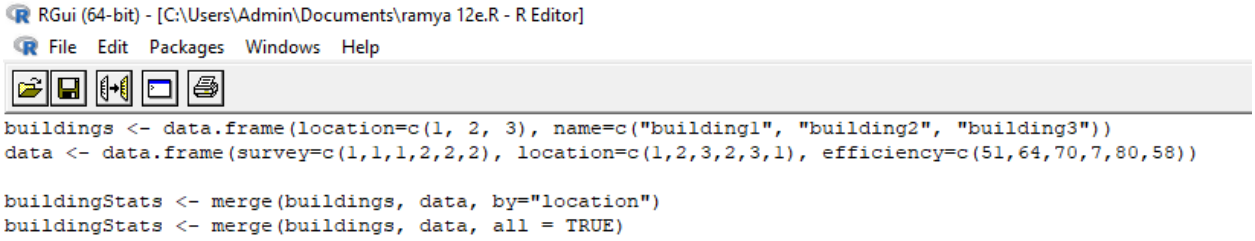
Exercise 12e)Cross Join:
Merge the two dataframes from Exercise 11a, into a "Cross Join" with each row of "buildings" matched to each row of "data". What new column names are created in "buildingStats"?

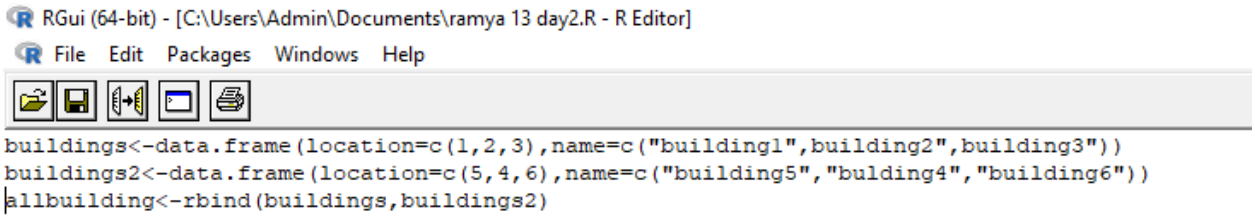
Program:

```
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)
```

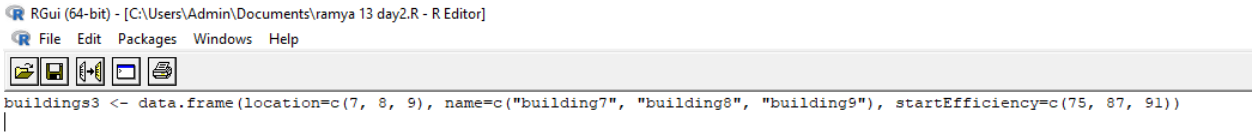


Exercise 13MergingDataframe rows:
To join two data frames (datasets) vertically, use the rbind function. The two data frames must
have the same variables, but they do not have to be in the same order.
Merge the rows of the following two dataframes:
buildings<- data.frame(location=c(1, 2, 3), name=c("building1", "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)
```



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))



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

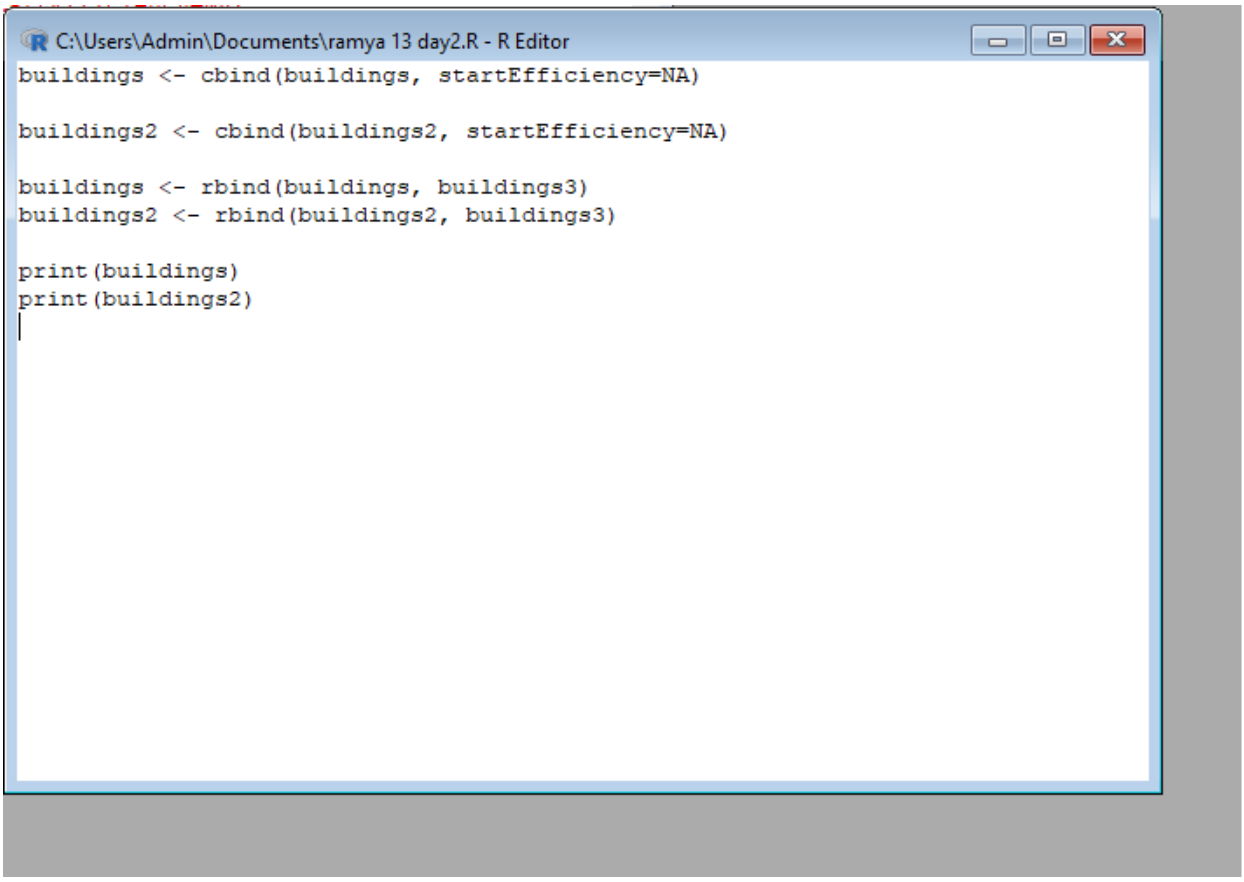
Exercise 15
Instead of deleting the extra variables from buildings3 . append the buildings, and buildings2
with the new variable in buildings3, (from Exercise 14). Set the new data in buildings and buildings2 , (from Exercise 13), to NA.

Input:
buildings <- cbind(buildings, startEfficiency=NA)

buildings2 <- cbind(buildings2, startEfficiency=NA)

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

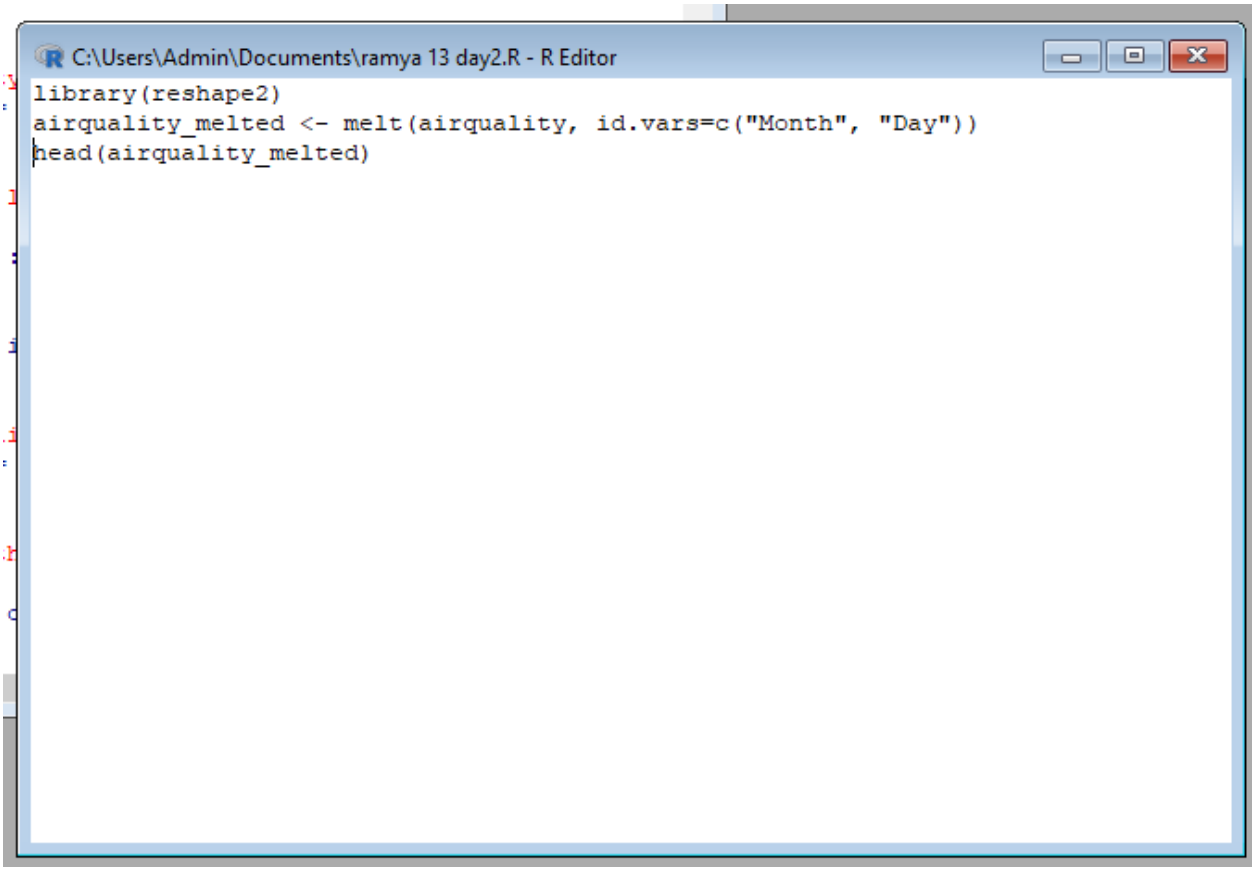
```
print(buildings)
print(buildings2)

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
>
```



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)
```


C:\Users\Admin\Documents\ramya 13 day2.R - R Editor
library(reshape2)
airquality_melted <- melt(airquality, id.vars=c("Month", "Day"))
head(airquality_melted)