

# **ACADGILD**

# SESSION 4: FOUNDATIONAL R PROGRAMMING-II

Assignment 1

### Data Analytics

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#### 1. Introduction

This assignment will help you understand the concepts learnt in the session.

#### 2. Objective

This assignment will test your skills on foundational R Programming- writing functions.

#### 3. Prerequisites

Not applicable.

#### 4. Associated Data Files

Not applicable.

#### 5. Problem Statement

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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.

```
ANS: 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
```

#Return only the rows in which the left table have match. df=merge(df1, df2, by = "CustId") df

```
> df
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.

```
df0=merge(df1, df2, by = "CustId", all = T) df0
```

```
> df0
CustId Product State
1 1 TV <NA>
2 2 TV Texas
3 3 TV <NA>
4 4 Radio Texas
5 5 Radio <NA>
5 6 Radio NYC
```

#Return all rows from the left table, and any rows with matching keys from the right table.

```
df3=merge(df1, df2, all.x = T)
```

df3

#Return all rows from the right table, and any rows with matching keys from the lefttable.

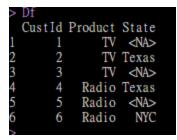
```
df4=merge(df1, df2, all.y = T)
```

df4

```
> df4
CustId Product State
1 2 TV Texas
2 4 Radio Texas
3 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.

```
Df=merge(df1,df2, all = T)
Df
```



• Keep only observations in df1 that match in df2.

```
library(dplyr)
Df1=semi_join(df1,df2)
Df1
```

```
> Dfl=semi_join(dfl,df2)
Joining, by = "CustId"
> Dfl
    CustId Product
1    2    TV
2    4    Radio
3    6    Radio
>
```

Drop all observations in df1 that match in df2.

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