

Introduction to Programming II

Project Log

Project title:	<u>Final Project – Gender Distribution in the Video Games Industry</u>
Topic:	<u>Week 14 - Gathering Data and creating a basic structure</u>
What progress have you made this topic?	
<u>I have successfully collected data, created a .csv file, outlined a “skeleton” of my extension and wrote in some basic layouts for it. The scripts I used were mostly taken from the existing project, studying how to create a new data visualization from scratch.</u>	
What problems have you faced and were you able to solve them?	
<u>There is surprisingly a lack of documented statistics on the issue of gender diversity. Thus the only reputable one found contained only 6 entries. I believe that the technical scope of the project should expand to cover the low amount of data entries. Therefore, I plan on being able to examine singular entries through hovering and clicking on them. This will raise the complexity of the project but ultimately will allow me to retain to my chosen topic.</u>	
What are you planning to do over the next few weeks?	
<u>I need to create a graph, examine how the pie chart object works, implement the graph and bar chart by working through the data. Furthermore, through testing, I found no viable way of using the “MousePressed()” function of the p5.js library in the context of constructor functions, therefore I will find a way to do it manually using the event system of base JavaScript. Next, I will implement a function/s to detect whether the mouse is hovering and pressed down onto a selected bar. This will then stop drawing the bar chart and draw the pie chart for the selected data entry. A simple back button will take the user back to the bar chart.</u>	
Are you on target to successfully complete your project? If you aren't on target, how will you address the issue?	
<u>I believe I am currently on target to completing the project.</u>	

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<u>Project title:</u>	<u>Final Project – Gender Distribution in the Video Games Industry</u>
<u>Topic:</u>	<u>Week 16 – Drawing Graph and Labels</u>
<u>What progress have you made this topic?</u>	
<u>I have created the basis of the bar chart, a graph with horizontal and vertical lines marking percentages, labels from bottom to top marking each 5 percent, and labels from left to right marking each year of the data. I have also made the algorithm ready for scale, meaning any additions to the .csv entries will not cause any issues with the function. Furthermore, this function also saves the positions of each bar, to make it easier when being drawn. Lastly, I have drawn labels on the side to explain which colour refers to which gender.</u>	
<u>What problems have you faced and were you able to solve them?</u>	
<u>Definitely sizing and scaling have been an issue. I have added to the layout function some paddings. These will mark the edges of the graph chart so drawing on top of it will be easier in the future.</u>	
<u>What are you planning to do over the next few weeks?</u>	
<u>I need to draw the bar chart on top of the graph, make functions to determine hover and click on a specific bar, then implement pie charts for single selections.</u>	
<u>Are you on target to successfully complete your project? If you aren't on target, how will you address the issue?</u>	
<u>I believe I am currently on target.</u>	

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<u>Topic:</u>	<u>Week 18 – Drawing the Bar Chart and Detecting Hovers</u>
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What progress have you made this topic?

I have managed to draw the bar chart, and created a function to detect hovers. It was a straightforward process, however it had its difficulties.

What problems have you faced and were you able to solve them?

One issue was the size of the bar, I needed to create a fake bar where the male/female/other value was at a specific percentage divisible by 5 to be able to track whether it is scaled correctly. Another issue was hovering – I decided on having a global boolean value of whether the mouse is hovering over a bar or not. This was incredibly inadequate as with testing, the value would constantly differ from true to false when it should have been true, as each hover check was happening for every bar, there was no way to have that value statically stay true, possibly causing issues with a user clicking and nothing happening. Therefore, I decided to treat each bar as a separate object with its own hover boolean value. This way, there is no chance of empty clicks happening.

What are you planning to do over the next few weeks?

I need to communicate to the user when they have hovered over the bar, make it easy to understand that it is a clickable object. Then, finally, implement the pie chart and back button.

Are you on target to successfully complete your project? If you aren't on target, how will you address the issue?

I believe I am almost finished with the project and made some strides in the development process. However, I also think I am at the hardest part, currently. Regardless, I will be taking the following week off for a beach vacation and do my best to get back on target later.

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<u>Topic:</u>	<u>Week 20 – Implementing Pie Chart and Final Tests</u>
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What progress have you made this topic?

I have fully finished the project by creating a function that switches from Bar chart to Pie chart, implemented pie charts in the project, tested with user input (and also had my sister test it with no previous explanations). The tests were successful, no bugs were found in the final version of the project, and I decided to make it more user-friendly by adding a glow to the bar chart when hovered.

What problems have you faced and were you able to solve them?

Detecting hovers was easy to implement, but detecting clicks on the contrary proved to be a difficulty using the p5.js library, therefore I used the event system within JavaScript to get over such thing. This, however, caused issues when trying to implement the back button as a p5 DOM element. The screen would begin to flicker from pie to bar chart. Therefore, I decided to make a simple back button using the “rect()” and “text()” p5.js functions.

What are you planning to do over the next few weeks?

I believe I can finally rest as this is the final project log. I may end up doing more tests before final submission, however I think I have tested each element of my project exhaustively.

Are you on target to successfully complete your project? If you aren't on target, how will you address the issue?

To be frank, I did take an unexpectedly large amount of time to complete this last part. I was struggling with my mental health and it took a toll on many things, including my overall productivity. I believe I did my best.