The glass ball project

A Java Overture: Traversing the Enigmatic Code Realm

Task 1: Graph Construction

In the context of Java programming, the first task involved the creation of a directed weighted graph. The code demonstrated proficiency in parsing data from "all_places_a.txt" and the rest to meticulously map the connections between Alipašino and Baščaršija. Utilizing Java's capabilities, the code efficiently translated this data into edges and nodes, providing a comprehensive representation of the travel routes within Sarajevo.

Task 2: Implementation of Dijkstra's Algorithm

Task 2 was dedicated to the application of Dijkstra's algorithm through the creation of the ShortestPathAlgorithm class and covering it with a test. This class showcased an adept utilization of the well-known algorithm to identify the shortest paths within a weighted graph. The systematic iteration through nodes, coupled with distance updates, reflected a mastery of algorithmic principles. The test used a proprietary graph which I drew and calculated the shortest path which I used to test the algorithm.

Task 3: Optimal Time Travel Analysis

This task focused on the practical determination of optimal travel times between specified landmarks. The code demonstrated an analytical approach, calculating durations between key points and documenting the results to multiple files. This task contributed valuable insights into the efficiency of paths between nodes.

Task 4: Introduction of Probabilities and CSV Generation

Task 4 introduced a layer of complexity by incorporating probabilities and navigating through a Probability Maze. The code adeptly processed constraints from the "Constraints.txt" file, adjusting the graph accordingly and generating a txt file with updated probability weights. This task underscored the project's adaptability to handle uncertainties. In the journey through Java, algorithms, and probability,

recognition is extended to Professor Sulejman Catibusic for serving as a guiding influence in the exploration of data algorithms.

Ps.

I had a amazing time using this algorithm to traverse Bingo the day before new year, finding the shortest path and the constraints being people blocking the ways whit their trollys >:(.