**Final Project Plan  
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**Introduction**

My application is intended to serve as a "Life Perspective" application. My main idea centers around pulling data from the World Bank database and display relevant statistics regarding standards of living - such as GDP per capita, Education Level, Annual Income, and other relevant information - and allow users to interact with it. This would mean having users input certain information regarding their own lives (naturally, this does not have to be accurate) and comparing this to worldwide statistics.

**Features and Site Design**Once logged in, the user will have a screen that displays a World Map. What the user will be able to see in a panel above the map are different filters – such as the standard of living measures listed above – and will be able to click on these to filter by what he/she wishes to be displayed on the map. For example, if a user checkmarks GDP, the map will be color-coded and filtered according to different levels of GDP across different nations. The map is intended to be interactive, so that when the user clicks on a country, detailed development statistics, such as trends in GDP per capita across different years, illiteracy rate, etc. can be displayed. This is intended to help meet the project requirement of “viewing the cumulative or individual data in multiple ways”. I hope to be able to display a key next to the map to specify certain ranges of the information that correspond to the colors being displayed.

I intend to add a field below this map, which when clicked will open another modal page that prompts the user to enter relevant information. As mentioned above, the user can put in any data that he desires, as long as it is valid (depending on the type of metric that is being entered). Once this information is inputted and submitted I intend to display a table below it that has certain messages displayed depending on where the data enters falls relative to the data already stored by the application. For example, if the user enters his or her education level, the application might display a message such as “You have attained a level of education that is higher than **X**% of the population of country **Y”**. Moreover, the map colors can be reactively updated to shade regions relative to the user’s own information. For example, poorer/worse off regions (depending on aggregated/median data) can be shaded as red, and richer/better off regions can be shaded blue, or any other color.

I also intend on using the Javascript D3 library and other useful data visualization tools to produce graphics in other tabs/sections in the website. These can help me represent the World Bank data other than in map form and can also give the user some interesting information and comparisons.

The design idea for this website is somewhat inspired from the lab in class that integrated the Google Maps API and earthquake data to display circles

**Different User Roles:**

* **Guest:** Only able to view development statistics/visualizations. Will not be prompted for information.
* **User:** Will have access to all features, barring administrative privileges. Will have personalized profile and information will be stored for further use.
* **Adminstrator:** Can monitor site traffic and usage, and perform site maintenance.

**Technologies:**

* Firebase: For user authentication and data storage (might possibly be backed up by JSON)
* Vue
* Vanilla JS
* D3
* JSONView plugin to access WorldBank API

**Data Sources:**

* World Bank database, can be accessed with API request. Displayed as a regular JSON file.   
  Useful link: <https://datahelpdesk.worldbank.org/knowledgebase/articles/898590-api-country-queries>
* Google Maps API for map display.