

## ACADGILD ASSIGNMENT 4.1

1. `df1 = data.frame(CustId = c(1:6), Product = c(rep("TV", 3), rep("Radio", 3)))`  
`df2 = data.frame(CustId = c(2, 4, 6), State = c(rep("Texas", 2), rep("NYC", 1)))`  
`df1` #left table  
`df2` #right table

For the above given data frames and tables perform the following operations:

- Return only the rows in which the left table have match.
- Returns all rows from both tables, join records from the left which have matching keys in the right table.
- Return all rows from the left table, and any rows with matching keys from the right table.
- Return all rows from the right table, and any rows with matching keys from the left table.

### ANSWER :

```
df1 = data.frame(CustomerId = c(1:6), Product = c(rep("TV", 3), rep("Radio", 3)))
df2 = data.frame(CustomerId = c(2, 4, 6), State = c(rep("Texas", 2), rep("NYC", 1)))

df1
# CustomerId Product
#1 TV
#2 TV
#3 TV
#4 Radio
#5 Radio
#6 Radio

df2
# CustomerId State
#2 Texas
#4 Texas
#6 NYC
```

- Return only the rows in which the left table have match.

### ANSWER:

```
df1 = data.frame(CustId = c(1:6), Product = c(rep("TV", 3), rep("Radio", 3))) df2 = data.frame(CustId = c(2, 4, 6), State = c(rep("Texas", 2), rep("NYC", 1)))
```

```
Left <- merge(df1, df2, by.x = "CustId") CustId Product State 1 2 TV Texas 2 4 Radio Texas 3 6 Radio NYC
```

- Returns all rows from both tables, join records from the left which have matching keys in the right table.

**ANSWER:**

```
Right <- merge(df1, df2, by = "CustId", all = TRUE)
```

```
Right CustId Product State 1 1 TV 2 2 TV Texas 3 3 TV 4 4 Radio Texas 5 5 Radio 6 6 Radio NYC
```

**2) Perform the below operations on above given data frames and tables:**

- Return a long format of the datasets without matching key.
- Keep only observations in df1 that match in df2.
- Drop all observations in df1 that match in df2.

**ANSWER:**

```
dt1[dt2, nomatch=0L, on = "CustomerId"]
> dt1[dt2, nomatch=0L, on = "CustomerId"]
CustomerId Product State
1: 2 TV TEXAS
2: 4 Radio TEXAS
3: 6 Radio NYC
dt2[dt1, nomatch=0L, on = "CustomerId"]
> dt2[dt1, nomatch=0L, on = "CustomerId"]
CustomerId State Product
1: 2 TEXAS TV
2: 4 TEXAS Radio
3: 6 NYC Radio
```