

TKS Solutions Airway Programing Manual

Critical Set-up Requirements:

- Make sure that excel data is formatted as follows:
 1. The row and column labels should be the same list of cities, in the same order.
 2. Only cities with direct flights connecting them should have a value in the table.
(See **figure 1** for an example of format requirements)
 3. Take note of the cell of the top most row label, then make sure your excel file is closed and you quit the excel application.
- After you close out of your Excel file, make sure you copy the “location” of the file in your computer. For help on how to do this, see the end of this manual.

Operating the code:

1. Open the file in Spyder and paste the location of your Excel file into line 12 of the code. (as seen in **figure 2**)
2. Press the green arrow in the Spyder menu at the top to run the program.
3. You will be prompted to enter the starting cell of the top most row label where the first city is shown. In **figure 1**, it is “A2”
4. Next you will be asked, *"Proceed with finding the distance and path? "*. Be sure to type in “yes” or “Yes” to execute to the next step.
5. You’ll be asked to enter a starting destination followed by a comma and a space, then the final destination. (e.g. Dallas, Houston). Press enter after doing so, and the program will display the least cost for the travel as well as the sequence of flights.
6. You will then be asked, *"Unsatisfied with results and want to try again? "*. If you type in yes or Yes, it will go back to step 3 where you enter the starting and final destination. If you wish to quit the program, enter anything else when prompted by: *"Unsatisfied with results and want to try again? "*.

Output:

Remember when we said keep your excel sheet closed when running the program? Go back and open it now! You will see a few rows below the data in cells A through D, that excel recorded every starting and final destination you entered as well as the total cost and sequence of flights. This makes for easy and accurate comparison.

Help on copying a file’s “location”:

A file’s location is the address in your computer where your file lives. In order to work with your file, our program needs to know its address. **For a PC**, navigate to where you can double click the Excel file in “*File Explorer*”. Now instead of double clicking, click it only once. In the menu of *File Explorer*, at the top there should be a button labeled “copy path”. Click the button and the location is now copied. **For a Mac**, navigate to where you can double click the Excel file in “*Finder*”. Now right-click the file, hold down the “option” key, and then select “Copy file name as Pathname”. The location is now copied.

See **figure 3** for images of the “copy path” and “Copy file name as Pathname” buttons.

Figure 1

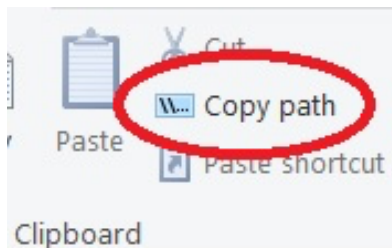
	A	B	C	D	E	F	G	H	
1		Dallas	Houston	Austin	Corpus Christie	San Antonio	Lubbock	El Paso	
2	Dallas		55	40					
3	Houston			35	60				
4	Austin					30			
5	Corpus Christie					35		100	
6	San Antonio						80		
7	Lubbock							75	
8	El Paso								
9									
10									

Figure 2

```
12 loc='/Users/student/Desktop/ORSCM/Python Programming/ExcelFiles/TexasAirways.xlsx'
```

Figure 3

PC



MAC

