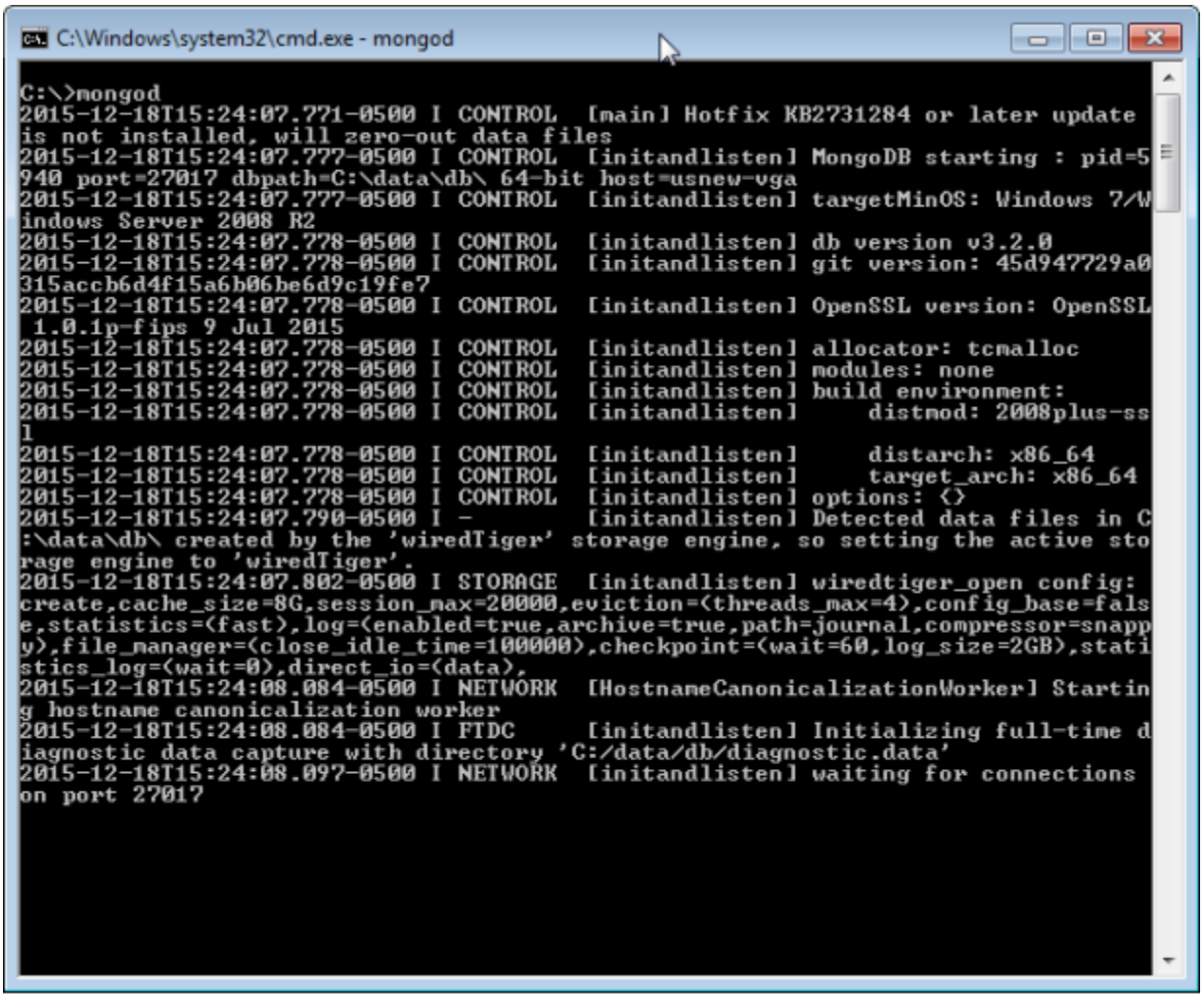
Assignment 14 Solution

Download the MongoDB :



Assignment 14 Solution

Inserting the Bird strike.csv and getting and display the inserted file:

```
# Function to load birdstrike data from working directory.
loadBirdStrikeData <- function(file = "Bird Strikes.csv") {
  # Load Bird strike data from working directory.
  df <- read.csv(file = file, stringsAsFactors = FALSE, header = TRUE)
  titles <- colnames(df)
  # Change column names and remove '.'
  colnames(df) <- gsub("\\.", "", titles)
  return (df)
}

db = "BirdStrike"
collection = "data"

# Question 2. Insert the Bird Strikes.csv file into MongoDB and
# use the export command to display the inserted file.
df <- loadBirdStrikeData()
mongoData<- mongo(db = db, collection = collection)
mongoData$insert(df)
mongoData$export(file("data.txt"))
```

Output:

```
> mongoData$insert(df)
Complete! Processed total of 99404 rows.
[1] TRUE
> mongoData$export(file("data.txt"))
Done! Exported a total of 99404 lines.
```

Question 3

3A) output:

```
> mongoData$distinct(key = "AirportName")
  [1] "NEWARK LIBERTY INTL ARPT"          "UNKNOWN"
  [3] "DENVER INTL AIRPORT"               "CHICAGO O'HARE INTL ARPT"
  [5] "JOHN F KENNEDY INTL"               "CINCINNATI MUNI ARPT-LUNKEN FIELD"
  [7] "MIAMI INTL"                        "SAN FRANCISCO INTL ARPT"
  [9] "SALT LAKE CITY INTL"               "SOUTHWEST FLORIDA INTL ARPT"
 [11] "KANSAS CITY INTL"                  "NASHVILLE INTL"
 [13] "SAN ANTONIO INTL"                  "PENSACOLA REGIONAL"
 [15] "THEODORE FRANCIS GREEN STATE"      "ATLANTA INTL"
 [17] "BALTIMORE WASH INTL"               "MINETA SAN JOSE INTL"
 [19] "TETERBORO AIRPORT"                 "LAFAYETTE REGIONAL (LA)"
 [21] "WILMINGTON INTL"                   "LUIS MUNOZ MARIN INTL -SAN JUAN"
 [23] "GROTON-NEW LONDON AR"              "PORT COLUMBUS INTL"
 [25] "RONALD REAGAN WASHINGTON NATL"     "SAN DIEGO INTL"
 [27] "ORLANDO SANFORD INTL AIRPORT"      "ORLANDO INTL"
```

Assignment 14 Solution

3B)

```
> mongoData$count(query = '{"OriginState":"New Jersey"}')
[1] 2936
```

3C)

```
146              ID BY SMITHSONIAN. FAA 4011. DNA. NO DEFORMED SURFACE NOTED ON RT WING. BLOOD AND FEATHERS OBSERVED ON R SLAT AND
DER WING/FLAP. NO DMG TO A/C. TIME OUT OF SERV WAS DUE TO MX FROM FRESNO BEING SENT TO INSPECT AND RETURN THE A/C TO SERVICE.
147
                                                    EVID OF STRIKE FOUND ON TOP OF FUSELAGE AND A/C NOSE. NO DMG NOTED.
148
                                                REMAINS SENT TO SMITHSONIAN ACCORDING TO ARPT REPT BUT THEY WERE NOT RECEIVED.
149                                             F/O FLEETINGLY SAW BIRD THRU LDG LIGHTS AND BOTH CREW FELT THUMP ON AIRFRAME. LANDED
EVENTFULLY. POST FLT INSPN FOUND A DUCK HAD ENTERED THE LEFT SIDE AIR CONDITIONING DUCT (PACK). A/C WAS TAKEN OUT OF SERVICE.
150
                                                                                                        GULL? ATIS WARNING.
151         OPS RESPONDED TO STRIKE REPT AND REMVD ONE RED FOX FROM RWY 1R AT 7500' REM MARK. PART STRUCK NOT REPTD, ASSUME LANDING
EAR.  ARPT BIOLOGIST HAD NO FURTHER REPTS OR INFO. DAILY REPT SHOWED PILOT, UPON FURTHER INSPN REPORTED MINOR DMG TO THE A/C.
```

Question 4

4i) output

American Airlines

```
3839    319905
3840    319904
3841    319537
3842    319912
3843    319913
3844    319539
3845    319945
3846    319796
3847    319795
3848    319615
3849    319628
3850    319569
3851    319572
```

Continental Airlines

```
823     317895
824     318759
825     318769
826     319266
827     319267
828     319184
829     318859
830     318860
831     319396
832     319483
833     319643
```

Assignment 14 Solution

4ii) output

American Airlines

3841	New York
3842	Texas
3843	Texas
3844	Texas
3845	N/A
3846	Florida
3847	Texas
3848	Texas
3849	Texas
3850	Texas
3851	Texas

Continental Airlines

822	New Jersey
823	New Jersey
824	Pennsylvania
825	New Jersey
826	Texas
827	New Jersey
828	Florida
829	Illinois
830	N/A
831	Texas
832	California
833	Florida

4iii) output

American Airlines

3840	AMERICAN AIRLINES
3841	AMERICAN AIRLINES
3842	AMERICAN AIRLINES
3843	AMERICAN AIRLINES
3844	AMERICAN AIRLINES
3845	AMERICAN AIRLINES
3846	AMERICAN AIRLINES
3847	AMERICAN AIRLINES
3848	AMERICAN AIRLINES
3849	AMERICAN AIRLINES
3850	AMERICAN AIRLINES

Continental Airlines

826	CONTINENTAL AIRLINES
827	CONTINENTAL AIRLINES
828	CONTINENTAL AIRLINES
829	CONTINENTAL AIRLINES
830	CONTINENTAL AIRLINES
831	CONTINENTAL AIRLINES
832	CONTINENTAL AIRLINES
833	CONTINENTAL AIRLINES

Assignment 14 Solution

4iv) output

American Airlines

```
3844          DALLAS/FORT WORTH INTL ARPT
3845                    MANAGUA INTL ARPT
3846                       MIAMI INTL
3847          DALLAS/FORT WORTH INTL ARPT
3848                AUSTIN-BERGSTROM INTL
3849          DALLAS/FORT WORTH INTL ARPT
3850          DALLAS/FORT WORTH INTL ARPT
3851          DALLAS/FORT WORTH INTL ARPT
```

Continental Airlines

```
826                SAN ANTONIO INTL
827        NEWARK LIBERTY INTL ARPT
828                     MIAMI INTL
829        CHICAGO O'HARE INTL ARPT
830                   TOCUMEN INTL
831     DALLAS/FORT WORTH INTL ARPT
832         SAN FRANCISCO INTL ARPT
833  FORT LAUDERDALE/HOLLYWOOD INTL
```