix.exs
* creating lib
* creating lib/calcuuladora.ex
* creating test
* creating test/test_helper.exs
* creating test/calcuuladora_test.exs

Your Mix project was created successfully.
You can use "mix" to compile it, test it, and more:

    cd calcuuladora
    mix test

Run "mix help" for more commands.

C:\Users\ACER\tallerICI\Prog_funcional>
```
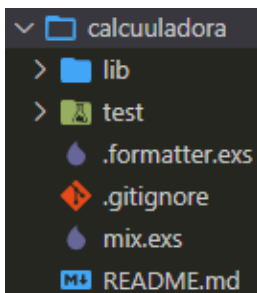
Estructura de directorios de un proyecto:

```
∨ 🗀 calcuuladora
  > 📁 lib
  > 🧪 test
      💧 .formatter.exs
      🔶 .gitignore
      💧 mix.exs
      📄 README.md
```

Carga de una aplicación

-Ingresar al directorio donde se creó la nueva aplicación:

```
C:\Users\ACER\tallerICI\Prog_funcional>cd calcuuladora

C:\Users\ACER\tallerICI\Prog_funcional\calcuuladora>
```

Lanzar el shell de Elixir con mix:

```
C:\Users\ACER\tallerICI\Prog_funcional\calcuuladora>iex -S mix
Compiling 1 file (.ex)
Generated calcuuladora app
Interactive Elixir (1.14.1) - press Ctrl+C to exit (type h() ENTER for help)
iex(1)> 
```

Ejecutar la función hello():

```
iex(1)> Calcuuladora.hello()
:world
iex(2)> 
```

Documentación con ExDoc

- Abrir el archivo *mix.exs*
- Modificar las dependencias agregando {:ex_doc, "~>0.12"}

```
defp deps do
  [
    # {:dep_from_hexpm, "~> 0.3.0"},
    # {:dep_from_git, git: "https://github.com/elixir-lang/my_dep.git", tag: "0.1.0"}
    {:ex_doc, "~>0.12"}
  ]
end
```

Ejecutar el comando mix deps.get:

```
C:\Users\ACER\tallerICI\Prog_funcional\calcuuladora>mix deps.get
Could not find Hex, which is needed to build dependency :ex_doc
Shall I install Hex? (if running non-interactively, use "mix local.hex --force") [Yn] y
* creating c:/Users/ACER/.mix/archives/hex-2.0.0
Resolving Hex dependencies...
Resolution completed in 0.581s
New:
  earmark_parser 1.4.29
  ex_doc 0.29.1
  makeup 1.1.0
  makeup_elixir 0.16.0
  makeup_erlang 0.1.1
  nimble_parsec 1.2.3
* Getting ex_doc (Hex package)
* Getting earmark_parser (Hex package)
* Getting makeup_elixir (Hex package)
* Getting makeup_erlang (Hex package)
* Getting makeup (Hex package)
* Getting nimble_parsec (Hex package)

C:\Users\ACER\tallerICI\Prog_funcional\calcuuladora>
```
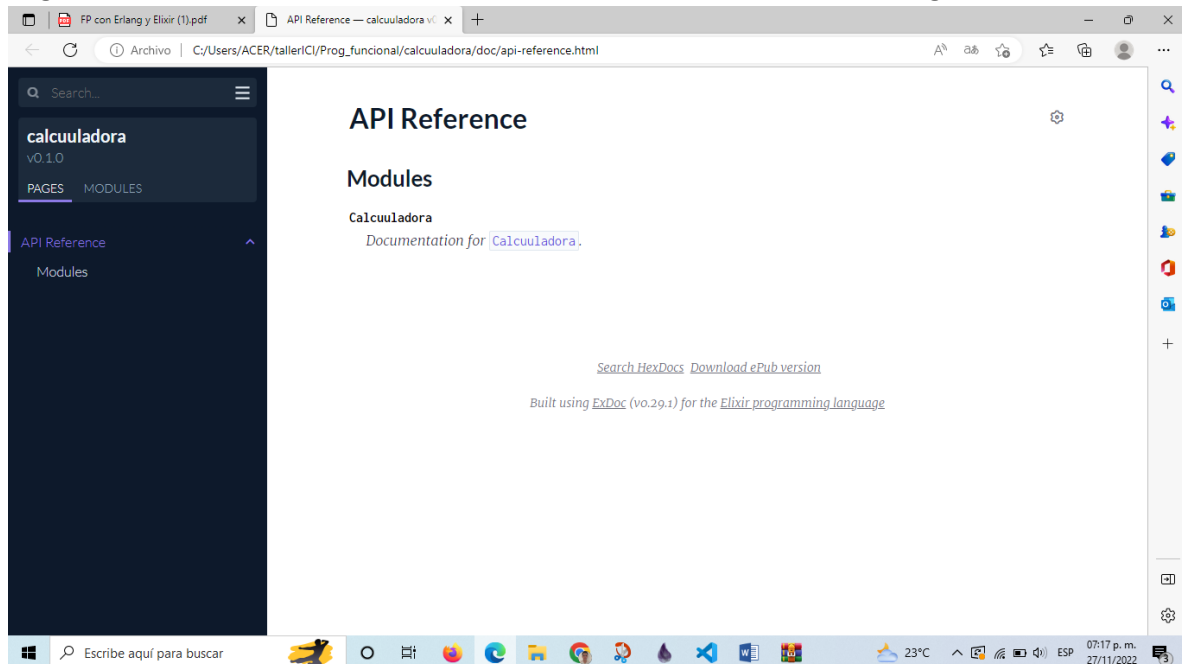
Ejecutar mix docs:

```
C:\Users\ACER\tallerICI\Prog_funcional\calcuuladora>mix docs
==> earmark_parser
Compiling 1 file (.yrl)
Compiling 2 files (.xrl)
Compiling 3 files (.erl)
Compiling 46 files (.ex)
Generated earmark_parser app
==> nimble_parsec
Compiling 4 files (.ex)
Generated nimble_parsec app
==> makeup
Compiling 44 files (.ex)
Generated makeup app
==> makeup_elixir
Compiling 6 files (.ex)
Compiling lib/makeup/lexers/elixir_lexer/atoms.ex (it's taking more than 10s)
Compiling lib/makeup/lexers/elixir_lexer.ex (it's taking more than 10s)
Compiling lib/makeup/lexers/elixir_lexer/variables.ex (it's taking more than 10s)
Generated makeup_elixir app
==> makeup_erlang
Compiling 3 files (.ex)
warning: Application.get_env/3 is discouraged in the module body, use Application.compile_env/3 instead
  lib/makeup/lexers/erlang_lexer.ex:250: Makeup.Lexers.ErlangLexer

Generated makeup_erlang app
==> ex_doc
Compiling 25 files (.ex)
Generated ex_doc app
==> calcuuladora
Generated calcuuladora app
Generating docs...
View "html" docs at "doc/index.html"
View "epub" docs at "doc/calcuuladora.epub"

C:\Users\ACER\tallerICI\Prog_funcional\calcuuladora>
```

Pegar la ruta del archivo doc/index.html en la barra de direcciones del navegador:

Test:

```
C:\Users\ACER\tallerICI\Prog_funcional\calcuuladora>mix test
==> earmark_parser
Compiling 3 files (.erl)
Compiling 46 files (.ex)
Generated earmark_parser app
==> nimble_parsec
Compiling 4 files (.ex)
Generated nimble_parsec app
==> makeup
Compiling 44 files (.ex)
Generated makeup app
==> makeup_elixir
Compiling 6 files (.ex)
Compiling lib/makeup/lexers/elixir_lexer/atoms.ex (it's taking more than 10s)
Compiling lib/makeup/lexers/elixir_lexer.ex (it's taking more than 10s)
Compiling lib/makeup/lexers/elixir_lexer/variables.ex (it's taking more than 10s)
Generated makeup_elixir app
==> makeup_erlang
Compiling 3 files (.ex)
warning: Application.get_env/3 is discouraged in the module body, use Application.compile_env/3 instead
  lib/makeup/lexers/erlang_lexer.ex:250: Makeup.Lexers.ErlangLexer

Generated makeup_erlang app
==> ex_doc
Compiling 25 files (.ex)
Generated ex_doc app
==> calcuuladora
Compiling 1 file (.ex)
Generated calcuuladora app
..
Finished in 0.07 seconds (0.00s async, 0.07s sync)
1 doctest, 1 test, 0 failures

Randomized with seed 85275

C:\Users\ACER\tallerICI\Prog_funcional\calcuuladora>
```

Doctest

-Se realiza a partir de la documentación de las funciones.

```
Prog_funcional > calcuuladora > lib > calcuuladora.ex > {} Calcuuladora
1    defmodule Calcuuladora do
2      @moduledoc """
3      Documentation for `Calcuuladora`.
4      """
5
6      @doc """
7      Hello world.
8
9      ## Examples
10
11         iex> Calcuuladora.hello()
12         :world
13
14      """
15      def hello do
16        :world
17      end
18    end
19
```

Test

-Se realiza a partir del script del test.

```
Prog_funcional > calcuuladora > test > 🔵 calcuuladora_test.exs > {} CalcuuladoraTest
1    defmodule CalcuuladoraTest do
2      use ExUnit.Case
3      doctest Calcuuladora
4
5      test "greets the world" do
6        assert Calcuuladora.hello() == :world
7      end
8    end
```