

Interaction of Node and Graph classes:

Interaction of **Node** and **Graph** classes: The graph contains the vertices as an id in the **adjacencyList()**, and the vertices themselves (**Node**) are used when searching for a path. The algorithm (for example, A*) accesses the **Graph** for the neighbors of the current vertex, then uses **Node** to calculate the cost of the path.

The graph is based on a dictionary that is created after receiving the addresses, their coordinates and the distances between them.

The dictionary has the form:

{address 1 = coordinates, address 2 = coordinates... }

Coordinates: {Campobasso, Italy, Castello Monforte=41.5633574,14.6556315, Campobasso, Italy, Via San Giovanni=41.5633574,14.6556315}

```
Map<String, String> map = new HashMap<>();
for (String adres : address) {
    try {
        String coordinates = GeocodingService.getCoordinates(adres);
        map.put(adres, coordinates);
    } catch (Exception e) {
        e.printStackTrace();
    }
}
System.out.println("Coordinates: " + map);
```