Lab 06 - HTML In Elm

CS 1XA3

Feb 12, 2018

Review: Hello World In Elm

Example

```elm
import Html exposing (..)

main : Html msg
main = text "Hello World!"
```

The simplist possible elm program is just a main that renders some
Html

Elm Html vs Html

Almost the same thing, just different syntax

- Elm Html
  ```
  div []
  [
   h1 [style [("color","blue")] ]
      [ text "Hello"]
  ]
  ```

- Html
  ```
  <div>
    <h1 style="color:blue;">Hello</h1>
  </div>
  ```

Learn about Html at
https://www.w3schools.com/html/default.asp

Elm Html Primitives

These functions are exclusive to Elm (i.e not defined in Html like every other your about to see)

```
text : String -> Html msg
-- The "bottom" Html element, simply puts
-- text in the generate Html code

node :  String -> List (Attribute msg)
               -> List (Html msg)
               -> Html msg
-- can be used to define any Html element,
-- for example: div = node "div"
```

Elm Html Tags

All these Elm functions correspond to Html tags. See the full list
at http://package.elm-lang.org/packages/elm-lang/html/
latest/Html

Grouping
```
div : List (Attribute msg) -> List (Html msg) -> Html msg
-- A generic container

p : List (Attribute msg) -> List (Html msg) -> Html msg
-- Groups text as a paragraph

pre : List (Attribute msg) -> List (Html msg) -> Html msg
-- Groups text formatted as is
```

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latest/Html

Text

```
b : List (Attribute msg) -> List (Html msg) -> Html msg
-- Bold Text
sub : List (Attribute msg) -> List (Html msg) -> Html msg
-- Subscript
sup : List (Attribute msg) -> List (Html msg) -> Html msg
-- Superscript
br : List (Attribute msg) -> List (Html msg) -> Html msg
-- LineBreak
```

Elm Html Tags

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at `http://package.elm-lang.org/packages/elm-lang/html/`
`latest/Html`

Lists

```
ol : List (Attribute msg) -> List (Html msg) -> Html msg
-- Ordered list of items

ul : List (Attribute msg) -> List (Html msg) -> Html msg
-- Unorded list of items

li : List (Attribute msg) -> List (Html msg) -> Html msg
-- Enumerated list of items
```

Elm Html Tags

All these Elm functions correspond to Html tags. See the full list at http://package.elm-lang.org/packages/elm-lang/html/latest/Html

Embedded Content and Links

```
img : List (Attribute msg) -> List (Html msg) -> Html msg
-- Embed an image

a : List (Attribute msg) -> List (Html msg) -> Html msg
-- Represents a hyperlink, i.e a clickable url
```
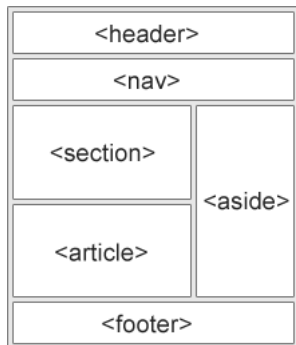
Example: Embedded Images and Links

```elm
import Html exposing (..)
import Html.Attributes exposing (..)

main : Html msg
main = div []
        [
         h1 [] [text "Drunk Rick"]   ,
         img [src "drunk_rick.jpg"]
             []                      ,
         a [href "https://www.google.ca"]
            [text "Find your own image on Google"]
        ]
```

Html5 Layout Tags

- ► header: Document header
- ► nav: Container for navigation links
- ► section: Document section (can define multiple)
- ► article: Document article (like section)
- ► aside: Document side bar
- ► footer: Document footer
- ► address: Contact information

You can inline CSS attributes using the style

```
myStyle : Attribute msg
myStyle =
  style
    [ ("backgroundColor", "red")
    , ("height", "90px")
    ]

main : Html msg
main = div [ myStyle ] [ text "Hello!" ]
```

Note: I'm not going to waste time teaching specifics about CSS, see https://www.w3schools.com/css/default.asp

Make Something!

Now that you now some Html, make a Webpage! Perhaps a CV for yourself ...