

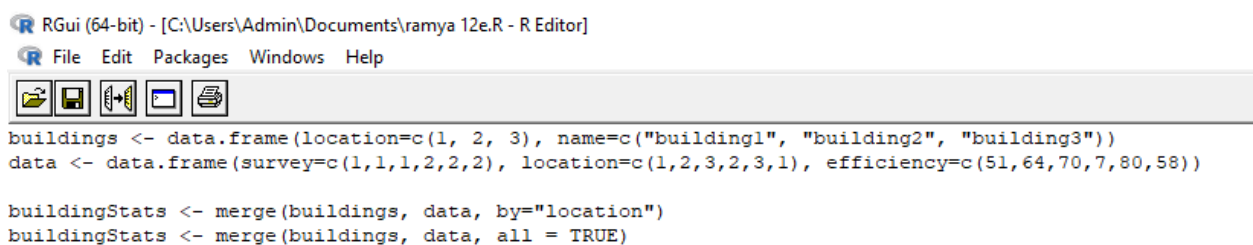
Exercise 12e)Cross Join:

Merge the two dataframes from Exercise 11a, into a “Cross Join” with each row of “buildings” matched to each row of “data”. What new column names are created in “buildingStats”?

Program:

```
buildings <- data.frame(location=c(1, 2, 3), name=c("building1", "building2", "building3"))
data <- data.frame(survey=c(1,1,1,2,2,2), location=c(1,2,3,2,3,1),
  efficiency=c(51,64,70,7,80,58))
```

```
buildingStats <- merge(buildings, data, by="location")
buildingStats <- merge(buildings, data, all = TRUE)
```



```
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buildings <- data.frame(location=c(1, 2, 3), name=c("building1", "building2", "building3"))
data <- data.frame(survey=c(1,1,1,2,2,2), location=c(1,2,3,2,3,1), efficiency=c(51,64,70,7,80,58))

buildingStats <- merge(buildings, data, by="location")
buildingStats <- merge(buildings, data, all = TRUE)
```

Exercise 13MergingDataframe rows:

To join two data frames (datasets) vertically, use the rbind function. The two data frames must

have the same variables, but they do not have to be in the same order.

Merge the rows of the following two dataframes:

```
buildings<- data.frame(location=c(1, 2, 3), name=c("building1", "building2", "building3"))
buildings2 <- data.frame(location=c(5, 4, 6), name=c("building5", "building4", "building6"))
```

Also, specify the new dataframe as, “allBuidings”.

```
buildings<-data.frame(location=c(1,2,3),name=c("building1",building2",building3"))
buildings2<-data.frame(location=c(5,4,6),name=c("building5", "bulding4", "building6"))
allbuilding<-rbind(buildings,buildings2)
```

```
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buildings<-data.frame(location=c(1,2,3),name=c("building1",building2",building3"))
buildings2<-data.frame(location=c(5,4,6),name=c("building5","bulding4","building6"))
allbuilding<-rbind(buildings,buildings2)
```

Exercise 14

Create a new dataframe, buildings3, that has variables not found in the previous dataframes.

buildings3 <- data.frame(location=c(7, 8, 9), name=c("building7", "building8", "building9"), startEfficiency=c(75,87,91))

```
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buildings3 <- data.frame(location=c(7, 8, 9), name=c("building7", "building8", "building9"), startEfficiency=c(75, 87, 91))
```

```
buildings3 <- data.frame(location=c(7, 8, 9), name=c("building7", "building8", "building9"), startEfficiency=c(75, 87, 91))
```

Exercise 15

Instead of deleting the extra variables from buildings3 . append the buildings, and buildings2

with the new variable in buildings3, (from Exercise 14). Set the new data in buildings and buildings2 , (from Exercise 13), to NA.

Input:

```
buildings <- cbind(buildings, startEfficiency=NA)
```

```
buildings2 <- cbind(buildings2, startEfficiency=NA)
```

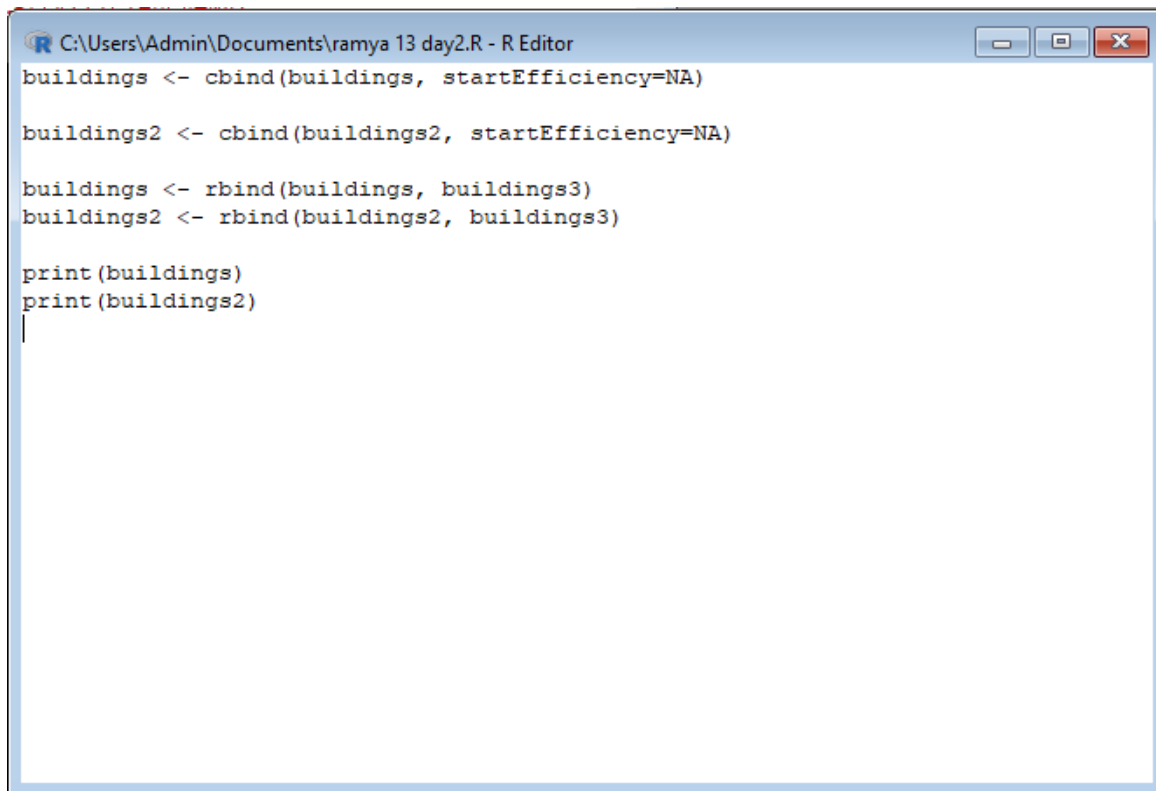
```
buildings <- rbind(buildings, buildings3)
```

```
buildings2 <- rbind(buildings2, buildings3)
```

```
print(buildings)
print(buildings2)
```

Output:

```
> print(buildings)
  location    name startEfficiency
1      1 building1          NA
2      2 building2          NA
3      3 building3          NA
4      7 building7          75
5      8 building8          87
6      9 building9          91
> print(buildings2)
  location    name startEfficiency
1      5 building5          NA
2      4 bulding4          NA
3      6 building6          NA
4      7 building7          75
5      8 building8          87
6      9 building9          91
>
```



```
R C:\Users\Admin\Documents\ramya 13 day2.R - R Editor
buildings <- cbind(buildings, startEfficiency=NA)

buildings2 <- cbind(buildings2, startEfficiency=NA)

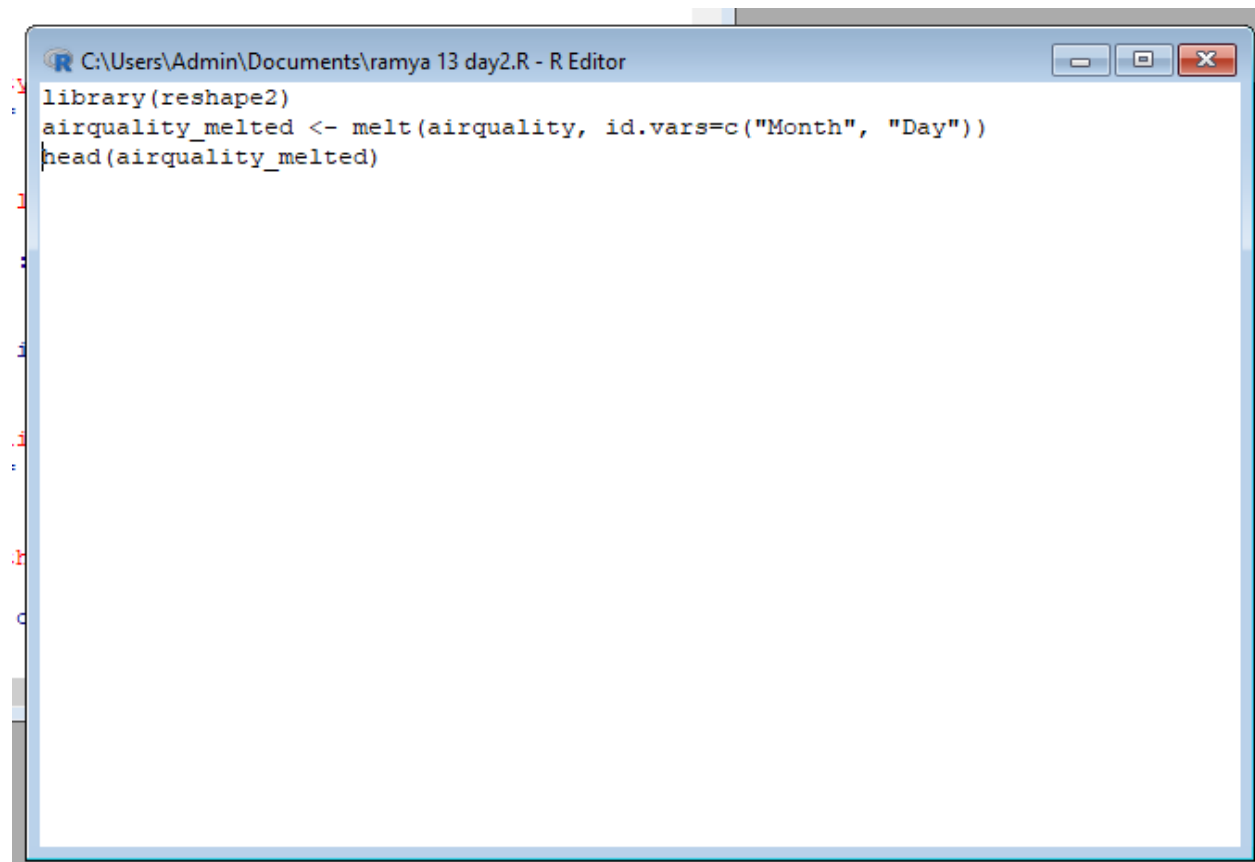
buildings <- rbind(buildings, buildings3)
buildings2 <- rbind(buildings2, buildings3)

print(buildings)
print(buildings2)
|
```

Exercises 17 :

1. Melt airquality data set and display as a long – format data ?

```
library(reshape2)
airquality_melted <- melt(airquality, id.vars=c("Month", "Day"))
head(airquality_melted)
```



The image shows a screenshot of an R Editor window. The title bar at the top reads "C:\Users\Admin\Documents\ramya 13 day2.R - R Editor". The window contains three lines of R code: `library(reshape2)`, `airquality_melted <- melt(airquality, id.vars=c("Month", "Day"))`, and `head(airquality_melted)`. The code is syntax-highlighted, with keywords in red, function names in blue, and strings in black. The window has standard Windows window controls (minimize, maximize, close) in the top right corner.

```
library(reshape2)
airquality_melted <- melt(airquality, id.vars=c("Month", "Day"))
head(airquality_melted)
```