

OUTPUTS:

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add_new_cities          ---> adds a new city to cities data set
add_path_between_cities ---> add edges between already existing cities
computer_shortest_path  ---> calculates shortest distance between two cities
delete_city             ---> deletes a city from record
add_new_towns           ---> adds towns in a city
add_path_between_towns  ---> adds edges in towns of a city
compute_shortest_path_for_towns --> finds shortest path wrt time, distance and overall cost

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1--> add new city          2-->load cities data          3--> load cities edges
4--> add new towns        5--> load towns data          6--> load town edges
7-->shortest path(cities)  8--> shortest path(towns)
9-->view all cities        10--> view all towns(of one city)
11--> add path in cities   0--> quit

```

Shortest path between Cities:

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1--> add new city          2-->load cities data      3---> load cities edges
4--> add new towns         5--> load towns data      6---> load town edges
7--->shortest path(cities)  8---> shortest path(towns)
9--->view all cities       10---> view all towns(of one city)
11--> add path in cities   0---> quit
```

2

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1--> add new city          2-->load cities data      3---> load cities edges
4--> add new towns         5--> load towns data      6---> load town edges
7--->shortest path(cities)  8---> shortest path(towns)
9--->view all cities       10---> view all towns(of one city)
11--> add path in cities   0---> quit
```

3

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1--> add new city          2-->load cities data      3---> load cities edges
4--> add new towns         5--> load towns data      6---> load town edges
7--->shortest path(cities)  8---> shortest path(towns)
9--->view all cities       10---> view all towns(of one city)
11--> add path in cities   0---> quit
```

7

Enter Starting City

lahore

Enter Destination City

islamabad

Optimal path with respect to time/ distance/ cost

time

Shortest path from lahore to islamabad wrt time is 310

lahore --> rawalpindi --> islamabad

Shortest Path inside city:

```
1--> add new city          2-->load cities data      3--> load cities edges
4--> add new towns         5--> load towns data      6--> load town edges
7-->shortest path(cities)   8--> shortest path(towns)
9-->view all cities        10--> view all towns(of one city)
11--> add path in cities    0--> quit

8
Enter city name
Lahore
Enter starting Town
JoharTown
Enter destination town
ModelTown
Optimal path with respect to time/ distance/ cost
time

shortest path from JoharTown to ModelTown has a cost wrt time 14

FOLLOW THE SHORTEST PATH
JoharTown ---> FaisalTown ---> ModelTown
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