LINGI2132 – Languages and translators

Project: **Domain Specific Language**

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Outline

Introduction

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Introduction

Our DSL: an encapsulation of *D3.js* to create

- chord plots
- migration maps

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Usage

- **Constructors**

```
val plot = ChordPlot(
 "Label A" -> (1,2,3),
 "Label B" -> (4,5,6),
 "Label C" -> (3,2,1)
)
val plot = ChordPlot("data.json")
val plot = MigrationPlot("path-to/map.geo.json",
 "FIN" -> (0,4,5,4),
 "FRA" -> (1,5,7,1),
 "ESP" -> (0,1,7,3),
 "ITA" -> (2,4,5,6)
)
val plot = MigrationPlot("map.json", "data.json")
```

Usage

- **Easy draw**

```
plot.draw()
```

- **Setters**

```
plot
  .setTarget("##playground2 svg")
  .setDimension(600, 600)
plot.colorPalette = List("orange", "green", "blue")
```

- **Changeable behaviors**

```
plot.showPopup = true
plot.focusSectionsOnClick
```

- **Customizable listeners**

```
plot onClick (
 println("clicked")
)
```

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Chord plot

- **Mergeable sections**
  ```
  plot.merge("label A" -> "Label B")
  ```
- **History**

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Matrices

- **Indexing**
  - **Using indices**

```
matrix(0)(1) // Returns the element at index (0,1)
matrix(*)(1) // Returns the column at index 1
matrix(0)(*) // Returns the row at index 0
```

  - **Using labels**

```
matrix("label A")("label B")
matrix("label C")(*)
matrix(*)("label A")
```

  - **Using both**

```
matrix("label A")(0)
```

Matrices

- **Merging**

```
matrix.merge(0 -> 1)
matrix.merge("label A" -> "label B")
matrix.merge(("label A", "label B") -> "label A and B")
```

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- Live demo
- Thanks for listening

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