Design Document

- http://leafletjs.com/examples/choropleth/
- https://www.gis.leg.mn/iMaps/elections/2016/all/index.html
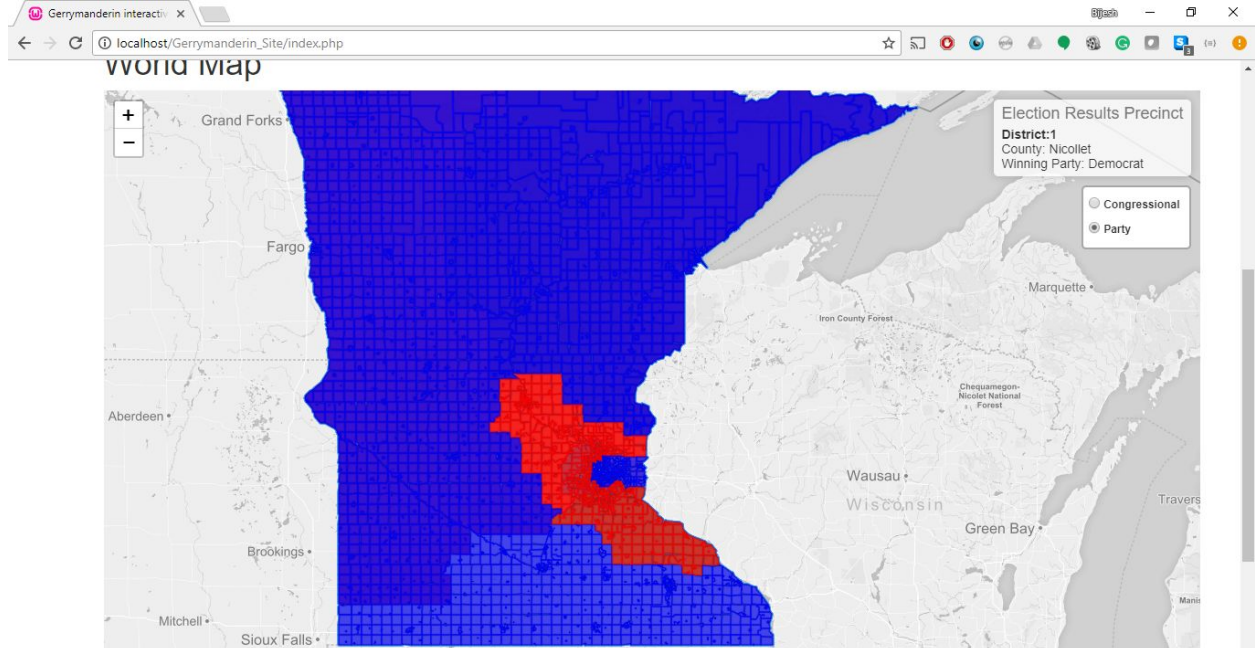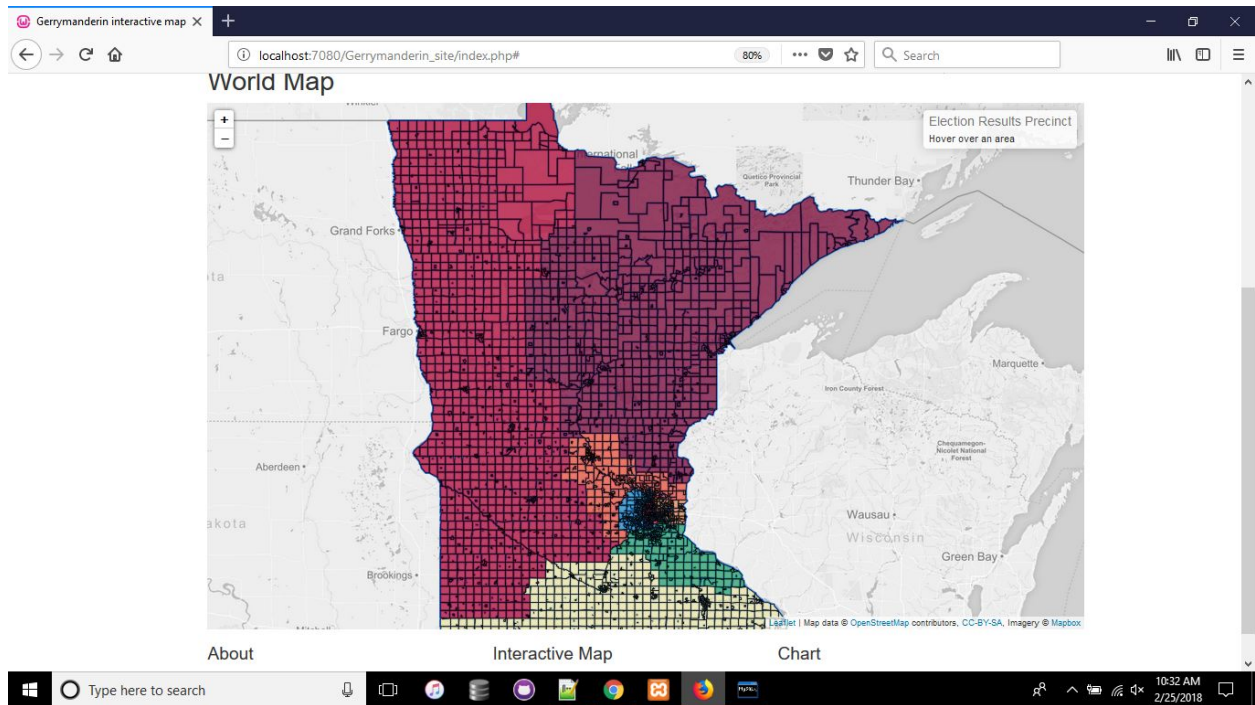

- Modify GeoJson with Java
  - Classes
    - Main
      - Runs the program

- ■ Parser
  - ● Reads the geojson into each line in ArrayList
- ■ Writter
  - ● This writes the either Republican or Democrat into the geojson code
- ● Create Boundaries with Java
  - ○ Classes
    - ■ Main
      - ● Runs the program
    - ■ Read and Write
      - ● Reads the GeoJson code
      - ● Writes new GeoJson code File
    - ■ LongLat Holder
      - ● Holds longitude, latitude, Congressional district ID, County ID, Senate ID, legislative district
    - ■ Line
      - ● Holds 2 points each point is data type LongLat Holder
    - ■ Boundary Creator
      - ● This class runs a loop on all the lines. Example, if looking for congressional district lines, it adds into a ArrayList the line only if the points are the same but the congressional districts are different.
- ● DataBase

Results
PK	vtdid
FK1	pctName
	pctCode
FK1	mcdName
FK1	countyName
FK1	countyCode
FK1	congDist
FK1	mnSendDist
FK1	mnLegDist
FK1	ctyComDist
FK1	juddist
	swcDist
	ward
FK1	hopDist
	parkDist
	tabSystem
	tabModel
	mailBallot
	reg7am
	edr
	signatures
	ab_mb
	fedOnlyAb
	presonlyab
	totVoting
	usprsr
	usprsdfl
	usprscp
	usprslmn
	usprswwp
	usprsgp
	usprsadp
	usprisp
	usprslib
	usprswi
	usprstotal
	usrepr
	usrepdfl
	userepwi
	usreptotal
	mnsenr
	mnsendfl
	mnsenwi
	mnsentotal
	mnlegr
	mnlegdfl
	mnlgwi
	mnlegtotal
	mnca1yes
	mnca1no
	mnca1est
	mnca1total

Counties
PK	orgcFid
FK1	CountyID
	CountyName
	fips

District
PK	DistrictName

Fields
PK	FieldName
FK1	Definition

notes

This database just hold some notes

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- Javascript Functions:
    - Function: Map
    - Function: prop
        - Updates the map information from the geoJson file
    - getColor
        - Colors the map according to the presidential district
    - Style
        - Styles the map divisions
    - HighlightFeature
        - Highlights a map area when cursor is pointed
    - resetHighLight
        - Resets style updates the layer information
    - zoomToFeature
        - Zooms into the area when clicked in that area

- ○ onEachFeature
    - ■ Controls the mouserhover, house click and zoom functions
- ○ secondLayerFeature
- ○ mouseoverSecondLayer
    - ■ Works as same function but for the second layer

Use Case Diagram
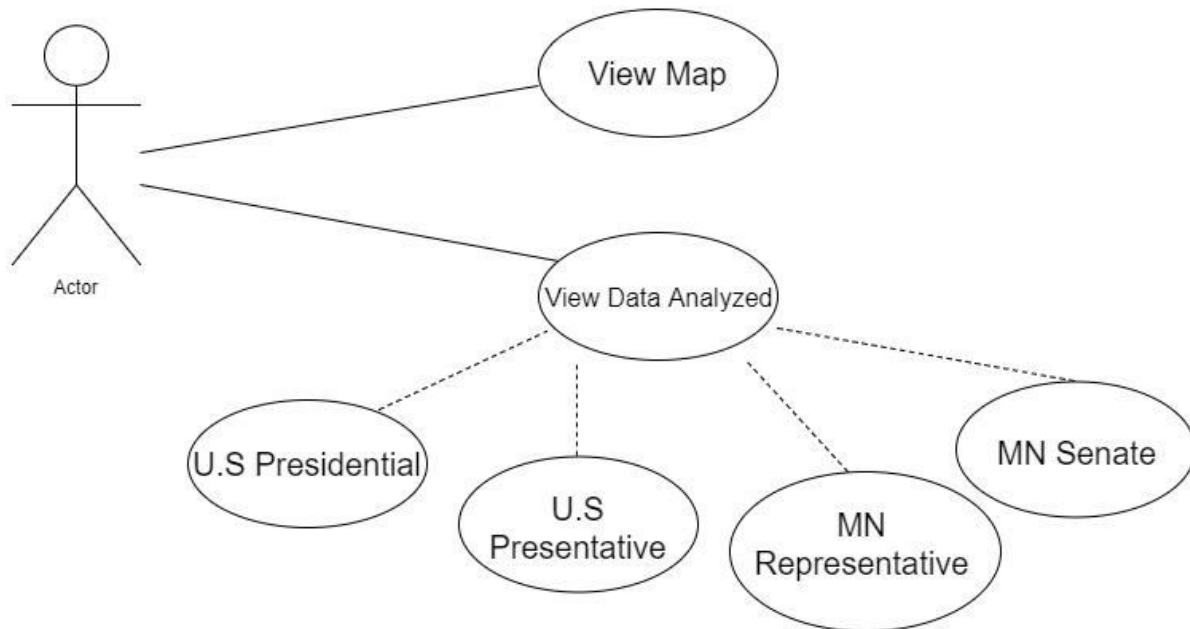
Use Case

Actor	Action
1. User visits the gerrymandering site and scrolls to the map section	
2. User has the option to choose different district such as Presidential, US congress, MN senate and MN House to view the election information.	
3. User clicks on one of the district to view the information	
	4. The program senses the district link clicked and displays the map with respect to that

	district.
5. User has the option choose the layer between the districts separated by color or the election results on which party won in that district. This switch option is located in the top right part of the map.	
	6. After user selects the layer button, the program overlays the selected layer onto the map.
7. User hovers around certain area in the map.	
	8. Which hovering around an area, the program senses the cursor and displays the information about the district and which party won on the top right part of the map.
9. User click on a certain area in the map.	
	10. The map zooms in to that area clicked.
	11. User is presented with information about the election.