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Data visualisations

- A world map was chosen as its the easiest form to allow a person to explore a bit across the globe and select countries to view some data. World map has a hover tooltip, a click function to update the barchart, zoom and move interactivity. The colours are designed so no two countries next to each other have the same colour, making it easy to distinguish between countries.
- A barchart was chosen because the data doesn't feature a time element and a barchart is intuitive to use (more in html layout). Furthermore the barchart has a hover over tooltip and changes colour when you hover over it.

Datatree

- Separated the source files.
 - A library (containing libraries such as d3, topojson and bootstrap),
 - A data folder (containing all data files),
 - A scripts folder (containing the executed script)
 - And a static folder (containing the css)
- This file separation makes sense to me as it separates the data based on what it does and is needed for. D3.js for instance is just a library that we use and for clearness it makes sense to separate it from the executed script

HTML layout

- Started with a base title to give the viewer an immediate idea on what its about
- Author name and student number below that to make it clear who the author is
- A small dropdown menu that updates the barchart based on data implemented
- Below that are the visualisations, side by side.
 - A world map with zoom and move interactivity to allow a person to browse around the globe with a tooltip with some basic info; name, population data and GDP.
 - A barchart indicating the most recent data available globally. Since there is no time element involved something like a line graph is absolutely useless whilst a barchart is a simple visualisation that anyone can immediately understand without much explanation.
- Then theres the text below the visualisations, providing the reader with some info about interactivity and sources.
- Story

Javascript

- One large problem with the current design is that the csv file and the json file sometimes have different names for different countries, which I'll be honest here i haven't really put much effort into fixing. (heurestieken being a prime time consumer for instance and its more effort than i think is worth at the moment).

- Separated into separate functions to make it easier to read and to call specific parts of it without having to call all of it.
- Globalname so the updatebarchart function can call the name selected on the world map
- Function drawcharts is called on window load, to guarantee that the script is executed.
- Function update changes the globalname and calls updatebarchart. This in my opinion is clearer and simpler to use than constantly changing the globalname and call the updatebarchart function from within a function (like `.on("click" function() { Globalname=something; updatebarchart(); })` vs `.on("click", update(something))`).
- Drawbarchart and update barchart are not nested, i had some difficulties calling the updatebarchart function from the world map function when it was nested. So i separated it into 2 functions instead of a nested function. Downside of this, is that you have to declare the margins and variables again.
- Updatebarchart doesn't redraw the entire svg, it just redraws the bars, y and x axis
- World map, is based on the code from <http://techslides.com/d3-world-maps-tooltips-zooming-and-queue>, with some minor modification in the loading of data, the mouse over function and added a `.on("click")` function.
- Wrap function is to wrap around the x-axis labels so they're not wider than the bar, so its easier to read. It's a function from <https://bl.ocks.org/mbostock/7555321>.
- Round function to round down floats to 0 decimals for easy readability and clearness. I mean 9000.2412542354325 is not as clear as just plain 9000, now is it?.
- JQuery function is only executed when the document is ready.
 - it appends options to the dropdown menu based on the countries in world-topo-min.json (used to draw the world map).
 - And it updates the barchart when a country is selected from the dropdown menu.

Bootstrap:

- Added some custom css to the bootstrap.css for the country hover, tooltip and barchart.