1. Find the maximal delays (you should consider both ArrDelay and DepDelay) for each month of 2008.

| Month | ArrDelay | DepDelay |
|-------|----------|----------|
| 1 | 1525 | 1355 |
| 2 | 2461 | 2457 |
| 3 | 1490 | 1521 |
| 4 | 2453 | 2467 |
| 5 | 1951 | 1952 |
| 6 | 1707 | 1710 |
| 7 | 1510 | 1518 |
| 8 | 1359 | 1367 |
| 9 | 1583 | 1552 |
| 10 | 1392 | 1369 |
| 11 | 1308 | 1286 |
| 12 | 1655 | 1597 |

執行結果

```
Month    ArrDelay       DepDelay
1.0      1525.0         1355.0
2.0      2461.0         2457.0
3.0      1490.0         1521.0
4.0      2453.0         2467.0
5.0      1951.0         1952.0
6.0      1707.0         1710.0
7.0      1510.0         1518.0
8.0      1359.0         1367.0
9.0      1583.0         1552.0
10.0     1392.0         1369.0
11.0     1308.0         1286.0
12.0     1655.0         1597.0
```

2. How many flights were delayed caused by weather between 2000 ~
2005? Please show the counting for each year.

| Year | the Numbers of Delayed by Weather |
|---|---|
| 2000 | 0 |
| 2001 | 0 |
| 2002 | 0 |
| 2003 | 44620 |
| 2004 | 115989 |
| 2005 | 111388 |

執行結果

```
((2000.0, 'NaN'), 5683047)
((2001.0, 'NaN'), 5967780)
((2002.0, 'NaN'), 5271359)
((2003.0, 'Delayed'), 44620)
((2003.0, 'NaN'), 2672742)
((2003.0, 'notDelayed'), 3771178)
((2004.0, 'Delayed'), 115989)
((2004.0, 'notDelayed'), 7013281)
((2005.0, 'Delayed'), 111388)
((2005.0, 'notDelayed'), 7029208)
```

3. List Top 5 airports which occur delays most in 2007. (Please show the
IATA airport code)
**origin IATA airport**

| origin IATA airport code | the Numbers of Delayed |
|---|---|
| ATL | 209826 |
| ORD | 188410 |
| DFW | 148059 |
| DEN | 122557 |
| LAX | 113379 |

**destination IATA airport**

| destination IATA airport code | the Numbers of Delayed |
|---|---|
| ATL | 156990 |
| ORD | 155461 |
| DFW | 113790 |
| LAX | 103285 |
| PHX | 96496 |

執行結果

```
Origin   Arrdelay        Destination      Depdelay
0        3829420         0        4147653
ATL      209826          NaN      160748
ORD      188410          ATL      156990
NaN      170340          ORD      155461
DFW      148059          DFW      113790
DEN      122557          LAX      103285
LAX      113379          PHX      96496
```

# Anything else worth mentioning (e.g. other valuable observations) or difficulties encountered in this work

資料欄位中有許多Missing data，以及欄位內容直接註記NA，這些資料需額外處理。