Clint Valentine
Week 12 Assignment

```
# 1. How many bird strike events occurred for American Airlines?
query <- "
  SELECT COUNT (DISTINCT record_id)
  FROM events

  INNER JOIN flights
  ON events.airport_name = flights.airport_name
  AND events.flight_date = flights.flight_date

  WHERE flights.aircraft_airline_operator = 'AMERICAN AIRLINES'
"
result <- unlist(dbGetQuery(conn, query))
cat('\nNumber of bird strike events with American Airlines: ', result, '\n')
```

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Number of bird strike events with American Airlines:  5803
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# 2. How many bird strikes were there for each airline? Show the airline name,
#    including UNKNOWN, and the number of strikes.
query <- "
  SELECT flights.aircraft_airline_operator, COUNT (DISTINCT record_id)
  FROM events

  INNER JOIN flights
  ON events.airport_name = flights.airport_name
  AND events.flight_date = flights.flight_date

  GROUP BY flights.aircraft_airline_operator
"
result <- dbGetQuery(conn, query)
cat('\nNumber of bird strikes per airline:\n\n')
print(result)
```

```
Number of bird strikes per airline:
           aircraft_airline_operator COUNT (DISTINCT record_id)
1         ABSA AEROLINHAS BRASILEIRAS                         1
2                             ABX AIR                      2592
3                        ACM AVIATION                         2
4                     ACTION AIRLINES                        12
5                   ADI SHUTTLE GROUP                        55
6                          AER LINGUS                        32
7                            AERO AIR                         2
8          AERO CHARTER AND TRANSPORT                         2
9                     AERO COSTA RICA                         4
10                    AERO INDUSTRIES                         1
11                           AEROFLOT                         1
12               AEROLINEAS EJECUTIVAS                         4
13                        AEROLITORAL                         4
14                         AEROMEXICO                         6
15                      AERONAVES TSM                         1
16                       AEROSUN INTL                         1
17                           AIR 2000                         2
[ rows omitted ]
```

```
# 3. Which airline had the most bird strikes, excluding military and unknown?
query <- "
  SELECT subquery.airline, MAX(subquery.count)
  FROM (
    SELECT flights.aircraft_airline_operator as airline,
           COUNT (DISTINCT record_id) as count
    FROM events

    INNER JOIN flights
    ON events.airport_name = flights.airport_name
    AND events.flight_date = flights.flight_date

    WHERE flights.aircraft_airline_operator != 'UNKNOWN'
    AND flights.aircraft_airline_operator != 'MILITARY'

    GROUP BY flights.aircraft_airline_operator) subquery
"
result <- dbGetQuery(conn, query)
print('\nAirline with the most bird strikes (excluding military/unknown):\n\n')
print(result)
```

```
Airline with the most bird strikes (excluding military/unknown):

         airline MAX(subquery.count)
1 UNITED AIRLINES              13081
```

```
# 4. Which bird strikes occurred for Helicopters? List all the bird strike
#    incidents with date.
query <- "
  SELECT events.record_id, events.flight_date
  FROM events

  INNER JOIN flights
  ON events.airport_name = flights.airport_name
  AND events.flight_date = flights.flight_date
  INNER JOIN aircraft
  ON flights.make_model = aircraft.make_model

  WHERE aircraft.type = 'Helicopter'
"
result <- dbGetQuery(conn, query)
cat('\nBird strikes (by ID) for helicopters and date of flight:\n\n')
print(result)
```

```
     record_id     flight_date
1       312197   5/12/2011 0:00
2       261350   3/24/2009 0:00
3       213040   2/17/2003 0:00
4       208985    3/8/2001 0:00
5       312006    5/5/2011 0:00
6       231499  11/12/2004 0:00
7       311762   5/26/2011 0:00
8       254548   5/28/2008 0:00
9       200830   4/29/2000 0:00
10      242729   9/22/2006 0:00
11      215783   5/15/2002 0:00
12      202457  12/11/2000 0:00
13      253249   9/26/2007 0:00
14      208561   8/16/2000 0:00
15      254613    8/8/2008 0:00
16      236369  11/22/2005 0:00
17      224515   5/16/2004 0:00
18      213825  11/15/2001 0:00
19      303254   7/25/2010 0:00
20      316957   9/21/2011 0:00
21      310146   1/23/2011 0:00
[ rows omitted ]
```

```
# 5. Which airlines had more than 10 bird strikes? List the airline names only
#    excluding military and unknown.
query <- "
  SELECT DISTINCT flights.aircraft_airline_operator
  FROM flights

  INNER JOIN events
  ON events.airport_name = flights.airport_name
  AND events.flight_date = flights.flight_date

  WHERE
    (events.wildlife_number_struck = '11 to 100'
     OR events.wildlife_number_struck = 'Over 100')
  AND flights.aircraft_airline_operator != 'UNKNOWN'
  AND flights.aircraft_airline_operator != 'MILITARY'
"
result <- dbGetQuery(conn, query)
cat('\nAirlines with more than 10 bird strikes excluding unknown/military:\n\n')
print(result)
```

```
Airlines with more than 10 bird strikes excluding unknown/military:

         aircraft_airline_operator
1             TRANS WORLD AIRLINES
2               NORTHWEST AIRLINES
3                  UNITED AIRLINES
4                         BUSINESS
5                    FEDEX EXPRESS
6                      US AIRWAYS*
7                AMERICAN AIRLINES
8             CONTINENTAL AIRLINES
9               SOUTHWEST AIRLINES
10         AMERICAN EAGLE AIRLINES
11                 DELTA AIR LINES
12                PIEDMONT AIRLINES
13                 MESABA AIRLINES
14                 MIDWEST AIRLINES
15                 HARBOR AIRLINES
16                  SPIRIT AIRLINES
17                      HORIZON AIR
18                     UPS AIRLINES
19           ZANTOP INTL AIRLINES
20                      GOVERNMENT
21                 SKYWEST AIRLINES
22                  COMAIR AIRLINES
23                        LUFTHANSA
24                     HAWAIIAN AIR
25               ATLANTIC SOUTHEAST
26          ATLANTIC COAST AIRLINES
27                FRONTIER AIRLINES
28                       AIR CANADA
29                         CAPE AIR
30                            CCAIR
31           EXECUTIVE JET AVIATION
32            AMERICA WEST AIRLINES
33                    MESA AIRLINES
34                          ABX AIR
35                      AIR MIDWEST
36                  SKYWAY AIRLINES
37                  SKYWAYS EXPRESS
38                 PRIVATELY OWNED
39                 JETBLUE AIRWAYS
40                  ALASKA AIRLINES
41                   ALOHA AIRLINES
42              CHAUTAUQUA AIRLINES
43                   FLIGHT OPTIONS
44                          NETJETS
45                       AMERIFLIGHT
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```
46                 JAPAN AIRLINES
47                     AIR CHINA
48         GREAT LAKES AIRLINES
49              CHICAGO EXPRESS
50                    SWIFT AIR
51                 PSA AIRLINES
52                   US EXPRESS
53                  ATA AIRLINES
54 EXPRESSJET (CONTINENTAL EXPRS)
55                    COMMUTAIR
56       AIR WISCONSIN AIRLINES
57              AIRTRAN AIRWAYS
58                  AIR GEORGIAN
59                      PINNACLE
60          SUBURBAN AIR FREIGHT
61               AIRNET EXPRESS
62            INDEPENDENCE AIR
63                   SALMON AIR
64              NETJETS AVIATION
65               VIRGIN ATLANTIC
66               SHUTTLE AMERICA
67             REPUBLIC AIRLINES
68                 LYNX AVIATION
69                XL AIRWAYS UK
70              ALOHA AIR CARGO
71                   US AIRWAYS
72              BRITISH AIRWAYS
73               ERA HELICOPTERS
74              LUFTHANSA CARGO
75              EMPIRE AIRLINES
76                 SOUTHERN AIR
77               VISION AIRLINES
78                COLGAN AIRWAYS
79              COMPASS AIRLINES
80           EXECUTIVE JET MGMNT
81           ALL NIPPON AIRWAYS
82                        XOJET
83                      EVA AIR
84        TRANS STATES AIRLINES
85                     USA 3000
86               FLIGHT EXPRESS
87               NORTH AMERICAN
```