In this Assignment we use RSQLite and Lubridate to create tables in SQL

ipak <- [**function**](http://inside-r.org/r-doc/base/function)(pkg){

new.pkg <- pkg[!(pkg %in% [**installed.packages**](http://inside-r.org/r-doc/utils/installed.packages)()[, "Package"])]

**if** ([**length**](http://inside-r.org/r-doc/base/length)(new.pkg))

[**install.packages**](http://inside-r.org/r-doc/utils/install.packages)(new.pkg, dependencies = **TRUE**)

[**sapply**](http://inside-r.org/r-doc/base/sapply)(pkg, [**require**](http://inside-r.org/r-doc/base/require), character.only = **TRUE**)

}

packages <- [**c**](http://inside-r.org/r-doc/base/c)("RSQLite", "lubridate")

ipak(packages)

[**getwd**](http://inside-r.org/r-doc/base/getwd)()

[**setwd**](http://inside-r.org/r-doc/base/setwd)("C:/Users/Neha/Desktop")

BirdStrikesData <- [**read.csv**](http://inside-r.org/r-doc/utils/read.csv)("Bird Strikes.csv", header = T, sep = ",")

db <- dbConnect(SQLite(), dbname="BirdStrikes.sqlite")

dbSendQuery(conn = db, "PRAGMA foreign\_keys = ON")

dbSendQuery(conn = db, "CREATE TABLE AirCraftFeatures(Aircraft\_type TEXT, No\_of\_Engines INTEGER, Aircraft\_Model TEXT, Flight\_No INTEGER)")

AircraftFeatures = cbind.data.frame(BirdStrikesData$Aircraft..Type, BirdStrikesData$Aircraft..Number.of.engines, BirdStrikesData$Aircraft..Make.Model, BirdStrikesData$Aircraft..Flight.Number)

dbWriteTable(conn=db, name="AircraftFeatures", AircraftFeatures, [**append**](http://inside-r.org/r-doc/base/append)=T, [**row.names**](http://inside-r.org/r-doc/base/row.names)=F)

dbSendQuery(conn = db, "CREATE TABLE Airport (Airport\_Name TEXT, Flight\_No INTEGER, Operator INTEGER, Location TEXT)")

Airport = cbind.data.frame(BirdStrikesData$Airport..Name, BirdStrikesData$Aircraft..Flight.Number, BirdStrikesData$Aircraft..Airline.Operator, BirdStrikesData$Location..Nearby.if.en.route )

dbWriteTable(conn=db, name="Airport", Airport, [**append**](http://inside-r.org/r-doc/base/append)=T, [**row.names**](http://inside-r.org/r-doc/base/row.names)=F)

dbSendQuery(conn = db, "CREATE TABLE FlightParameter (Flight\_date TEXT, Time INTEGER, Feet\_above\_altitude INTEGER, phase\_of\_flight INTEGER, Flight\_No INTEGER, Record\_id INTEGER)")

FlightParameter = cbind.data.frame(BirdStrikesData$FlightDate, BirdStrikesData$When..Time..HHMM., BirdStrikesData$Feet.above.ground, BirdStrikesData$When..Phase.of.flight, BirdStrikesData$Aircraft..Flight.Number, BirdStrikesData$Record.ID )

dbWriteTable(conn=db, name="FlightParameter", FlightParameter, [**append**](http://inside-r.org/r-doc/base/append)=T, [**row.names**](http://inside-r.org/r-doc/base/row.names)=F)

dbSendQuery(conn = db, "CREATE TABLE Wildlife (Species TEXT, Size INTEGER, Location TEXT)")

Wildlife = cbind.data.frame(BirdStrikesData$Wildlife..Species, BirdStrikesData$Wildlife..Size, BirdStrikesData$Location..Nearby.if.en.route)

dbWriteTable(conn=db, name="Wildlife", Wildlife, [**append**](http://inside-r.org/r-doc/base/append)=T, [**row.names**](http://inside-r.org/r-doc/base/row.names)=F)

dbSendQuery(conn = db, "CREATE TABLE BirdStrike (Number\_struck INTEGER, Size INTEGER, Remains\_obtained INTEGER, Record\_id INTEGER)")

BirdStrike = cbind.data.frame(BirdStrikesData$Wildlife..Number.struck, BirdStrikesData$Wildlife..Size, BirdStrikesData$Remains.of.wildlife.collected., BirdStrikesData$Record.ID )

dbWriteTable(conn=db, name="BirdStrike", BirdStrike, [**append**](http://inside-r.org/r-doc/base/append)=T, [**row.names**](http://inside-r.org/r-doc/base/row.names)=F)

dbSendQuery(conn = db, "CREATE TABLE Effect(Impact\_to\_flight TEXT, Indicated\_Damage, Others TEXT)")

Effect = cbind.data.frame(BirdStrikesData$Effect..Impact.to.flight, BirdStrikesData$Effect..Indicated.Damage, BirdStrikesData$Effect..Other)

dbWriteTable(conn=db, name="Effect", Effect , [**append**](http://inside-r.org/r-doc/base/append)=T, [**row.names**](http://inside-r.org/r-doc/base/row.names)=F)

dbSendQuery(conn = db, "CREATE TABLE Condition(Precipitation TEXT, Sky TEXT, Date INTEGER)")

Condition = cbind.data.frame(BirdStrikesData$Conditions..Precipitation, BirdStrikesData$Conditions..Sky, BirdStrikesData$FlightDate)

dbWriteTable(conn=db, name="Condition", Condition , [**append**](http://inside-r.org/r-doc/base/append)=T, [**row.names**](http://inside-r.org/r-doc/base/row.names)=F)

The screen shots of the data retrieved are :





