YaChing Yang
U65545021
DS210

DS210 Final Project:
World Happiness Report

This project uses the petgraph library to perform graph analysis and Breadth-First Search on the 2015.csv dataset, which contains countries happiness data. Each node of the graph represents a country and the edges that connect the nodes represents the region that the country belongs to. So, if two counties are in the same region, then they will be connected with an edge. This project also calculates the node degree as well as the betweenness centrality.

The output of the project contains information about each county and a graph that represents the relationship between countries based on their regions. Each node in the graph stores the happiness score of that country and its degree and centrality. In the context of this project, nodes with higher degree are countries that have similar happiness scores, meaning similar level of happiness. Nodes with higher betweenness centrality scores plays a more crucial role in the region, implying that the country might have more influence in the region that it is located. The graph visualization should reveal how the world is interconnected and how countries with similar happiness scores influence the region.

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Country: Denmark, Region: western Europe, Happiness Score: 7.8, Rank: 1, GDP: 1.5, Health: 0.9, Family: 1.8,
Corruption: 0.1 ...
Node: 0 (Happiness Score: 7.8) Node: 1 (Happiness Score: 6.5) ...
Betweenness Centrality: Node: 0, Centrality: 0.2 Node: 1, Centrality: 0.1 ... Node Degrees: Node 0: Degree 4
Node 1: Degree 3 ...
```