

Note:

1. Output should be read from bottom to top. i.e **source** city will be at the **bottom** with distance 0 and **destination** will be at the **top**. The total distance is specified in the end.
2. Input file for the program is **graph4** file. Please refer the same.
3. The city names cannot have any space in them for e.g “Rimnicu Vilcea” needs to be specified as “Rimnicu-Vilcea”

Sample Output –**1. ARAD and BUCHAREST**

- i. **Search Strategy:** BFS
 - **Input to program:** ARAD BUCHAREST BFS
 - **Output:**
Finding path from : arad to bucharest
BFS - Breadth First #####
Bucharest 211
Fagaras 99
Sibiu 140
Arad 0
Total Distance: 450
Exit
- ii. **Search Strategy:** DFS
 - **Input to program:** ARAD BUCHAREST DFS
 - **Output:**
Finding path from : arad to bucharest
DFS - Depth First #####
Bucharest 101
Pitesti 97
Rimnicu-Vilcea 80
Sibiu 151
Oradea 71
Zerind 75
Arad 0
Total distance : 575
Exit
- iii. **Search Strategy:** Iterative deepening.
 - **Input to program:** ARAD BUCHAREST IDS
 - **Output:**
Finding path from : arad to bucharest
IDS - Iterative deepening #####
Bucharest 211
Fagaras 99
Sibiu 140
Arad 0
Total distance : 450
Exit

2. SIBIU and EFORIE

i. Search Strategy: BFS

- **Input to program:** SIBIU EFORIE BFS

- **Output:**

Finding path from : sibiu to eforie

BFS - Breadth First

Eforie 86

Hirsova 98

Urzeceni 85

Bucharest 211

Fagaras 99

Sibiu 0

Total Distance: 579

Exit

ii. Search Strategy: DFS

- **Input to program:** SIBIU EFORIE DFS

- **Output:**

Finding path from : sibiu to eforie

DFS - Depth First

Eforie 86

Hirsova 98

Urzeceni 85

Bucharest 101

Pitesti 138

Craiova 120

Drobeta 75

Mehadia 70

Lugoj 111

Timisoara 118

Arad 140

Sibiu 0

Total distance : 1142

Exit

iii. Search Strategy: Iterative deepening.

- **Input to program:** SIBIU EFORIE IDS

- **Output:**

Finding path from : sibiu to eforie

IDS - Iterative deepening

Eforie 86

Hirsova 98

Urzeceni 85

Bucharest 211

Fagaras 99

Sibiu 0

Total distance : 579

Exit

3. DROBETA and FAGARAS

- i. **Search Strategy:** BFS
 - **Input to program:** DROBETA FAGARAS BFS
 - **Output:**
Finding path from : drobeta to fagaras
BFS - Breadth First #####
Fagaras 211
Bucharest 101
Pitesti 138
Craiova 120
Drobeta 0
Total Distance: 570
Exit
- ii. **Search Strategy:** DFS
 - **Input to program:** DROBETA FAGARAS DFS
 - **Output:**
DFS - Depth First #####
Fagaras 211
Bucharest 101
Pitesti 97
Rimnicu-Vilcea 80
Sibiu 151
Oradea 71
Zerind 75
Arad 118
Timisoara 111
Lugoj 70
Mehadia 75
Drobeta 0
Total distance : 1160
Exit
- iii. **Search Strategy:** Iterative deepening.
 - **Input to program:** DROBETA FAGARAS IDS
 - **Output:**
Finding path from : drobeta to fagaras
IDS - Iterative deepening #####
Fagaras 211
Bucharest 101
Pitesti 138
Craiova 120
Drobeta 0
Total distance : 570
Exit