VDE: Visualization Design Environment

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The Project

Say I want to make a visualization with my dataset...

quickly and easily...

but I also want control over the layout and visual parameters...

and I want to explore different options...

but I don’t know how to program at all!
Relevant Work

Excel: Few chart types and not user-friendly

ManyEyes: Little control of design and layout

Tableau: Limited control of design and layout

D3 / Google Chart Tools: Coding required

But... we can leverage:

- D3
- SVG
- jQuery UI
- Flow Menus
Goal

To build a Visualization Design Environment:

- Graphical tool for creating visualizations
- Flow menus on the visualization assign data to visual encodings
- Drag and drop based interactions
- Direct manipulations to easily edit, resize, and layout visualizations
- No coding required
<table>
<thead>
<tr>
<th>ISO country code</th>
<th>Country name</th>
<th>2011 GDP</th>
<th>2010 population</th>
<th>Female count</th>
<th>Male count</th>
<th>Gold medals</th>
<th>Silver medals</th>
<th>Bronze medals</th>
<th>Continent</th>
</tr>
</thead>
</table>

```
height
width
fill
stroke
linear Male count
logarithmic
```
ISO country code
Country name
2011 GDP
2010 population
Female count
Male count
Gold medals
Silver medals
Bronze medals
Continent

angle
inner radius
outer radius
fill
stroke

linear
Gold medals
logarithmic
1. Adding Scatterplots

2. Adding Text Visualization

3. Characterize Input Variables as N/O/Q to narrow down flow menu options

4. Adding Axes Labels, Titles, and Text Fields

5. Usability: Data Input & Saving
Questions for Feedback

1. What are other essential features?

2. What are limitations of a drag-and-drop environment?

3. What features should be customizable versus smart defaults (like color palettes, tick mark spacing, etc.)?

4. Best way to “save” visualizations or reproduce for later use?