Team #6 - GDProject
ITSC 3155 Final Project Report
Prepared by: Austin, Dane, Cameron, Yashiya
Date: 12/21/2020

Demo: https://youtu.be/G1XNgqeet4g

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1 Introduction

The idea would be that people can view information about the country that they wish to view. The goal of this project would be to make information about countries as easily accessible as possible and easily understandable. Major features would be that the data is accurate and frequently updated, and there could be various ways to visualize the data. The customer could be someone who is curious about such information, or the customer could be someone who uses the information to understand and help others. It would be useful to society by showing the health of countries and have professionals use the information for the better of society.

1.1 Project Overview and Statement of Proposal

Statement of Proposal: We propose to create a software that lets you visualize the correlation of government structures and their GDPs, Demographics, Population, etc.

1.2 Project Scope and Objectives

The scope is to create a user friendly interface that makes it extremely quick and easy to plug in different variables about countries and to see their correlations.

2 Project Resources

2.1 Group Members

Members:

- Austin Silfies-heater
- Dane Medlin
- Cameron Pacileo
- Yashiya Minor

2.2 Hardware and Software Resources

Software: PyCharm with Plotly, Dash, Io, Panda, Numpy. Google Chrome or equivalent browser for github, documentation, assignment submissions
Hardware: Working computer with internet connection

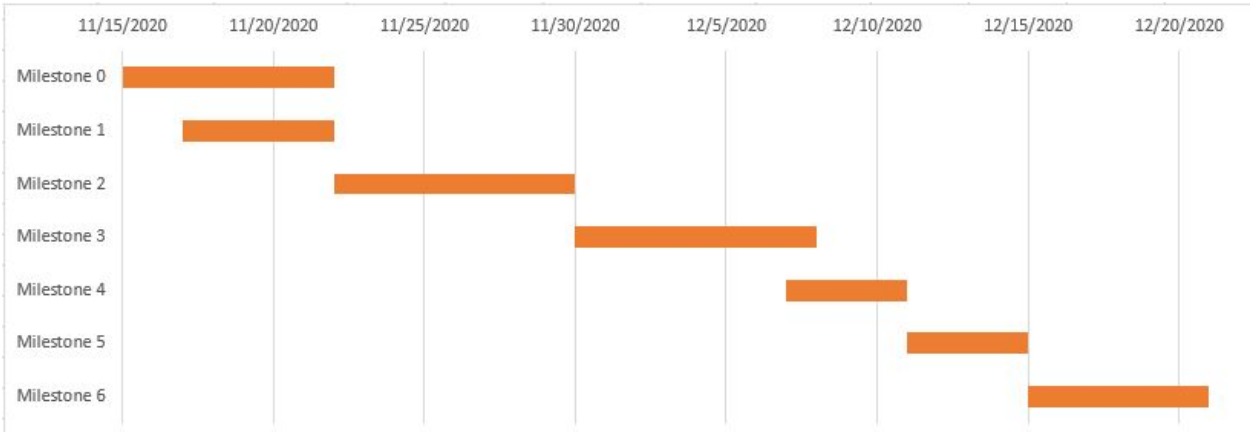
2.3 Special Resources

Jamie Stephens, https://plotly.com/ , https://dash.plotly.com/

3 Plan

3.1 Timeline Chart

Gantt Chart (with dates). Video on Gantt charts in excel



3.2 Task/Milestone Descriptions

Milestone 1 -

The goal of the project would be to provide a tool that gives easy access to GDPs across the world. The major features of the project would be intuitive searching tools that allow quick and easy access to specified data, and understandable charts that format the data in an accessible way. Customers would be anyone who would benefit from the data, most likely those involved in the economics field like stock traders and financial analysts. This project would be useful to society by making a lot of people's jobs easier & more convenient.

3.3 Resource Table

Task	People	Hardware & Software	Special
1	Cameron	Pages	N/A
2	Shy	PyCharm	N/A
3	Dane	PyCharm	N/A
4	Austin	PyCharm	N/A

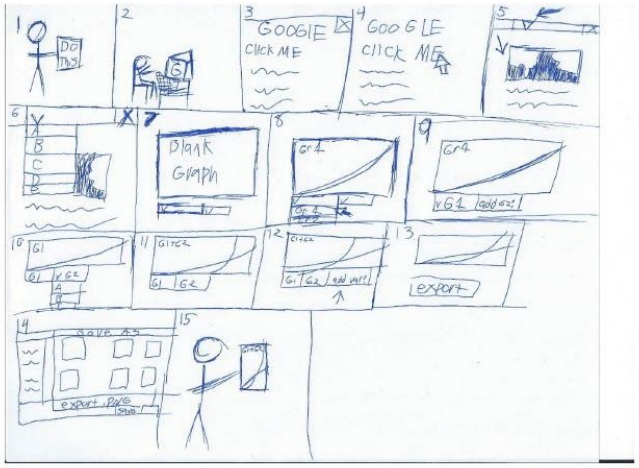
4 System Design:

4.3 User Stories

Group 6 user stories

1. As a/an "user" I want to "be able to compare graphical data for different regions"
2. As a/an "user" I want to "select my region from a list"
3. As a/an "user" I want to "have a visual representation of regions I can select"
4. As a/an "user" I want to "view data over time in a graphical format"
5. As a/an "user" I want to "quickly return to the main page/top of page"

1. Student gets assignment relating to Global GDP
2. Student uses Google to search for Global GDP Data
3. Product is displayed on search results
4. Student clicks on the link
5. Student locates interactive map or region dropdown menu
6. Student selects the region of interest to be displayed
7. Product displays a blank graph with dropdown menu for variable selection
8. Student selects the data type to generate for the selected region
9. Product updates empty graph to display the selected data plot for the region
10. Student sees option to add additional region onto the current plot
11. Student adds addition region data set to to graphed for comparison
12. Student wants more than two variables to visualize and sees the option to add a third variable
13. Student has option to export a visual copy of the current graph generated
14. Student saves exported image of the the plot to local device
15. Student uses exported graph in presentation or assigned project

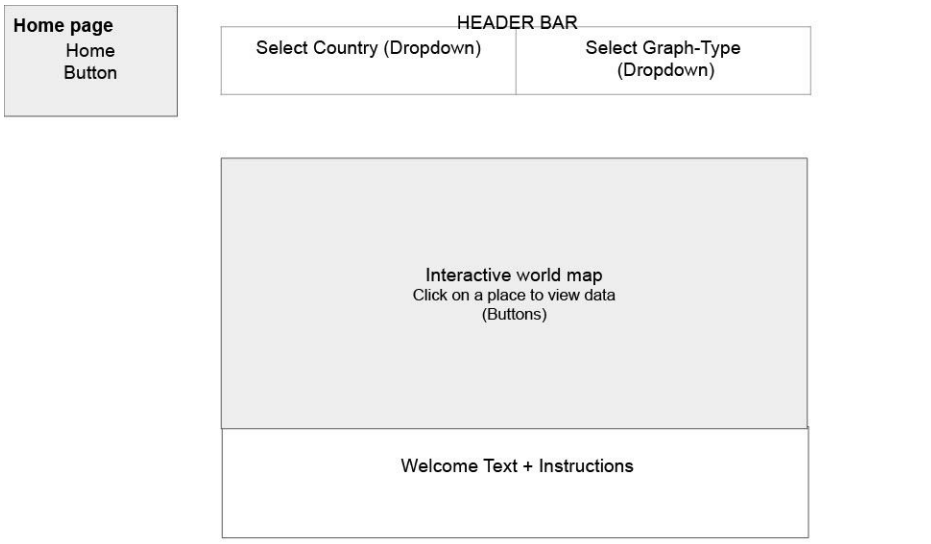


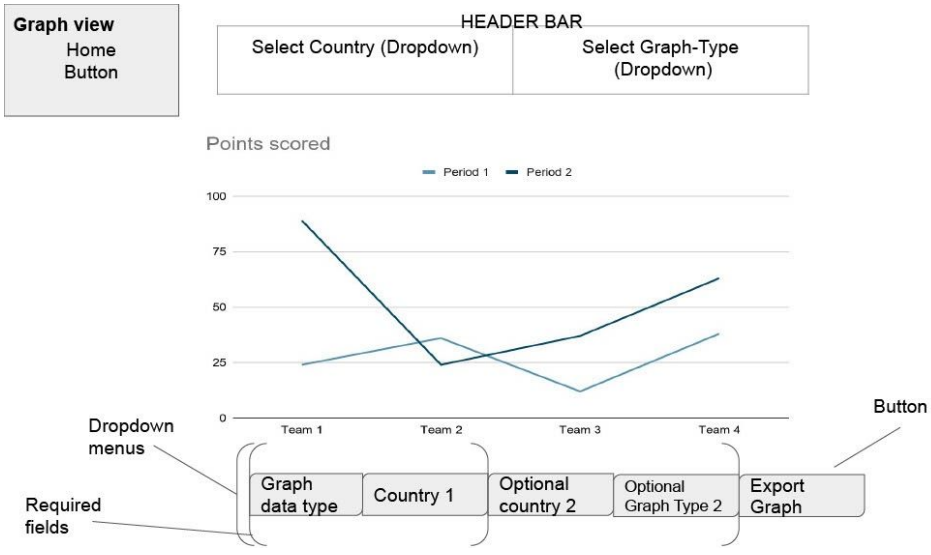
4.4 Feature List

2. Feature List:

- Interactive Map - (research how) Cam/AH
- Dropdown menu of Country/Graph Type Cam/Shy
- Graphical rendering of data Dane/Cam
- Comparison of Graphs **AH/Shy**
- Export / image save of graph data Dane/Shy
- Ability to add a third variable in the graph Dane

4.5 Storyboard





5 User Tests:

5.1 Test procedure

The two groups parlayed in our unofficial discord server on Dec. 13th at 2 pm. Also included were a TA and the professor. Group 5 went first, so one of their members screenshared their project as we gave them orders indicating what we wanted done. After we did this, the professor repeated the process. The usability of the product was analyzed and compared to their user stories.

The testing procedure was then completed again, with our group as the screen-sharer and Group 5/the professor as the testers.

5.2 User Test and Results

The testing of our product went well. Minor things had to be explained to the testers, and not every aspect was intuitive or feature-complete, but complaints were minimal. Upon reviewing their canvas submissions regarding the test, the biggest complaints lied in the lack of explanation regarding the point of the product, and the non-intuitive slider.

5.3 Conclusion

The test of our project was mostly a success. The biggest things we took away from our feedback was that we needed to clearly label and explain what we're displaying, and that parts of our design weren't intuitive enough.

6 Lessons Learned

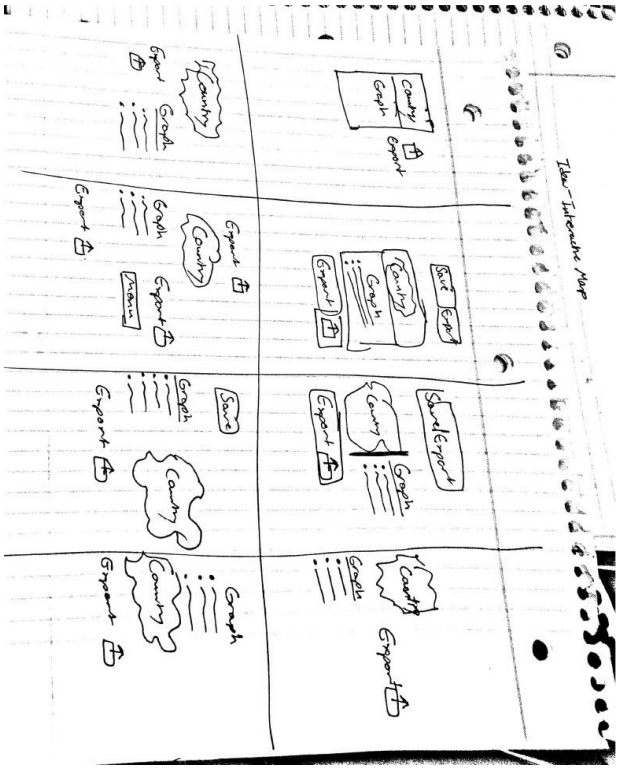
We learned how to put all the diagrams we learned about to use. This project was also a crash course in python, as several members of our team came into the assignment with minimal knowledge regarding how python works. Working on this project also provided opportunities to learn the inner workings of github, which will likely be very useful for the future.

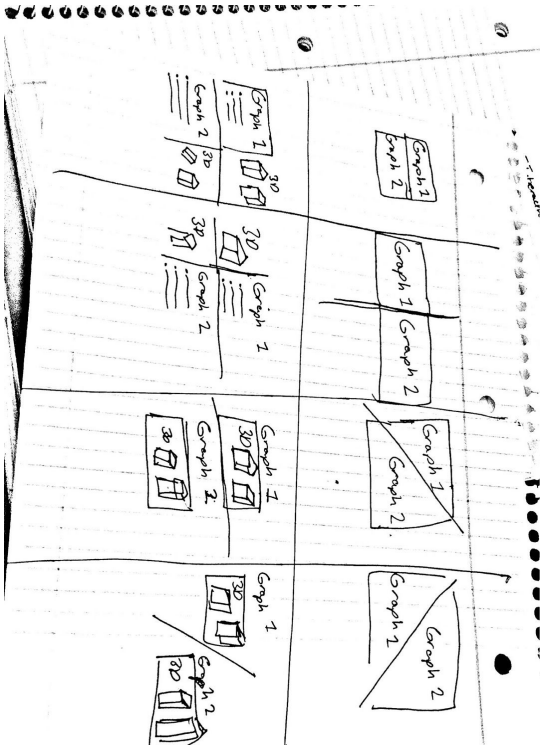
7 Future work

In the future this project can be expanded to be more comprehensive. Providing more datasets for users to utilize will make the project even more useful than it already is. If the project was hosted on an actual website, it could be used by way more people (most aren't going to go out of their way to download a python file from github).

8 Appendices

8.1 Sketches





8.2 Software Repository and Installation Instructions

Github link contains the project with latest updates, opened in pycharm.
https://github.com/asilfies/Group6/tree/main