|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ­ | start | A | B | C | D | E | F | G | H | I | J | K | L | End |
| Start | 0 | 92 | 88 | 92 | 150 | 168 | 225 | 248 | 238 | 235 | 300 | 308 | 300 | 310 |
| A | - | 0 | - | - | 58 | 80 |  |  |  |  |  |  |  |  |
| B | - | - | 0 | - | 75 | 80 |  |  |  |  |  |  |  |  |
| C | - | - | - | 0 | 63 | 83 |  |  |  |  |  |  |  |  |
| D | - | - | - |  | 0 | - | 75 | 100 | 88 | 87 |  |  |  |  |
| E |  |  |  |  |  | 0 | 62 | 80 | 78 | 67 |  |  |  |  |
| F |  |  |  |  |  |  | 0 | - | - | - | 76 | 83 | 75 |  |
| G |  |  |  |  |  |  |  | 0 | - | - | 58 | 80 | 70 |  |
| H |  |  |  |  |  |  |  |  | 0 | - | 70 | 80 | 70 |  |
| I |  |  |  |  |  |  |  |  |  | 0 | 65 | 80 | 67 |  |
| J |  |  |  |  |  |  |  |  |  |  | 0 | - | - | 10 |
| K |  |  |  |  |  |  |  |  |  |  |  | 0 | - | 10 |
| L |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 10 |
| End | - | - | - | - | - | - | - | - | - | - | - | - | - | 0 |

0 1 2 3 4 5 6 7 8 9 10 11 12 13

* ***The Relation:***
* ***From Start city to start is 0 cost   
  keep comparing the cities stages each other and save the path and the cost each time edit if found a good path***

***Stage : 0 , Stage : 1***

***Start -> A : 92   
 Start -> B : 88   
 Start -> C : 92  
  
1. Min : Start -> B : 88  
  
Stage : 1 , Stage : 2***

***D E  
A 150 172   
B 163 168  
C 155 175***

***2. Min : Start -> A -> D : 150***

***Stage : 2 , Stage : 3  
 F G H I  
D 225 250 238 237  
E 230 248 246 235***

***3.Min : Start → A → D → F : 225***

***Stage : 3 , Stage : 4***

***J K L***

***F 301 308 300***

***G 308 330 320***

***H 308 318 308***

***I 300 315 302***

***3. Min : Start -> A -> D -> F -> L: 300***

***Stage : 4 , Stage : 5***

***End***

***J 310***

***K 325***

***L 310***

***4. Min : Start -> B -> E -> I -> J -> End : 310 , Start -> A -> D -> F -> L -> End : 310 ->>> (will take the first solution cuz it’s the first one no <= in the code that’s why we end with B -> E -> I -> J -> END : 310 cost )***