Exercise 4 (10 points) – can be done in pair or individually

- The first lines of all source files must be comments containing names & IDs of all members. Also create file readme.txt containing names & IDs of all members

- Put all files (source, input, readme.txt) in folder Ex4_xxx where xxx = ID of the group representative, i.e. your source files must be in package Ex4_xxx (assumedly in Maven's src/main/java). Input files must be read from this path

- The group representative zips Ex4_xxx & submits it to Google Classroom. The other members submit only readme.txt. Email submission is not accepted

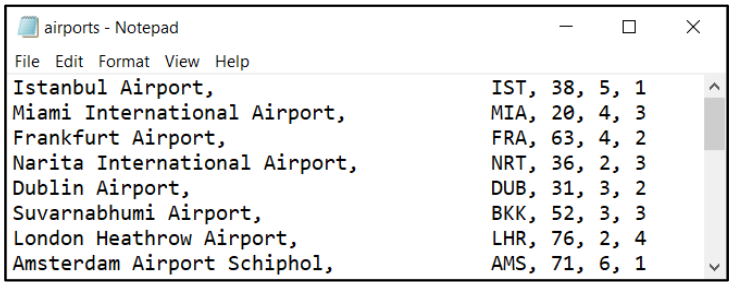
==========

Keep your source code for Exercise 5

1. Copy class Airport to your source file. Complete this class to make it concrete, but do not change the visibility of each member

```
class Airport implements Comparable<Airport>
   private String  name, code;
   private int     passengersMillion, numRunways, numTerminals;

   public int compareTo(Airport other) {
      // add your code according to conditions in 2.2-2.5
   }
}
```



2. Write another class that acts as the main class

   2.1 Create an ArrayList of Airport. Read each line of input file into each Airport object and add this object to the ArrayList
   - Column 1 : airport name
   - Column 2 : airport code
   - Column 3 : international passengers in millins
   - Column 4 : number of runways
   - Column 5 : number of terminals

   2.2 Sort Airport objects in decreasing order of passengers

   2.3 If conditions in 2.2 are equal, sort them in decreasing order of runways

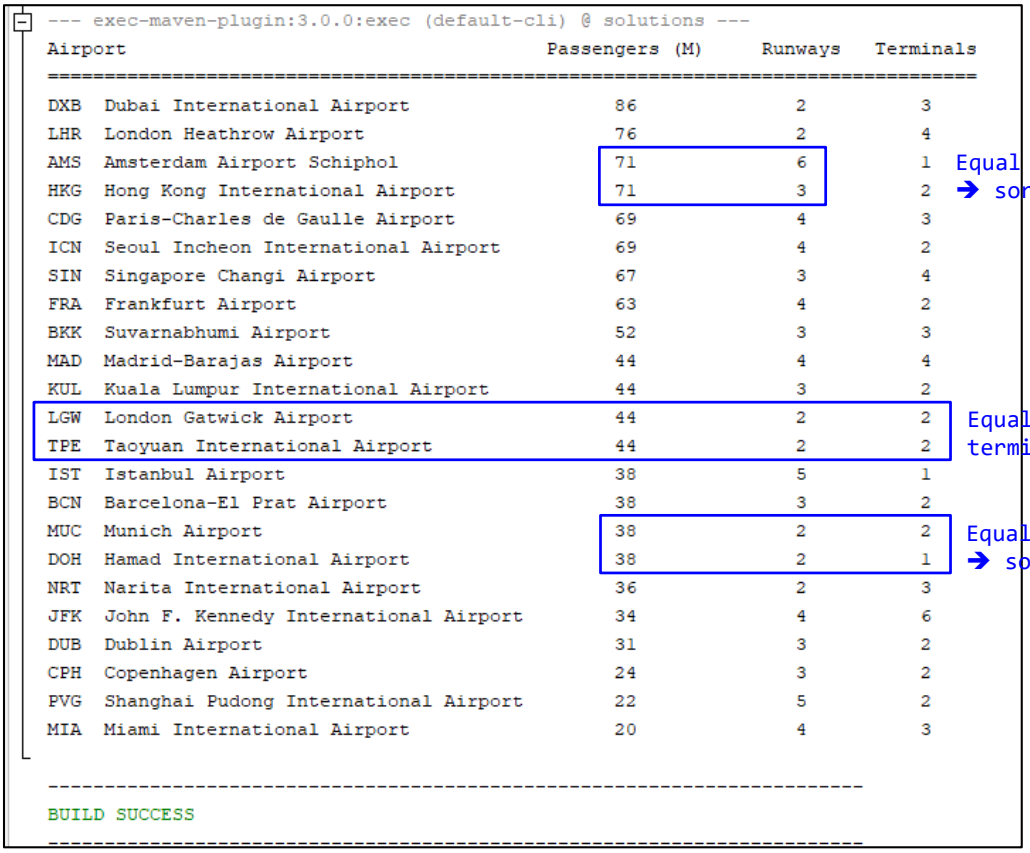
   2.4 If conditions in 2.3 are equal, sort them in decreasing order of terminals

   2.5 If conditions in 2.4 are equal, sort them in alphabetical order of airport code

3. Print the sorting results in proper format

Note – Class String in Java already implements compareTo and compareToIgnoreCase

```
String code1 = "DUB"; String code2 = "DXB";
int x = code1.compareToIgnoreCase(code2);      // x = -3, i.e. DUB comes before DXB
int x = code2.compareToIgnoreCase(code1);      // x =  3, i.e. DXB comes after DUB
```



```
--- exec-maven-plugin:3.0.0:exec (default-cli) @ solutions ---
Airport                                      Passengers (M)      Runways   Terminals
================================================================================
DXB  Dubai International Airport                     86             2           3
LHR  London Heathrow Airport                         76             2           4
AMS  Amsterdam Airport Schiphol                      71             6           1
HKG  Hong Kong International Airport                 71             3           2
CDG  Paris-Charles de Gaulle Airport                 69             4           3
ICN  Seoul Incheon International Airport             69             4           2
SIN  Singapore Changi Airport                        67             3           4
FRA  Frankfurt Airport                               63             4           2
BKK  Suvarnabhumi Airport                            52             3           3
MAD  Madrid-Barajas Airport                          44             4           4
KUL  Kuala Lumpur International Airport              44             3           2
LGW  London Gatwick Airport                          44             2           2
TPE  Taoyuan International Airport                   44             2           2
IST  Istanbul Airport                                38             5           1
BCN  Barcelona-El Prat Airport                       38             3           2
MUC  Munich Airport                                  38             2           2
DOH  Hamad International Airport                     38             2           1
NRT  Narita International Airport                    36             2           3
JFK  John F. Kennedy International Airport           34             4           6
DUB  Dublin Airport                                  31             3           2
CPH  Copenhagen Airport                              24             3           2
PVG  Shanghai Pudong International Airport           22             5           2
MIA  Miami International Airport                     20             4           3

------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
```

Equal passengers
➔ sort by runways

Equal passengers, runways, terminals ➔ sort by code

Equal passengers & runways
➔ sort by terminals