FUNCTIONALITY

Data Structure:

The data of interest here is the geographic data of different states and their counties in America. Thus, it ideally fits a tree structure where the fundamental root node denotes USA. The subsequent level contains the names of the regions of US. The final level is where each region has their specific counties under them. Each county node has the information regarding their healthcare professional, FIPS code, and EHR adoption rate percentage. The screenshot below is an example of the visualization obtained for the state of Arizona. The tree form is depicted here where the state is the parent node under which its counties are all children nodes. Similarly, each state can be expressed in this format.

Country - USA

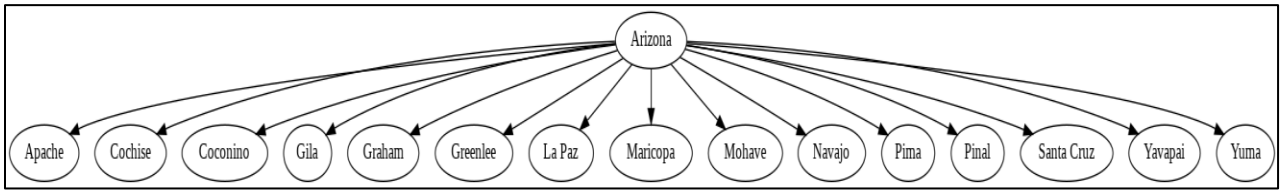
↓

State

↓

County

[FIPS, Percentage, Physician Count, etc.]



Interaction:

The project has interaction capabilities for searching the tree for specific county and/or state and for the graphical visualization of the trees. The input for state and county name will be given by the user. The tree image for the corresponding state will be created. Since the code was implemented in the virtual Google Colaboratory environment, the created image file will be the runtime. That file can be downloaded and viewed. The state name would be used to determine the county in the state having the lowest EHR adoption percentage. The county name will turn up a search with the list of counties with that name and it will provide the healthcare professional's details for the topmost county. The search can be refined by using both state name and county name to find the specific county in that particular state.