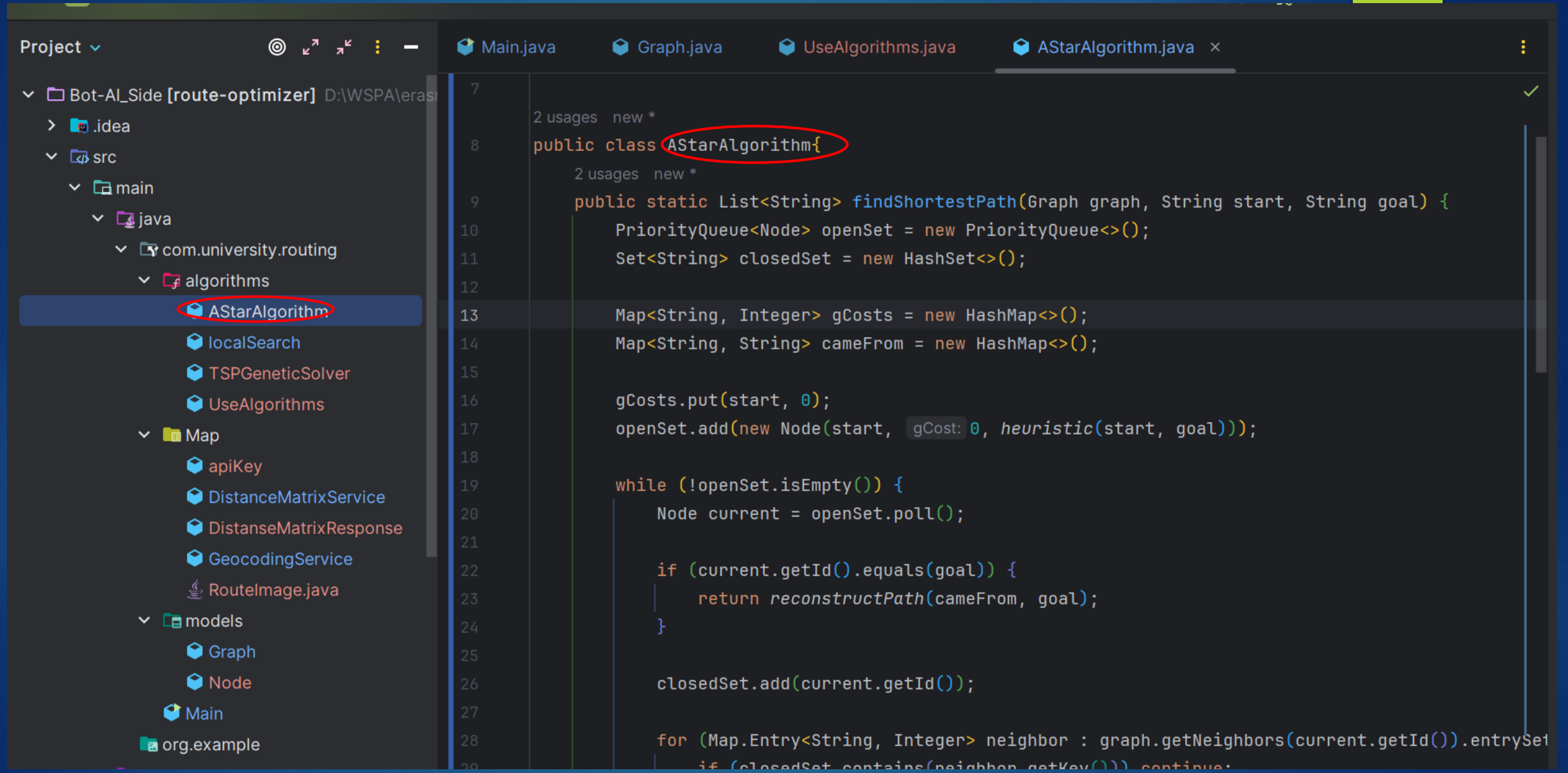
Algorithm A*:


Project
Bot-AI_Side [route-optimizer] D:\WSPA\eras
.idea
src
main
java
com.university.routing
algorithms
AStarAlgorithm
localSearch
TSPGeneticSolver
UseAlgorithms
Map
apiKey
DistanceMatrixService
DistanseMatrixResponse
GeocodingService
RouteImage.java
models
Graph
Node
Main
org.example
Main.java
Graph.java
UseAlgorithms.java
AStarAlgorithm.java
2 usages new *
public class AStarAlgorithm{
2 usages new *
public static List<String> findShortestPath(Graph graph, String start, String goal) {
PriorityQueue<Node> openSet = new PriorityQueue<>();
Set<String> closedSet = new HashSet<>();
Map<String, Integer> gCosts = new HashMap<>();
Map<String, String> cameFrom = new HashMap<>();
gCosts.put(start, 0);
openSet.add(new Node(start, gCost: 0, heuristic(start, goal)));
while (!openSet.isEmpty()) {
Node current = openSet.poll();
if (current.getId().equals(goal)) {
return reconstructPath(cameFrom, goal);
}
closedSet.add(current.getId());
for (Map.Entry<String, Integer> neighbor : graph.getNeighbors(current.getId()).entrySet