Introduction to Programming II Project Log

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| **Project title:** | Data Visualisation Application |
| **Topic:** | Topic 8 |
| **What progress have you made this topic?** | |
| My progress has been substantial, and I managed to develop my independent extension which features a stacked area chart. I initially chose a dataset “Singapore External Debt Statistics” where I proceeded to clean it for easier data manipulation. I adapted the “this.layout” object from the climate change visualisation. I then calculated the maximum value for the y-axis to ensure proper scaling. With an emphasis on object-orientated programming, I modularised the visualisation drawing process into three separate functions: “drawLabels”, “drawData” and “drawLegend”. These functions are rendered in each individual component of the code. I also added a mousePressed functionality, where upon clicking each individual colour on the legend, it only shows the selected categories’ data. | |
| **What problems have you faced and were you able to solve them?** | |
| The primary problems I faced were planning the rendering of individual areas in the stacked area chart, manipulating data to populate arrays and implementing of the “mousePressed” functionality. During the planning phase, I initially visualised a general structure for the drawing code, however, there were many issues that I had to figure out during the actual coding. Utilising “console.log” to debug was instrumental in identifying the many instances where for-loops exceeded table data. I also manually sketched a simplified representation of the data table to enhance my own understanding. Implementing the “mousePressed” feature required extensive experimentation of different methodologies before I finalised my current implementation. All these problems were eventually overcome. | |
| **What are you planning to do over the next few weeks?** | |
| In the next few weeks, I plan to improve on the existing implementations of the pie chart and the stacked bar chart. Adding a 3D popup functionality to the pie chart upon mouseover, as well as to display the % of the data upon mouseover to the stacked bar chart. | |
| **Are you on target to successfully complete your project? If you aren’t on target, how will you address the issue?** | |
| I am currently on target to complete the project. | |