***Lab 9– Data Manipulation***

Use *flights* data set in the *nycflights13* package to find answers for the following questions:

* 1. Find all flights that had an arrival delay of three or more hours.
  2. Find all flights that arrived more than three hours late, but didn’t leave late.
  3. Find all flights that were delayed by at least an hour, but made up over 50 minutes in flight.
  4. Find all flights that departed between midnight and 5am.
  5. Find the most delayed flights.
  6. Find the flights travelled the farthest.
  7. Find the flights travelled the shortest.
  8. Show the following details for each flight: flight number, origin and destination.
  9. Show the following details for each flight travelled in June 2013: flight number, Origin and destination.
  10. Create new variables to store the variables stored in HHMM format to be in minutes since midnight. For example, 525 means 5:25 so it equals to 5\*60+25=325 minutes.
  11. Increase the departure delay for flight number 88 by 46 minutes.
  12. Summarize the number of flights, average of time spent in the air, farthest and shortest travelling for each carrier. Order the output by the number of flights.
  13. Summarize the number of flights, average of time spent in the air, farthest and shortest travelling for each origin and destination for flights travelled between June and September. Order the output by the number of flights.
  14. Find all destinations that are flown by at least ten carriers.
  15. Find the carrier that has the least departure delays.