**Map of cities (graph) construction / route searching**  
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**Use case**:   
 Searching for a path in a Graph (network of cities in a given country)

**Python Libs/Packages:** - JSON (data)  
 - networkx (visualization)

**Python data structures**:   
 lists, dictionaries, sets

**SW Elements**:   
 OOP(Classes)  
 function  
 recursion  
 graph construction

**Input** :   
 JSON file

**Data-Structure**

**Roads**  
 Dictionary {ID {City, city, distance, status}}

**MapCity** (class)  
 City name  
 single remote (connected) city (RemoteCity)

**RemoteCity** (used by MapCity)  
 Name  
 distance  
 status (of road)

**Map**   
 Dictionary: {city-name : [all connected cities]

**Data Path**

JSON =>   
 Nodes =>   
 City + Single Remote City =>

Map

**Execution**

1. Loading data from (JSON) file  
    (see: facility to create it)
2. Construct a Map (see Data Path)
3. Search for Path between 2 cities (yields all available routes)  
    - includes recursive traversal on the map  
    - recursive steps are reflected on terminal
4. Fetch and Visual the best route
5. Visualize the route (if one exist)