Two Table Operations: SQL Joins

The following code should set up four dataframes, 3 for the first exercise, and another one for the second.

```
library(dplyr)
#########

PID <- c(101,102,103,104,105,106,107,108,110)
VarA <- sample(letters[1:12],length(PID),replace=T)
VarB <- sample(10:20/10,length(PID),replace=T)
Table1 <- data.frame(PID,VarA,VarB)
rm(PID);rm(VarA);rm(VarB);

PID <- c(101,102,103,104,105,106,108,109)
Var1 <- sample(c("RAVC","SLIR","HUFP","GRFD"),length(PID),replace=T)
Var2 <- sample(9:16,length(PID),replace=T)
Table2 <- data.frame(PID,Var1,Var2)
rm(PID);rm(Var1);rm(Var2);


PrimKey <- c(101,102,103,104,105,106,107,108,109,110)
X1 <- c("Dog","Cat","Dog","Dog","Duck","Cat","Dog","Cat","Hamster","Goat")
X2 <- c("BodyRolls","BodyRolls","Hikicks","Hikicks","BodyRolls",
        "BodyRolls","Hikicks","Hikicks","BodyRolls","BodyRolls")
Table3 <- data.frame(PrimKey,X1,X2)
rm(PrimKey);rm(X1);rm(X2);

#########

Species <- c("Setosa","Versicolor","Virginica")
Country <- c("France","Scotland","Ireland")
iris1 <- sample_frac(iris,0.95)
iris2 <- data.frame(Species,Country)
```

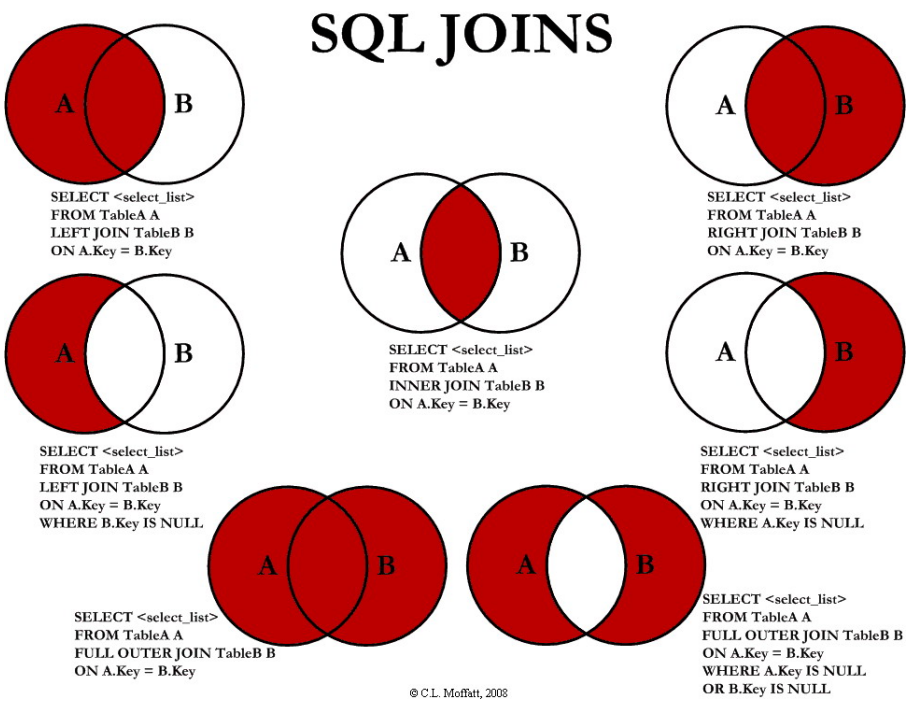
SQL JOINS
A
B
SELECT <select_list>
FROM TableA A
LEFT JOIN TableB B
ON A.Key = B.Key
SELECT <select_list>
FROM TableA A
RIGHT JOIN TableB B
ON A.Key = B.Key
SELECT <select_list>
FROM TableA A
INNER JOIN TableB B
ON A.Key = B.Key
SELECT <select_list>
FROM TableA A
LEFT JOIN TableB B
ON A.Key = B.Key
WHERE B.Key IS NULL
SELECT <select_list>
FROM TableA A
RIGHT JOIN TableB B
ON A.Key = B.Key
WHERE A.Key IS NULL
SELECT <select_list>
FROM TableA A
FULL OUTER JOIN TableB B
ON A.Key = B.Key
SELECT <select_list>
FROM TableA A
FULL OUTER JOIN TableB B
ON A.Key = B.Key
WHERE A.Key IS NULL
OR B.Key IS NULL
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Figure 1: