CME 2201 - Assignment 2

Journey Planner for Izmir Public Transportation

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1-Performance Test Results

Criteria 1 : There is not any walk criteria to ignore multiple walk and application could not find 3 different destination.

Criteria 2 : There is a double walk criteria to ignore multiple walk and application could not find 11 different destination.

In total , with 100 different search , application find out 86 destination and could not find out 14 destination.

Average search times (without creating graph part):

Criteria 1 = in 50 different search , 0,00758 ms

Criteria 2 = in 50 different search , 0,0083 ms

2-Explanations

For criteria 1 , I use each edge's weight as a 1 meter so that means I can find out fewer stops to reach destination. But application can not find 3 destination .

For criteria 2 , I use each edge's weight as a real length what I can see on the text file so that means I can find out minimum distance to reach destination . But application can not find out 11 destination.

3-Java Classes

1-Dijkstra

2-Edge

3-Graph

4-Line

5-Main

6-Vertex

In Dijkstra , I calculate the shortest path and calculate fewer stops for criteria input.

In Edge , I hold destination , weight and type because I am using directed graph.

In Graph , I use addEdge and creating whole graph.

In Line , I create the all different busses and hold their vertices which they passed.

In Vertex , I create stops information for each vertex.

Min Distance ;

```
Source : Å?ahin / Destination : Å?irinyer Aktarma
You can not go there without walking in a row !
yok11

Source : Kalp Damar Hastanesi / Destination : Fahrettin Altay Aktarma Merkezi
Minimum distance is : 27606.0 meters.
Path -> 14329 14327 14335 12877 12879 12881 12883 12885 12895 12887 12889 12893 12946 12944 12940 12942 12890
Walked 3 times.

yok11

Source : HalkapÄ±nar / Destination : MezarlÄ±k
Minimum distance is : 32636.0 meters.
Path -> 100036 10454 10430 10428 10426 10424 10338 10334 10332 10328 10322 10052 10101 10325 10329 10415 10425
Walked 3 times.

yok11

Source : Levent Ã‡eÅŸme / Destination : Mavi KÃ¶ÅŸe
Minimum distance is : 6077.0 meters.
Path -> 11940 11939 11941 11947 11949 41141 41143 41145 41147 41149 12043 12045 12042 41148 41146 41144 41107
Walked 3 times.

yok11

criteria 1 0
criteria 2 50
average time is 0.00834 ms
```

Fewer Stops :

```
Source : Å?ahin / Destination : Å?irinyer Aktarma
You can not go there without walking in a row !
yok11

Source : Kalp Damar Hastanesi / Destination : Fahrettin Altay Aktarma Merkezi
Minimum distance is : 27606.0 meters.
Path -> 14329 14327 14335 12877 12879 12881 12883 12885 12895 12887 12889 12893 12946 12944 12940 12942 12890
Walked 3 times.

yok11

Source : HalkapÄ±nar / Destination : MezarlÄ±k
Minimum distance is : 32636.0 meters.
Path -> 100036 10454 10430 10428 10426 10424 10338 10334 10332 10328 10322 10052 10101 10325 10329 10415 10425
Walked 3 times.

yok11

Source : Levent Ã‡eÅŸme / Destination : Mavi KÃ¶ÅŸe
Minimum distance is : 6077.0 meters.
Path -> 11940 11939 11941 11947 11949 41141 41143 41145 41147 41149 12043 12045 12042 41148 41146 41144 41107
Walked 3 times.

yok11

criteria 1 0
criteria 2 50
average time is 0.00834 ms
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