



# Under the Umbrella

Georgina McFadyen  
@gemcfadyen

# Elixir Applications

```
defmodule RomanNumerals.Mixfile do
  use Mix.Project

  def project do
    [app: :romanNumerals,
     version: "0.0.1",
     elixir: "~> 1.2",
     elixirc_paths: elixirc_paths(Mix.env),
     compilers: [:phoenix, :gettext] ++ Mix.compilers,
     build_embedded: Mix.env == :prod,
     start_permanent: Mix.env == :prod,
     deps: deps()]
  end

  # Configuration for the OTP application.
  #
  # Type 'mix help compile.app' for more information.
  def application do
    [mod: {RomanNumerals, []},
     applications: [:phoenix, :phoenix_pubsub, :phoenix_html, :cowboy, :logger, :gettext]]
  end

  # Specifies which paths to compile per environment.
  defp elixirc_paths(:test), do: ["lib", "web", "test/support"]
  defp elixirc_paths(_),     do: ["lib", "web"]

  # Specifies your project dependencies.
  #
  # Type `mix help deps` for examples and options.
  defp deps do
    [{:phoenix, "~> 1.2.1"},
     {:phoenix_pubsub, "~> 1.0"},
     {:phoenix_html, "~> 2.6"},
     {:phoenix_live_reload, "~> 1.0", only: :dev},
     {:gettext, "~> 0.11"},
     {:cowboy, "~> 1.0"}]
  end
end
```

```
def project do
  [app: :romanNumerals,
   version: "0.0.1",
   elixir: "~> 1.2",
   elixirc_paths: elixirc_paths(Mix.env),
   compilers: [:phoenix, :gettext] ++ Mix.compilers(),
   build_embedded: Mix.env == :prod,
   start_permanent: Mix.env == :prod,
   deps: deps()]
end
```

```
defp deps do
  [{:phoenix, "~> 1.2.1"},
   {:phoenix_pubsub, "~> 1.0"},
   {:phoenix_html, "~> 2.6"},
   {:phoenix_live_reload, "~> 1.0", only: :dev},
   {:gettext, "~> 0.11"},
   {:cowboy, "~> 1.0"}]
end
```

```
def application do
  [mod: {RomanNumerals, []},
   applications: [:phoenix, :phoenix_pubsub, :phoenix_html, :cowboy, :logger, :gettext]]
end
```

# External Dependencies

```
defp deps do
  [{:cowboy, "~> 1.0.0"},
   {:plug, "~> 1.0"},
   {:poison, "~> 2.0"}]
end
```

# Internal Dependencies

```
def deps do
  [{:kv, git: "https://github.com/YOUR_ACCOUNT/kv.git"}]
end
```



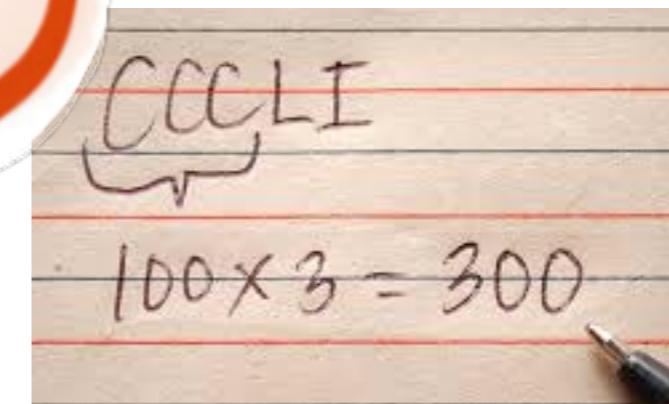


FRONT END

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BACK END



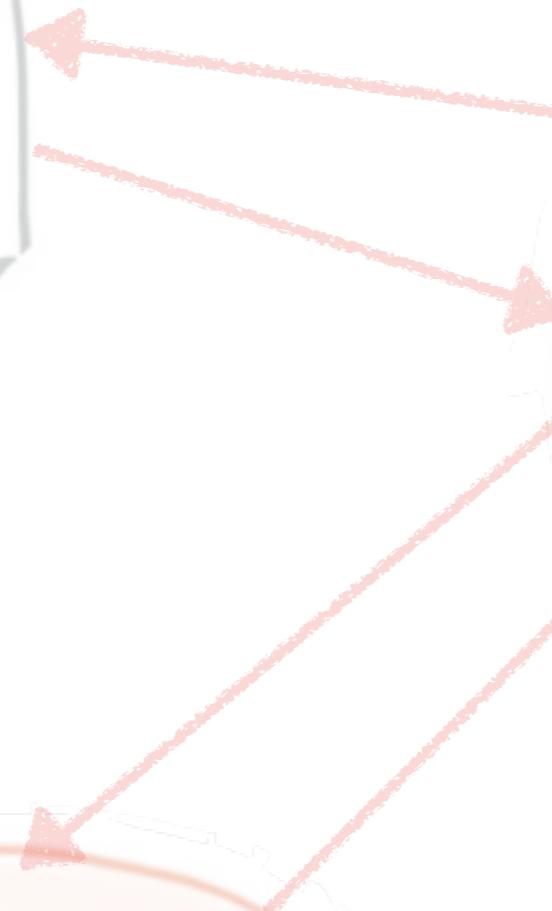




FRONT END



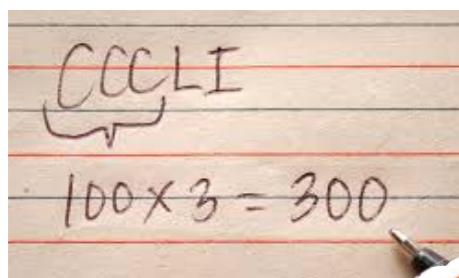
BACK END



Convert to Roman  
Convert to Binary



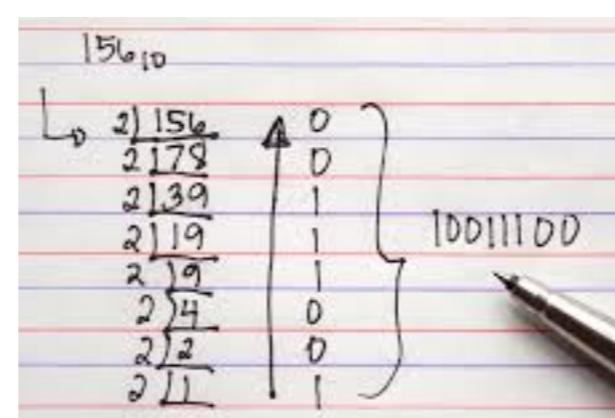
FRONT END



BACK END

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BACK END





```
~$ mix new roman_numerals --umbrella|
```

```
├── apps
├── config
│   └── config.exs
└── mix.exs
└── README.md
```

```
cd apps  
mix new roman_numeral_backend  
mix phoenix.new roman_numeral_frontend
```

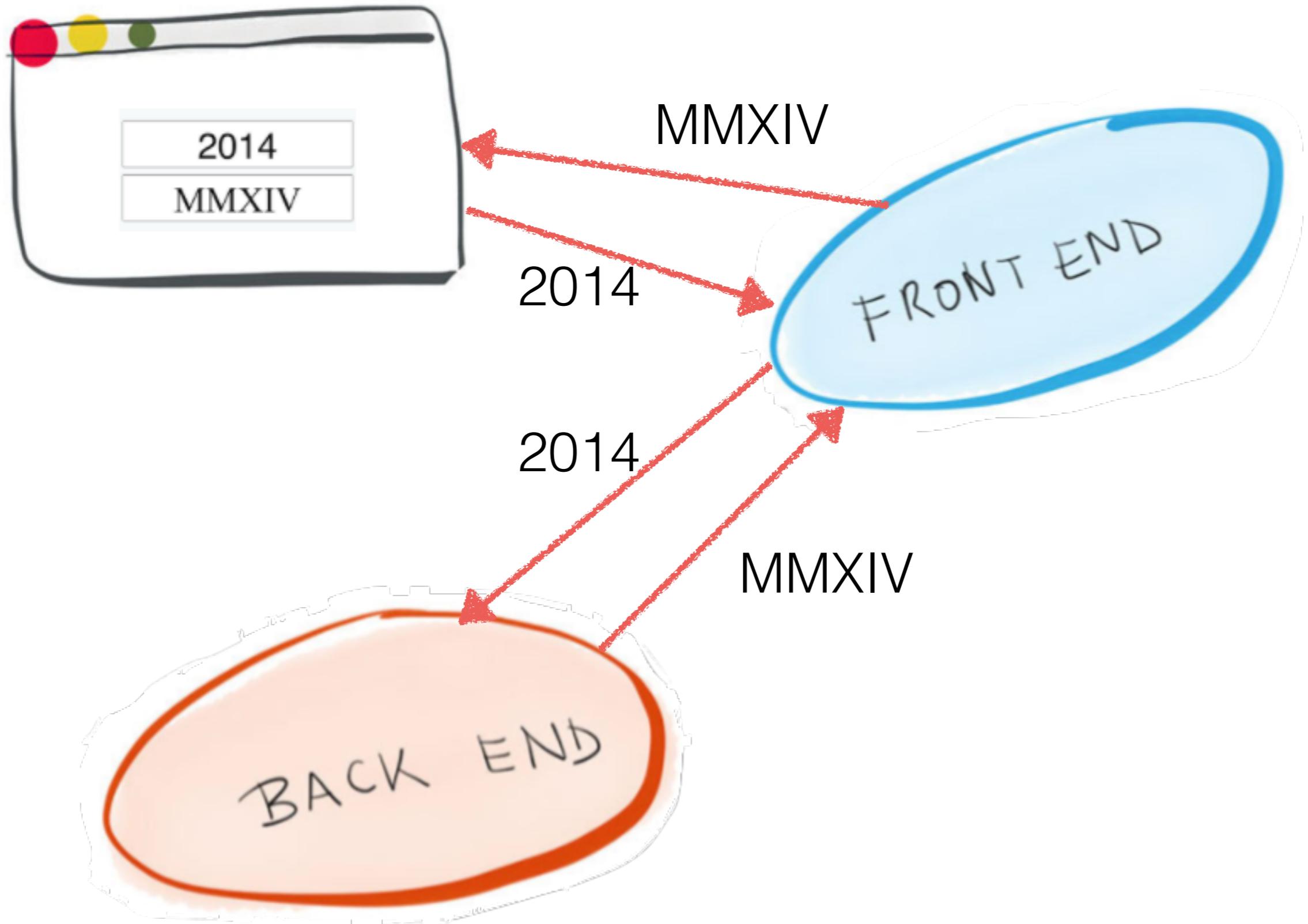
```
└── apps
    └── roman_numeral_backend
    └── roman_numeral_frontend
└── config
    └── config.exs
└── mix.exs
└── README.md
```

```
|- apps
  |- roman_numeral_backend
  |- roman_numeral_frontend
|- config
  |- config.exs
mix.exs
README.md
```



```
|- lib
  |- roman_numeral_backend.ex
|- mix.exs
|- README.md
|- test
  |- roman_numeral_backend_test.exs
  |- test_helper.exs
```

```
|- config
|- lib
  |- roman_numeral_frontend
    |- endpoint.ex
    |- repo.ex
    |- roman_numeral_frontend.ex
|- mix.exs
|- README.md
|- test
|- web
```



```
defp deps do
  [{:phoenix, "~> 1.2.1"},
   {:phoenix_pubsub, "~> 1.0"},
   {:phoenix_html, "~> 2.6"},
   {:phoenix_live_reload, "~> 1.0", only: :dev},
   {:gettext, "~> 0.11"},
   {:cowboy, "~> 1.0"}]
  {:roman_numeral_backend, in_umbrella: true}]
end
```



```
def project do
  [app: :roman_numeral_frontend,
   version: "0.0.1",
   build_path: "../../_build",
   config_path: "../../config/config.exs",
   deps_path: "../../deps",
   lockfile: "../../mix.lock",
   elixir: "~> 1.2",
   elixirc_paths: elixirc_paths(Mix.env),
   compilers: [:phoenix, :gettext] ++ Mix.compilers,
   build_embedded: Mix.env == :prod,
   start_permanent: Mix.env == :prod,
   deps: deps()]
end
```



# Micro Services?

# Take your umbrella

- One Repository
- Break the system down
- Loose Coupling
- Single Responsibility
- Choice of Deployment

[https://github.com/gemcfadyen/  
umbrella\\_romanNumerals](https://github.com/gemcfadyen/umbrella_romanNumerals)

Georgina McFadyen  
@gemcfadyen