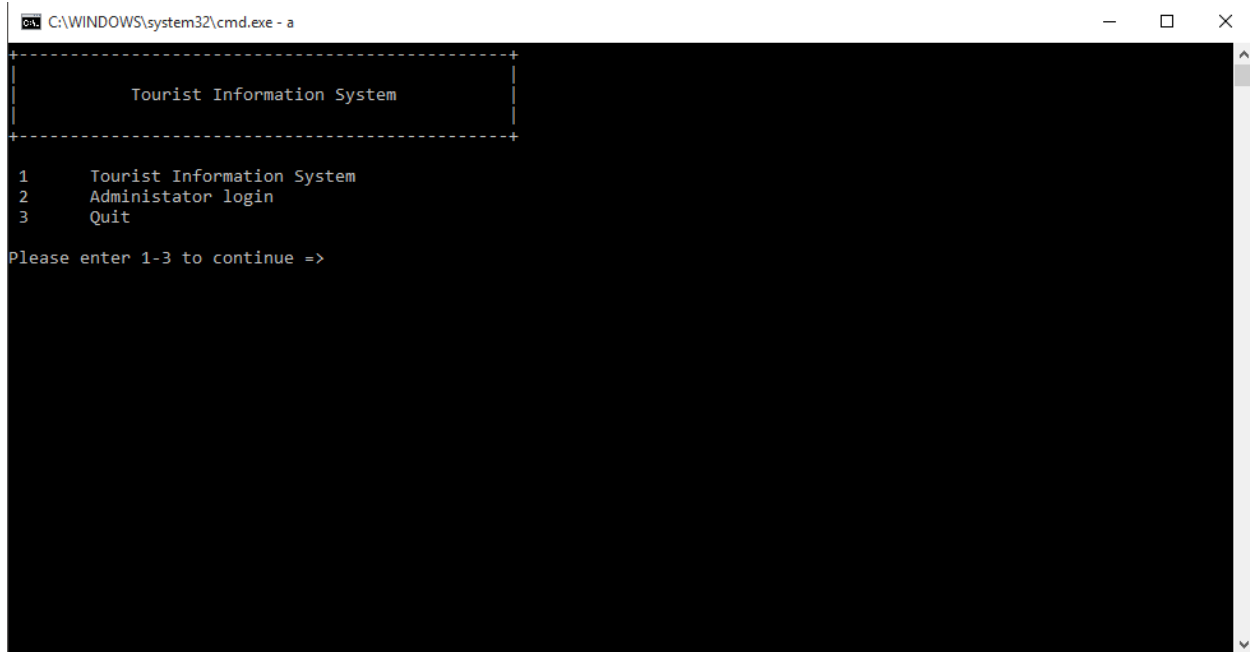


Documentation of Code

Complie: g++ -std=c++11 mile2.cpp preconditionViolationExcep.cpp Attraction.cpp City.cpp Sport.cpp Culture.cpp Shopping.cpp Flight.cpp -o a.exe

This is the main menu of the program. User are require to key in 1 to 3 in order to continue.



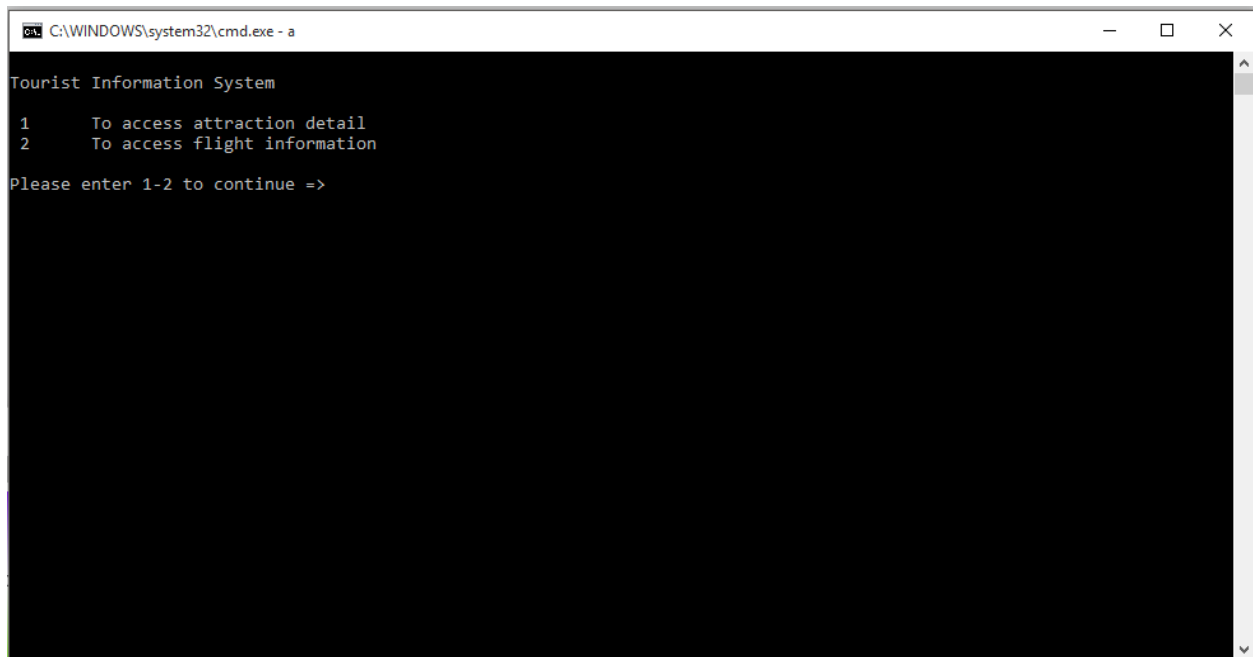
```
C:\WINDOWS\system32\cmd.exe - a

+-----+
| Tourist Information System |
+-----+

1  Tourist Information System
2  Administrator login
3  Quit

Please enter 1-3 to continue =>
```

If user entered 1 in the main menu, it will access the tourist information system. User are require to key in 1 to access attraction detail or 2 to access flight information.



```
C:\WINDOWS\system32\cmd.exe - a

Tourist Information System

1      To access attraction detail
2      To access flight information

Please enter 1-2 to continue =>
```

If user entered 1 in the tourist information system, the program will ask user to enter city ID, type ID and attraction ID that user wanted to view the detail. If the city has no attractions it will tell user that it has no attraction.

```
C:\WINDOWS\system32\cmd.exe - a

City ID and Name

ID      Name
5       Bangkok
1       Kuala Lumpur
2       Seoul
3       Singapore

Please enter ID to continue =>_
```

```
C:\WINDOWS\system32\cmd.exe - a

Type of attraction

1       Sport
2       Culture
3       Shopping
4       Show All

Please enter 1-4 to access attractions => _
```

```
C:\WINDOWS\system32\cmd.exe - a

List of Attractions

ID = 100. Name = Kelab Golf Perkhidmatan Awam. Type ID = 1
ID = 101. Name = Kuala Lumpur Golf & Country Club. Type ID = 1
ID = 102. Name = The Challenger Sports Centre. Type ID = 1
ID = 104. Name = National Textiles Museum. Type ID = 2
ID = 105. Name = Asian Art Museum. Type ID = 2
ID = 106. Name = Kuala Lumpur City Centre(KLCC). Type ID = 3
ID = 107. Name = Pavillion Kuala Lumpur. Type ID = 3
ID = 108. Name = Berjaya Times Square. Type ID = 3

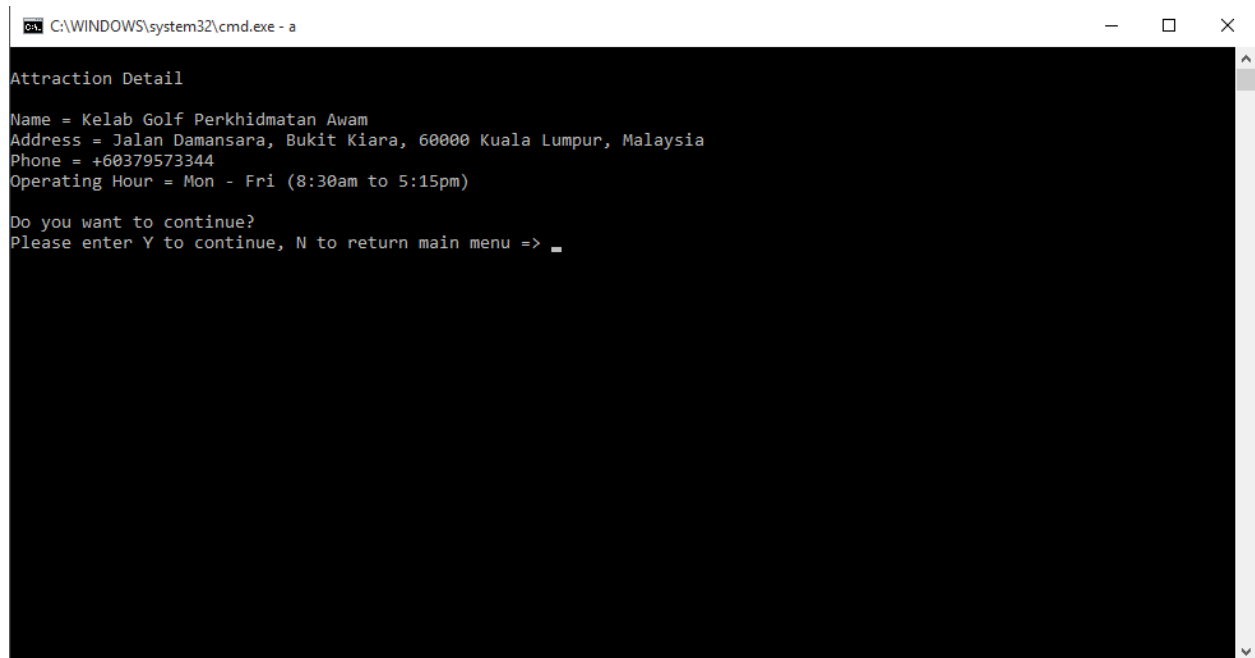
Enter the ID you want to access => _

Attraction Detail

Bangkok have no attraction.

Do you want to continue?
Please enter Y to continue, N to return main menu => _
```

After the program show the detail of the attraction, user are require to press y or n to continue. If user entered y, the program will continue ask the user for attraction detail or flight detail. If user entered n, the program will go back to main menu



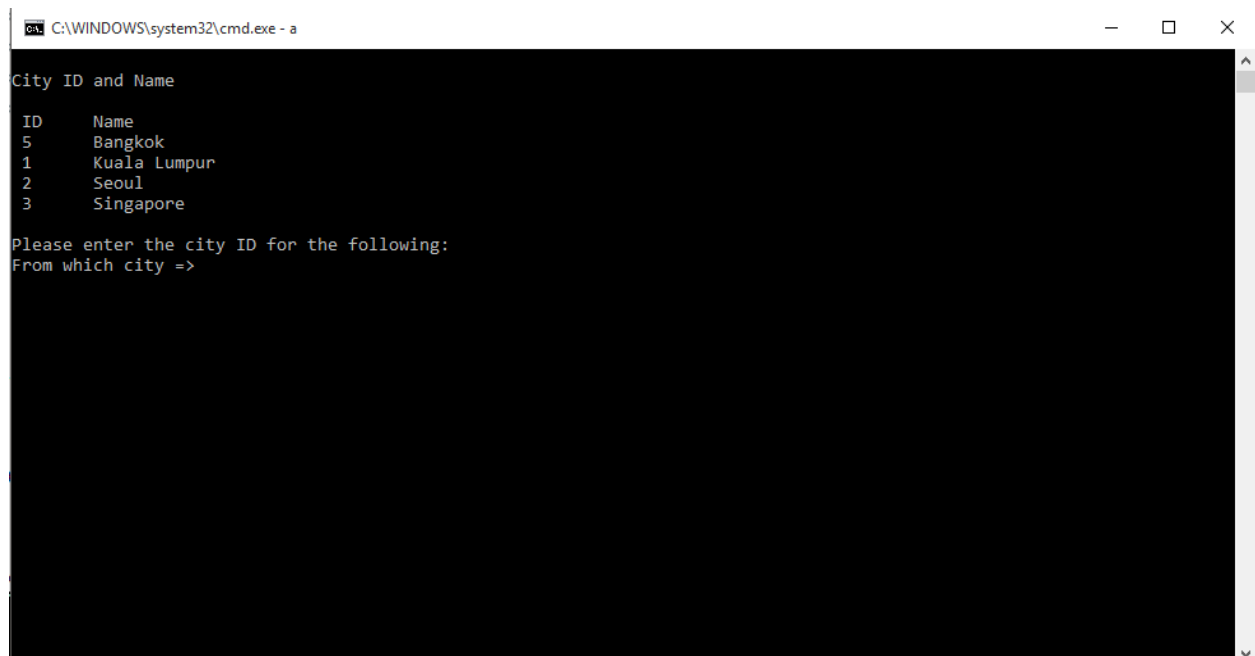
```
C:\WINDOWS\system32\cmd.exe - a

Attraction Detail

Name = Kelab Golf Perkhidmatan Awam
Address = Jalan Damansara, Bukit Kiara, 60000 Kuala Lumpur, Malaysia
Phone = +60379573344
Operating Hour = Mon - Fri (8:30am to 5:15pm)

Do you want to continue?
Please enter Y to continue, N to return main menu => _
```

If user entered 2 in the tourist information system, the program will ask user to enter what is the origin city and destination city.



```
C:\WINDOWS\system32\cmd.exe - a

City ID and Name

ID      Name
5       Bangkok
1       Kuala Lumpur
2       Seoul
3       Singapore

Please enter the city ID for the following:
From which city =>
```

```
C:\WINDOWS\system32\cmd.exe - a

City ID and Name

ID      Name
5       Bangkok
2       Seoul
3       Singapore

To which city =>
```

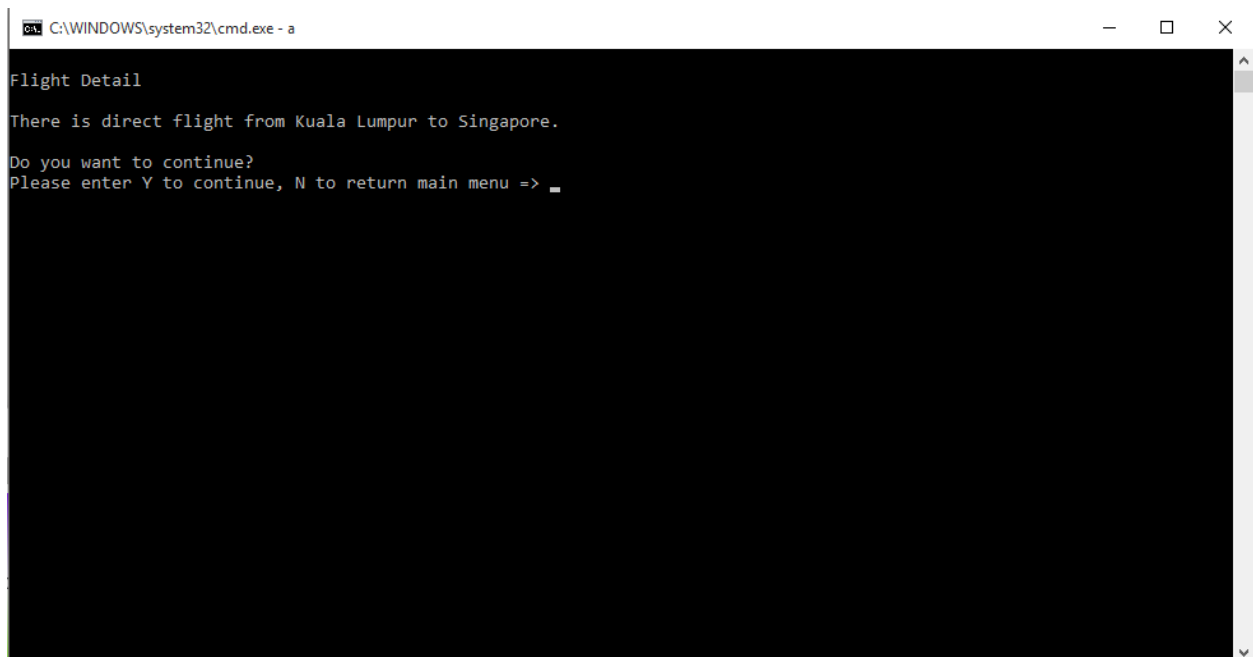
The program will show the direct flight. If there is no direct flight it will show the indirect flight. If there is none of both, it will tell user there is no direct and indirect flight.

```
C:\WINDOWS\system32\cmd.exe - a

Flight Detail

There is indirect flight from Bangkok to Singapore.
Bangkok -> Seoul -> Singapore

Do you want to continue?
Please enter Y to continue, N to return main menu => _
```



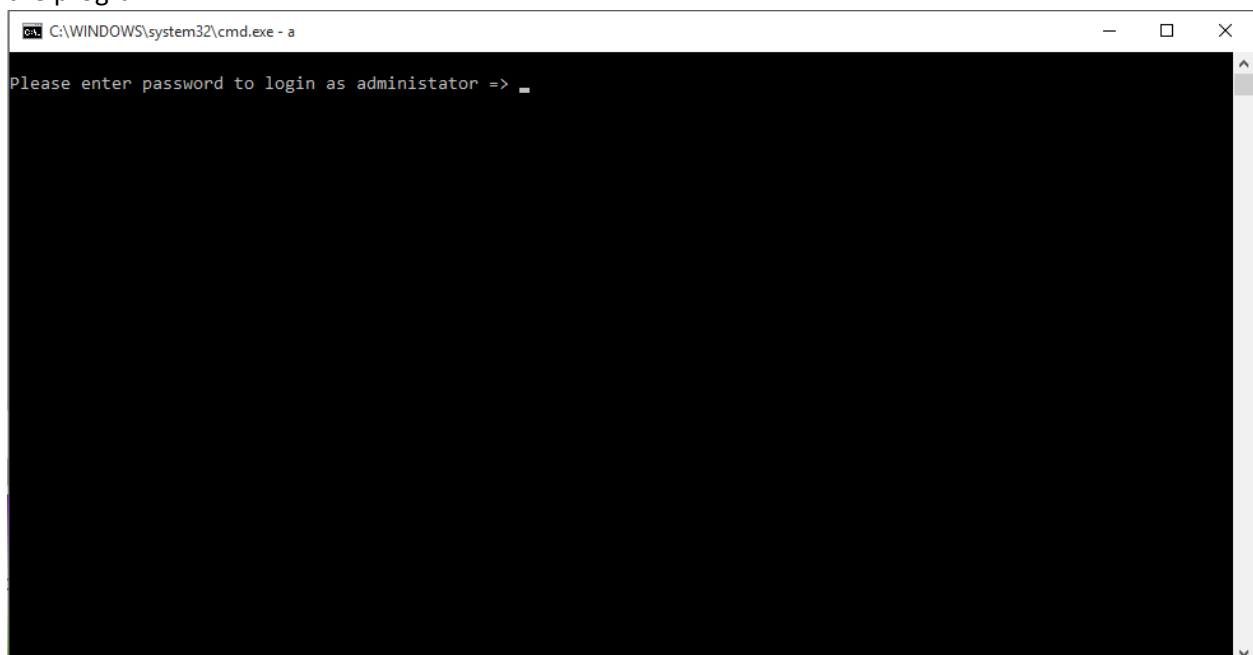
```
C:\WINDOWS\system32\cmd.exe - a

Flight Detail

There is direct flight from Kuala Lumpur to Singapore.

Do you want to continue?
Please enter Y to continue, N to return main menu => _
```

If user key in 2 in main menu to access administrator menu, user are required to type in password (default password = admin123). This is to make sure user cannot just simply modify the data stored in the program.



```
C:\WINDOWS\system32\cmd.exe - a

Please enter password to login as administator => _
```

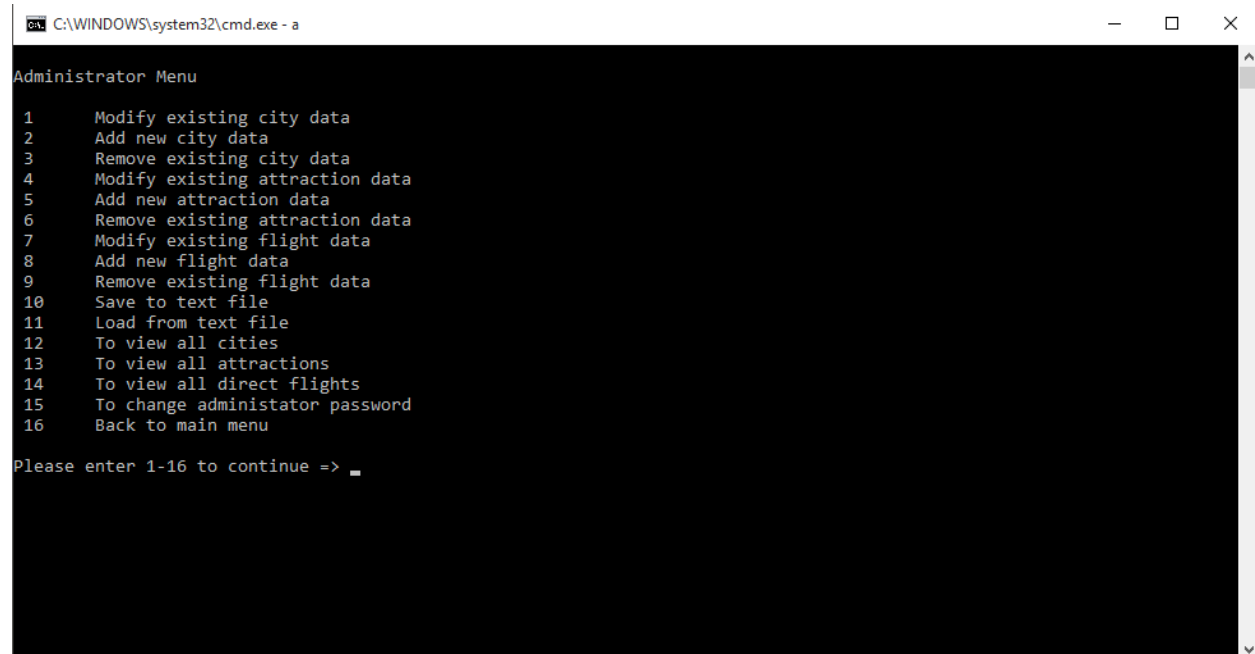
```
C:\WINDOWS\system32\cmd.exe - a

Please enter password to login as administator => *****
Access denied. Please retype your password.
Press any key to continue . . . █
```

```
C:\WINDOWS\system32\cmd.exe - a

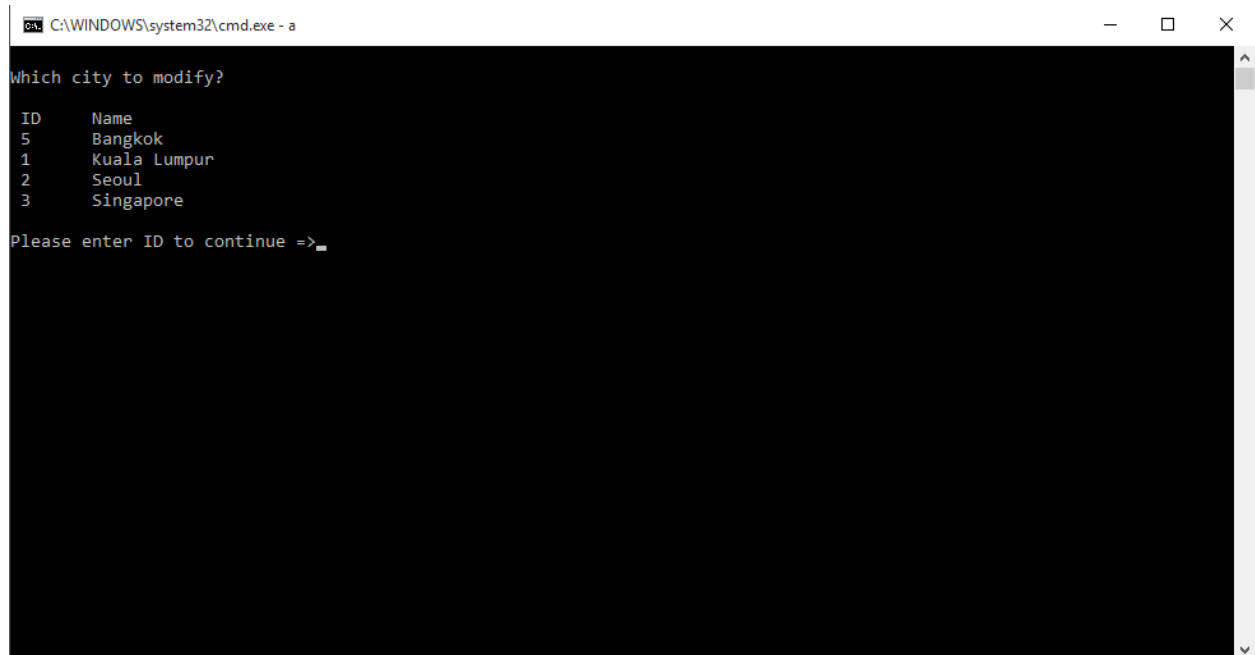
Please enter password to login as administator => *****
Access granted. Welcome administrator!
Press any key to continue . . . █
```


After user key in the correct password, the program will enter into administrator menu. 1-3 is to change city data, 4-6 is to change attraction data, 7-9 is to change flight data, and 10-15 is additional choices to ease admin when changing data. 16 is to go back main menu.



```
C:\WINDOWS\system32\cmd.exe - a
Administrator Menu
1      Modify existing city data
2      Add new city data
3      Remove existing city data
4      Modify existing attraction data
5      Add new attraction data
6      Remove existing attraction data
7      Modify existing flight data
8      Add new flight data
9      Remove existing flight data
10     Save to text file
11     Load from text file
12     To view all cities
13     To view all attractions
14     To view all direct flights
15     To change administrator password
16     Back to main menu
Please enter 1-16 to continue => _
```

If user chooses 1 to modify city data, the program will ask which city ID to modify. After that the program will ask user to enter new city ID and city name. After that, the program will ask whether the new city have direct flight to any other city and whether any other city have direct flight to the new city. The program will ask whether the new city does not have direct flight to any other city and whether any other city does not have direct flight to the new city.




```
C:\WINDOWS\system32\cmd.exe - a

Which city to modify?

ID      Name
5       Bangkok
1       Kuala Lumpur
2       Seoul
3       Singapore

Please enter ID to continue =>_
```



```
C:\WINDOWS\system32\cmd.exe - a

Please update the following data :

ID => 5

Name => _
```

```
C:\WINDOWS\system32\cmd.exe - a

ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.

Does Taipei have any direct flight to any city above? N to stop.
Please enter the city id => _
```

```
C:\WINDOWS\system32\cmd.exe - a

ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.

Does any city above have direct flight to Taipei? N to stop.
Please enter the city id =>
```

```
C:\WINDOWS\system32\cmd.exe - a

ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.

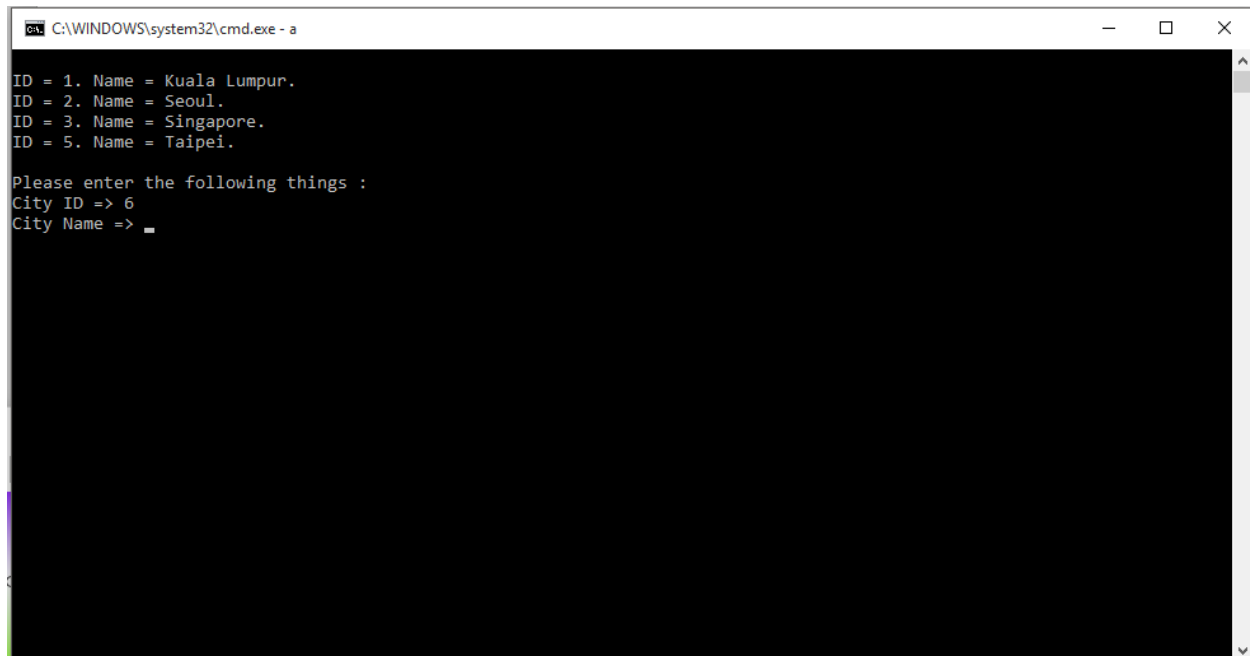
Does Taipei do not have direct flight to any city above? N to stop.
Please enter the city id =>
```

```
C:\WINDOWS\system32\cmd.exe - a

ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.

Any city above do not have direct flight to Taipei? N to stop.
Please enter the city id =>
```

If user entered 2 to add city data, the program will ask user the new city ID and new city name. The program will ask whether the new city have direct flight to any other city and whether any other city have direct flight to the new city.



```
C:\WINDOWS\system32\cmd.exe - a

ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.
ID = 5. Name = Taipei.

Please enter the following things :
City ID => 6
City Name => 
```

If user entered 3 to remove city data, the program will ask the user which position to remove the city. The program will ask whether the new city does not have direct flight to any other city and whether any other city does not have direct flight to the new city.



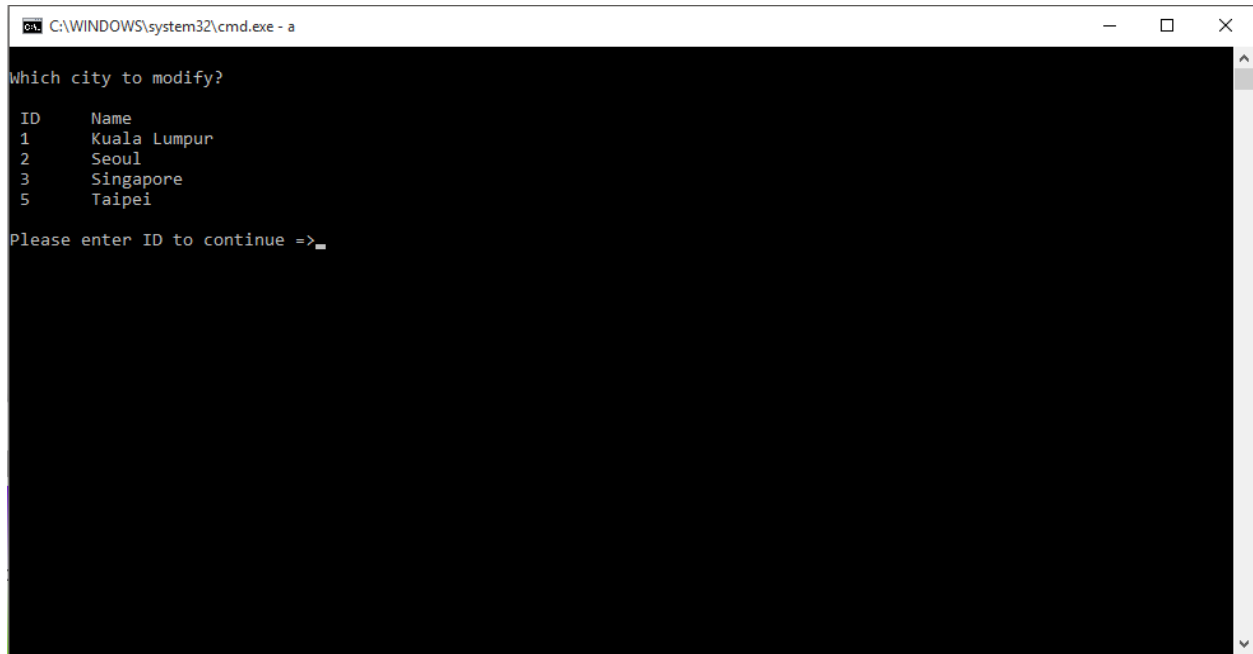
```
C:\WINDOWS\system32\cmd.exe - a

List of Cities
ID = 6. Name = Bangkok.
ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.
ID = 5. Name = Taipei.

1      Remove front
2      Remove back
3      Remove from a position

Please enter 1-3 to continue => 
```

If user entered 4 to modify attraction data, the program will ask the user which city to modify, the attraction ID that wanted to modify. If the city have no attractions, the program will tell user that it has no attractions. The program will ask user for ID, name, type ID, address, phone number, and operating hour. If user type id is 2, the program will also ask entrance fee.

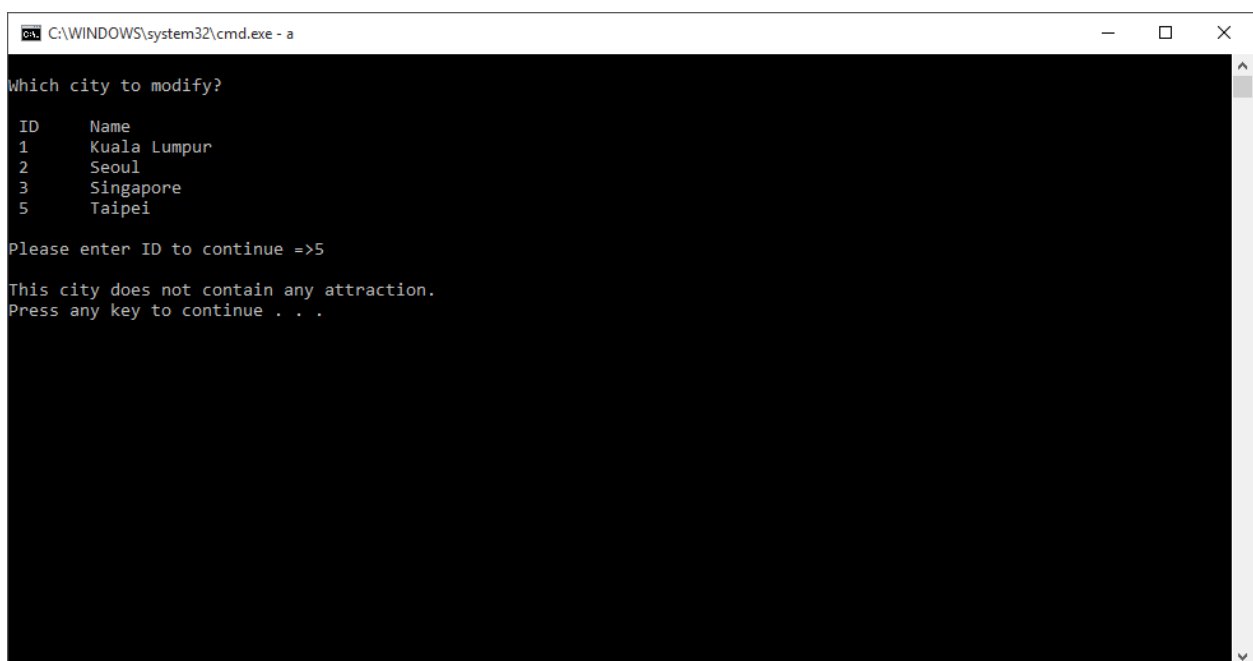


```
C:\WINDOWS\system32\cmd.exe - a

Which city to modify?

ID      Name
1       Kuala Lumpur
2       Seoul
3       Singapore
5       Taipei

Please enter ID to continue =>
```



```
C:\WINDOWS\system32\cmd.exe - a

Which city to modify?

ID      Name
1       Kuala Lumpur
2       Seoul
3       Singapore
5       Taipei

Please enter ID to continue =>5

This city does not contain any attraction.
Press any key to continue . . .
```

```
C:\WINDOWS\system32\cmd.exe - a

List of Attractions

ID = 100. Name = Kelab Golf Perkhidmatan Awam. Type ID = 1
ID = 101. Name = Kuala Lumpur Golf & Country Club. Type ID = 1
ID = 102. Name = The Challenger Sports Centre. Type ID = 1
ID = 104. Name = National Textiles Museum. Type ID = 2
ID = 105. Name = Asian Art Museum. Type ID = 2
ID = 106. Name = Kuala Lumpur City Centre(KLCC). Type ID = 3
ID = 107. Name = Pavillion Kuala Lumpur. Type ID = 3
ID = 108. Name = Berjaya Times Square. Type ID = 3

Please enter ID to modify =>_
```

```
C:\WINDOWS\system32\cmd.exe - a

List of Attractions

ID = 100. Name = Kelab Golf Perkhidmatan Awam. Type ID = 1
ID = 101. Name = Kuala Lumpur Golf & Country Club. Type ID = 1
ID = 102. Name = The Challenger Sports Centre. Type ID = 1
ID = 104. Name = National Textiles Museum. Type ID = 2
ID = 105. Name = Asian Art Museum. Type ID = 2
ID = 106. Name = Kuala Lumpur City Centre(KLCC). Type ID = 3
ID = 107. Name = Pavillion Kuala Lumpur. Type ID = 3
ID = 108. Name = Berjaya Times Square. Type ID = 3

Please enter ID to modify =>100

Please update the following data :
ID => 231

Name => Stadium Kuala Lumpur

Type ID => 1

Address => No 1234 Jalan Stadium, 61059 Kuala Lumpur

Phone number => 03-43546346

Operating Hour => Daily
```

```
C:\WINDOWS\system32\cmd.exe - a

List of Attractions

ID = 231. Name = Stadium Kuala Lumpur. Type ID = 1
ID = 101. Name = Kuala Lumpur Golf & Country Club. Type ID = 1
ID = 102. Name = The Challenger Sports Centre. Type ID = 1
ID = 104. Name = National Textiles Museum. Type ID = 2
ID = 105. Name = Asian Art Museum. Type ID = 2
ID = 106. Name = Kuala Lumpur City Centre(KLCC). Type ID = 3
ID = 107. Name = Pavillion Kuala Lumpur. Type ID = 3
ID = 108. Name = Berjaya Times Square. Type ID = 3

Please enter ID to modify =>231

Please update the following data :
ID => 231

Name => Stadium Kuala Lumpur

Type ID => 2

Address => No 1234 Jalan Stadium, 61059 Kuala Lumpur

Phone number => 03-43546346

Operating Hour => Daily

Entrance Fee => 10
```


If user entered 5 to add attraction data, the program will ask user city ID, position, type ID, ID, name, address, phone number, operating hour. If type ID is 2, the program will ask for entrance fee.

```
C:\WINDOWS\system32\cmd.exe - a

Add to which city?

ID      Name
1       Kuala Lumpur
2       Seoul
3       Singapore
5       Taipei

Please enter ID to continue => _
```

```
C:\WINDOWS\system32\cmd.exe - a

List of Attractions

1       Add front
2       Add back
3       Add to a position

Please enter 1-3 to continue => _
```

```
C:\WINDOWS\system32\cmd.exe - a

Type of attraction

1      Sport
2      Culture
3      Shopping

Which type of attraction to add => 
```

```
C:\WINDOWS\system32\cmd.exe - a

Type of attraction

1      Sport
2      Culture
3      Shopping

Which type of attraction to add => 3

Please enter the following things :
ID => 1234

Name => Shopping Mall

Address => No 124 Abc Road

Phone number => 04-15513535

Operating Hour => 24 Hours
```

If user entered 6 to remove attraction data, the program will ask for city ID and position. If there is no attraction, the program will notify user that the city does not have any attraction to delete.

```
C:\WINDOWS\system32\cmd.exe - a

Remove from which city?

ID      Name
1       Kuala Lumpur
2       Seoul
3       Singapore
5       Taipei

Please enter ID to continue =>_
```

```
C:\WINDOWS\system32\cmd.exe - a

Remove from which city?

ID      Name
1       Kuala Lumpur
2       Seoul
3       Singapore
5       Taipei

Please enter ID to continue =>5

This city does not contain any attraction.
Press any key to continue . . .
```

```
C:\WINDOWS\system32\cmd.exe - a

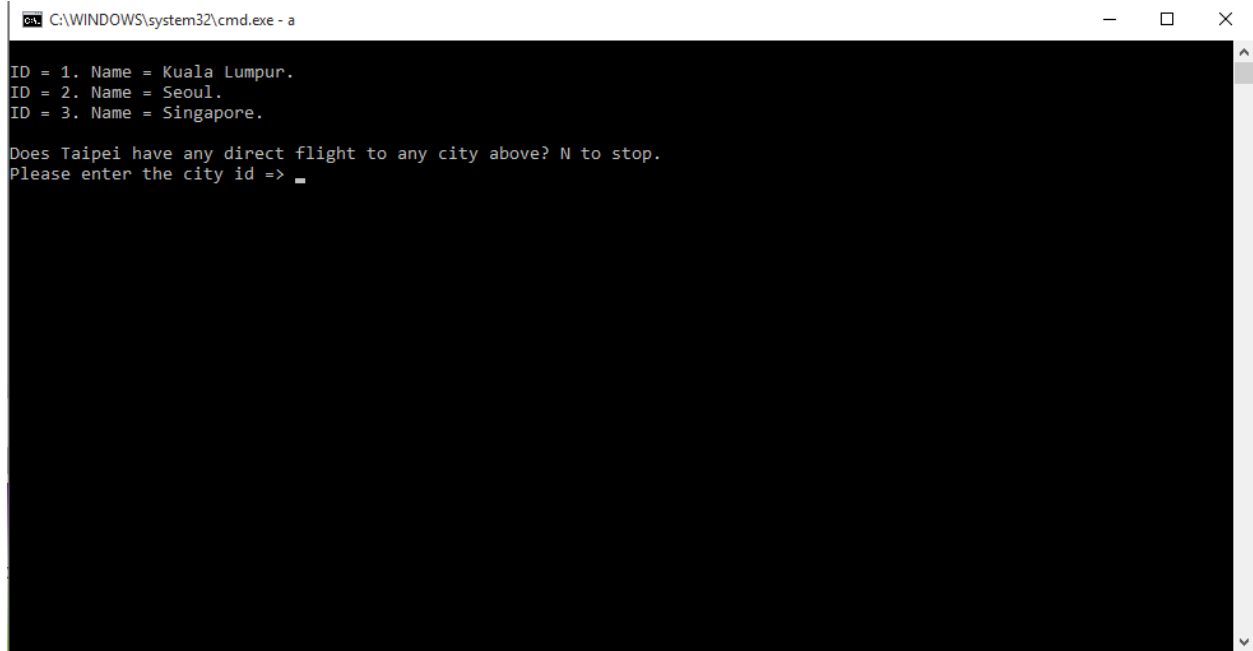
List of Attractions

ID = 231. Name = Stadium Kuala Lumpur. Type ID = 2
ID = 101. Name = Kuala Lumpur Golf & Country Club. Type ID = 1
ID = 102. Name = The Challenger Sports Centre. Type ID = 1
ID = 104. Name = National Textiles Museum. Type ID = 2
ID = 105. Name = Asian Art Museum. Type ID = 2
ID = 106. Name = Kuala Lumpur City Centre(KLCC). Type ID = 3
ID = 107. Name = Pavillion Kuala Lumpur. Type ID = 3
ID = 108. Name = Berjaya Times Square. Type ID = 3

1      Remove front
2      Remove back
3      Remove from a position

Please enter 1-3 to continue =>
```

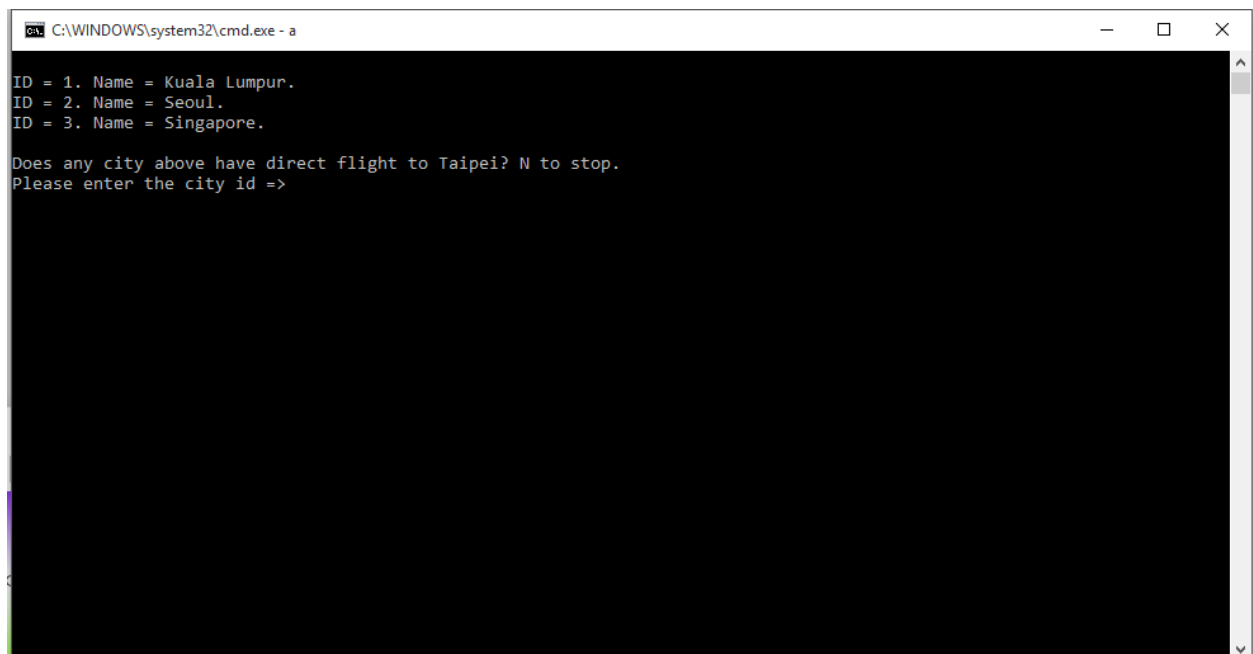
If user entered 7 to modify flight data, the program will ask whether the new city have direct flight to any other city and whether any other city have direct flight to the new city. The program will ask whether the new city does not have direct flight to any other city and whether any other city does not have direct flight to the new city.



```
C:\WINDOWS\system32\cmd.exe - a

ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.

Does Taipei have any direct flight to any city above? N to stop.
Please enter the city id => 
```



```
C:\WINDOWS\system32\cmd.exe - a

ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.

Does any city above have direct flight to Taipei? N to stop.
Please enter the city id => 
```

```
C:\WINDOWS\system32\cmd.exe - a

ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.

Does Taipei do not have direct flight to any city above? N to stop.
Please enter the city id =>
```

```
C:\WINDOWS\system32\cmd.exe - a

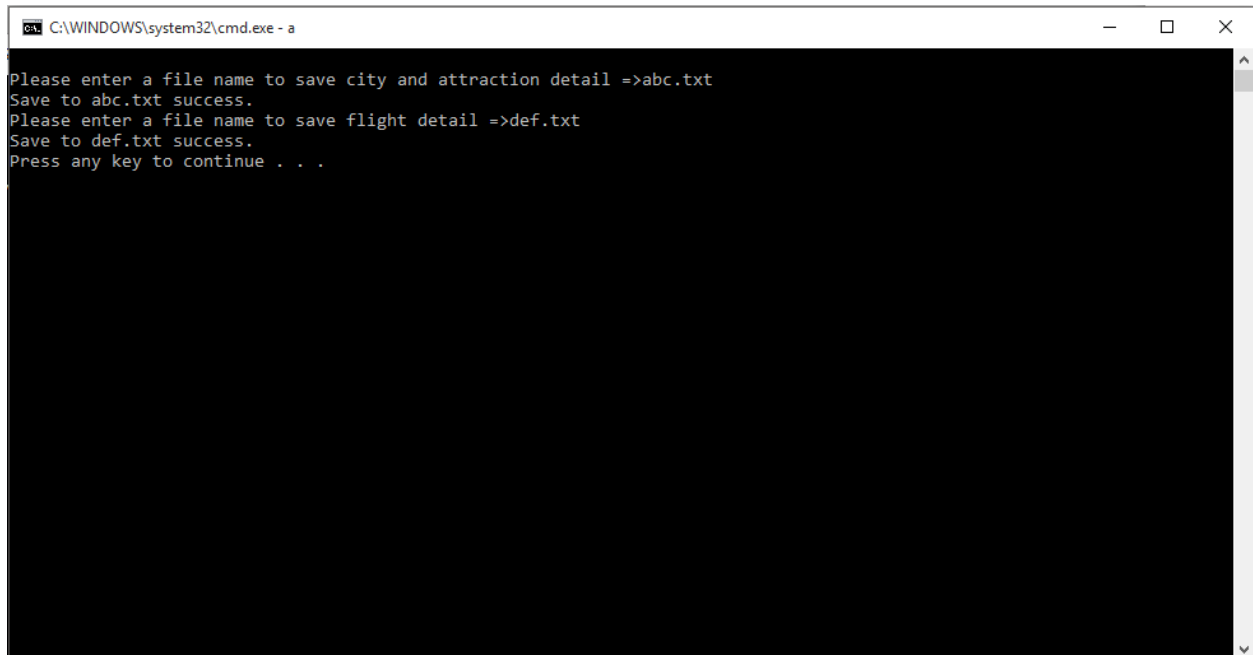
ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.

Any city above do not have direct flight to Taipei? N to stop.
Please enter the city id =>
```

If user entered 8 to add flight data, the program will ask whether the new city have direct flight to any other city and whether any other city have direct flight to the new city.

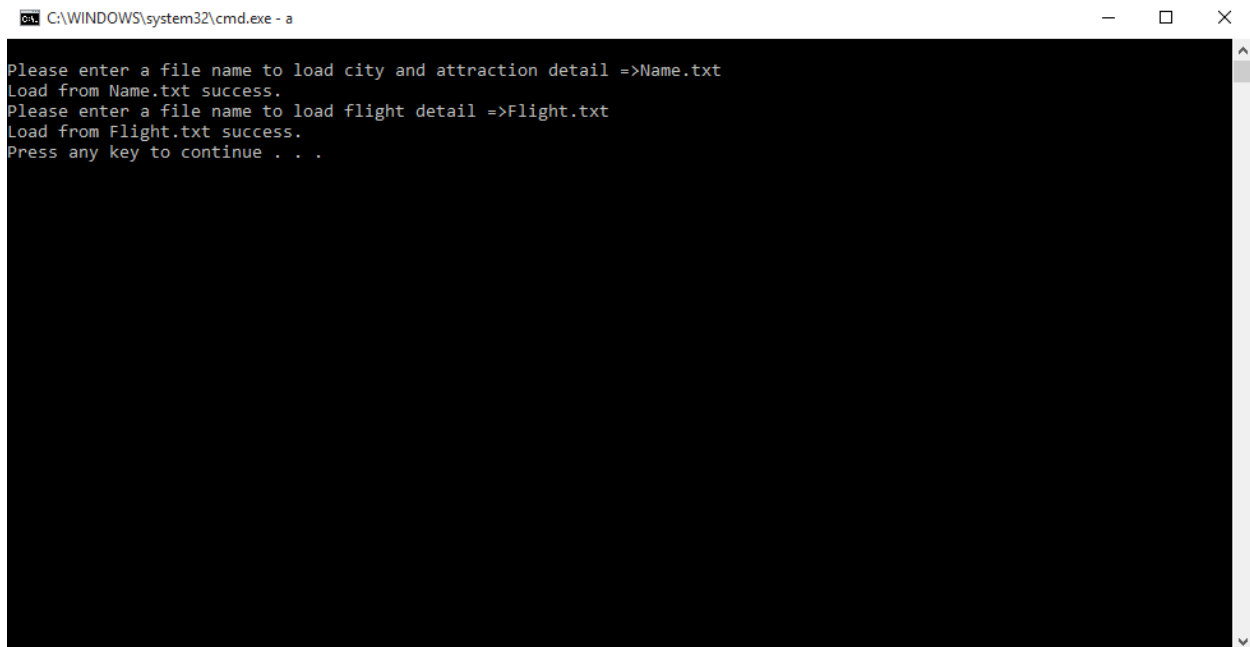
If user entered 9 to remove flight data, the program will ask whether the new city does not have direct flight to any other city and whether any other city does not have direct flight to the new city.

If user entered 10 to save to text file, the program will ask user to save to what file.

A screenshot of a Windows command prompt window. The title bar at the top shows the path 'C:\WINDOWS\system32\cmd.exe - a' and standard window controls. The black command prompt area contains the following text: 'Please enter a file name to save city and attraction detail =>abc.txt', 'Save to abc.txt success.', 'Please enter a file name to save flight detail =>def.txt', 'Save to def.txt success.', and 'Press any key to continue . . .'.

```
C:\WINDOWS\system32\cmd.exe - a
Please enter a file name to save city and attraction detail =>abc.txt
Save to abc.txt success.
Please enter a file name to save flight detail =>def.txt
Save to def.txt success.
Press any key to continue . . .
```

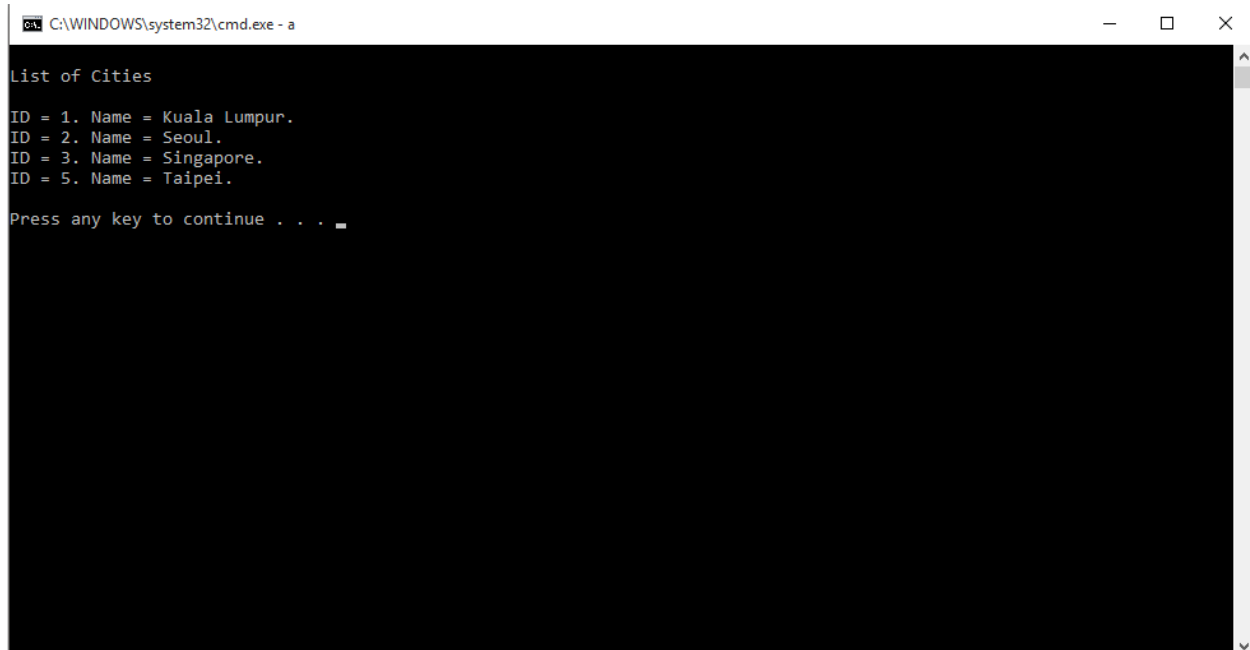
If user entered 11 to load from text file, the program will ask which text file to load from.



A screenshot of a Windows command prompt window. The title bar shows 'C:\WINDOWS\system32\cmd.exe - a'. The window has standard minimize, maximize, and close buttons. The text inside the window is as follows:

```
Please enter a file name to load city and attraction detail =>Name.txt
Load from Name.txt success.
Please enter a file name to load flight detail =>Flight.txt
Load from Flight.txt success.
Press any key to continue . . .
```

If user entered 12, the program will list out all of the city.



A screenshot of a Windows command prompt window. The title bar shows 'C:\WINDOWS\system32\cmd.exe - a'. The window has standard minimize, maximize, and close buttons. The text inside the window is as follows:

```
List of Cities
ID = 1. Name = Kuala Lumpur.
ID = 2. Name = Seoul.
ID = 3. Name = Singapore.
ID = 5. Name = Taipei.
Press any key to continue . . .
```


If user entered 13, the program will list all attractions.

```
C:\WINDOWS\system32\cmd.exe - a

List of Attractions

ID = 231. Name = Stadium Kuala Lumpur. Type ID = 2
ID = 101. Name = Kuala Lumpur Golf & Country Club. Type ID = 1
ID = 102. Name = The Challenger Sports Centre. Type ID = 1
ID = 105. Name = Asian Art Museum. Type ID = 2
ID = 106. Name = Kuala Lumpur City Centre(KLCC). Type ID = 3
ID = 107. Name = Pavillion Kuala Lumpur. Type ID = 3
ID = 108. Name = Berjaya Times Square. Type ID = 3
ID = 109. Name = Jamsil Sports Complex. Type ID = 1
ID = 110. Name = Seoul Plaza Ice Skating Rink. Type ID = 1
ID = 111. Name = Kukkiwon. Type ID = 1
ID = 112. Name = Dong-Lim Knot Museum. Type ID = 2
ID = 113. Name = Teddy Bear Museum. Type ID = 2
ID = 114. Name = National Museum of Korea. Type ID = 2
ID = 115. Name = Doosan Tower. Type ID = 3
ID = 116. Name = Coex Mall. Type ID = 3
ID = 117. Name = Migiore Dongdaemun. Type ID = 3
ID = 118. Name = Singapore Indoor Stadium. Type ID = 1
ID = 119. Name = Water Sports Centre. Type ID = 1
ID = 120. Name = National Stadium. Type ID = 1
ID = 121. Name = The Rink. Type ID = 1
ID = 122. Name = Singapore Art Museum. Type ID = 2
ID = 123. Name = National Museum of Singapore. Type ID = 2
ID = 124. Name = Peranakan Museum Singapore. Type ID = 2
ID = 125. Name = ION Orchard. Type ID = 3
ID = 126. Name = Orchard Central. Type ID = 3

Press any key to continue . . .
```

If user entered 14, the program will list all direct flights.

```
C:\WINDOWS\system32\cmd.exe - a

List of Direct Flights

Kuala Lumpur -> Kuala Lumpur
Kuala Lumpur -> Singapore
Seoul -> Singapore
Seoul -> Taipei
Singapore -> Kuala Lumpur
Singapore -> Seoul
Singapore -> Taipei
Taipei -> Seoul

Press any key to continue . . .
```

If user entered 15 to change administrator password, the program will ask the old password. After that the program will ask 2 times for the new password.



The image displays two screenshots of a Windows command prompt window, titled "C:\WINDOWS\system32\cmd.exe - a".

The top screenshot shows the prompt "Please key in the old password => _", where the underscore indicates the cursor position for input.

The bottom screenshot shows two prompts: "Please enter the new password => admin123" and "Please retype the new password => admin123_". The second prompt has the text "admin123" entered and the cursor at the end.