Class Documentation

This document organizes the classes and its methods/member variables and assigns responsibilities to group members.

Class Name: TracerouteData		
Priority: 1	Coder: Minsu	Summary: Generates Traceroute Data
dest: String The dest variable stores the destination site of the traceroute. flags: Dict A dict of other flags if needed		
__init__(String dest): void Initiates the Traceroute class with the destination field initialized updateProtocol(String protocol): void Updates the protocol to one of the four: UDPLITE/UDP/TCP/(Default) ICMP addFlag(String flag, String value): void Adds flag, and if applicable, its value, to the flags dictionary removeFlag(String key): void Removes the given key from the flag dictionary traceroute2List(): List Returns a list representation of the traceroute call and flag options genIPs(String trPath): Array Generates traceroute data using the current settings and returns an array of IP addresses		

Class Name: LocData		
Priority: 2	Coder: Matt	Summary: Generates Location Data
IPArr: Array The IP addresses returned from traceroute		
__init__(Array IPAddr): void Initiates LocData with IPAddrs initiated tr2coords(IPAddr IPAddr, String coords): void Maps ip addresses in the traceroute to lat/long coordinates and saves the data into coords coordsReduce(String coords, String reducedCoords): void Reduces coordinates by count and adds a new "count" column, saving the generated file at reducedCoords reducedCoords2FIPS(String reducedCoords, String fips): void Maps the coords in reducedCoords to FIPS geoid convertData(String fipsPath): void Using the previous three functions, convert the data stored in trPath into fips data and save it to fipsPath		

Class Name: Choropleth		
Priority: 4	Coder: Minsu	Summary: Plots FIPS data into a Choropleth
fipsPath: String The path where the fips data is stored. This data is used to plot the Choropleth.		
__init__(String fipsPath): void Initiates Choropleth with fipsPath initialized plotData(String choroplethPath): void Using the data stored at fipsPath, generates a Choropleth and saves it as a png at choroplethPath		

Class Name: TracerouteHeatmap		
Priority: 4	Coder: Matt	Summary: Takes User Input and Generates a Heatmap
workPath: String The folder where all the generated data, including the heatmap, will be stored		
__init__(String workPath): void Initiates TracerouteHeatmap with workPath initialized run(String dest): void Generates the Heatmap/Choropleth for the traceroute to the given path		