DAY -02

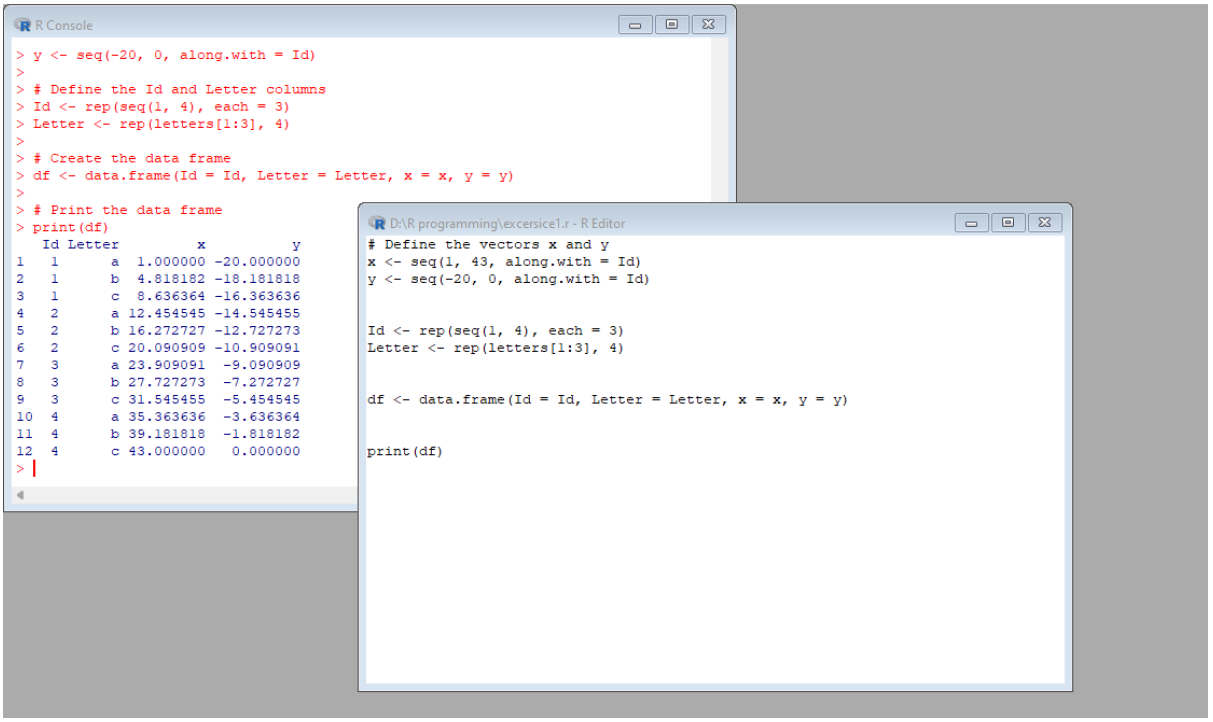
CODE:

1.# Define the vectors x and y

```
x <- seq(1, 43, along.with = Id)

y <- seq(-20, 0, along.with = Id)


# Define the Id and Letter columns

Id <- rep(seq(1, 4), each = 3)

Letter <- rep(letters[1:3], 4)


# Create the data frame

df <- data.frame(Id = Id, Letter = Letter, x = x, y = y)


# Print the data frame

print(df)
```

OUTPUT

```
Id Letter        x         y
1   1      a  1.000000 -20.000000
2   1      b  4.818182 -18.181818
3   1      c  8.636364 -16.363636
4   2      a 12.454545 -14.545455
5   2      b 16.272727 -12.727273
6   2      c 20.090909 -10.909091
7   3      a 23.909091  -9.090909
8   3      b 27.727273  -7.272727
9   3      c 31.545455  -5.454545
10  4      a 35.363636  -3.636364
11  4      b 39.181818  -1.818182
12  4      c 43.000000   0.000000
```



3.

Code:

```
df_1<-data.frame(id=1:4,Age=c(14,15,12,10))

df_2<-data.frame(id=1:4,sex_code=c("F","M","M","F"),Code=c("a","b","c","d"))

df_1

df_2

Mr<-merge(df_1,df_2,by="id")

print(Mr)
```

output:

```
id Age

1  1  14

2  2  15

3  3  12

4  4  10

> df_2

  id sex_code Code

1  1       F    a
```

2 2 M b

3 3 M c

4 4 F d

> Mr<-merge(df_1,df_2,by="id")

> print(Mr)

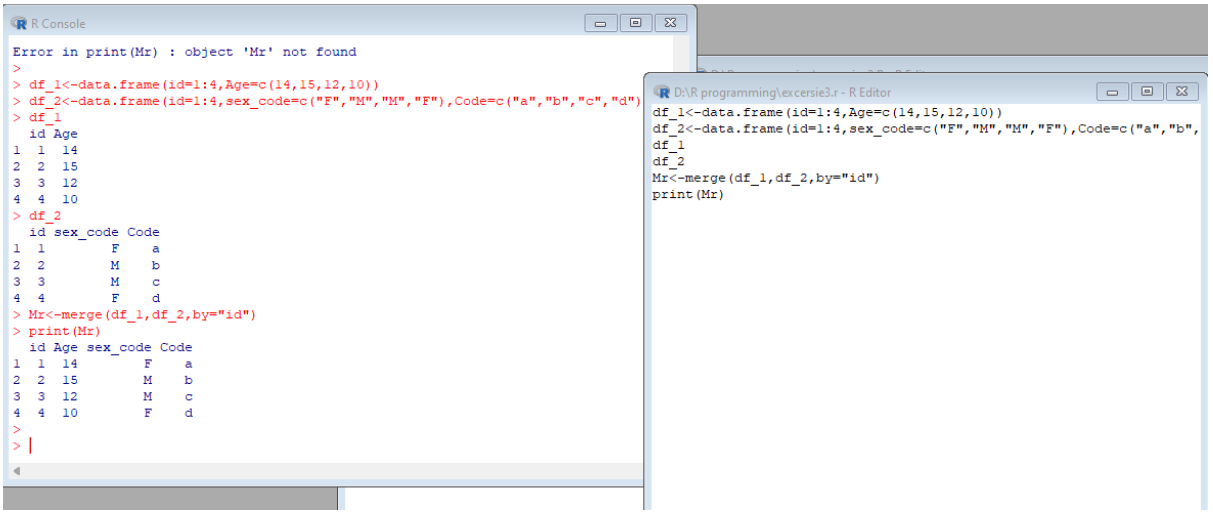
id Age sex_code Code

1 1 14 F a

2 2 15 M b

3 3 12 M c

4 4 10 F d



4.

Code:

#df1 and df2

df1 <- data.frame(Id = 1:4, Age = c(14, 12, 15, 10))

df2 <- data.frame(Id = 1:4, Sex = c("F", "M", "M", "F"), Code = c("a", "b", "c", "d"))

create M by merging df1 and df2

M <- merge(df1, df2, by = "Id")

#df3

df3 <- data.frame(id2 = 4:1, score = c(100, 98, 94, 99))

df3

create N by merging M and df3

N<-merge(M, df3, by.x = "Id", by.y = "id2")

N

Output:

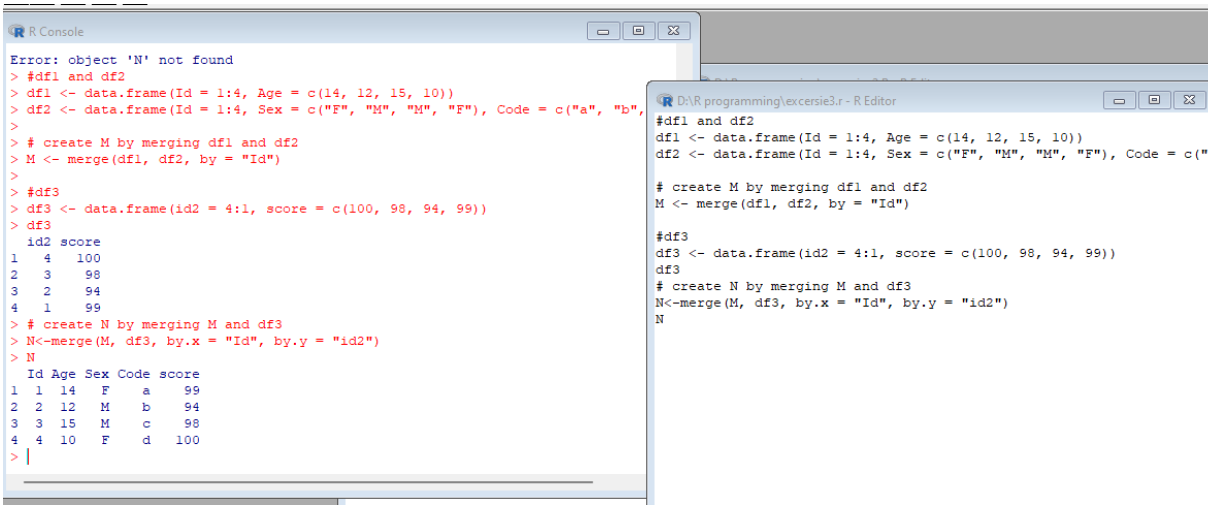
Id Age Sex Code score

1 1 14 F a 99

2 2 12 M b 94

3 3 15 M c 98

4 4 10 F d 100



5.

Code:

#df1 and df2

df1 <- data.frame(Id = 1:4, Age = c(14, 12, 15, 10))

df2 <- data.frame(Id = 1:4, Sex = c("F", "M", "M", "F"), Code = c("a", "b", "c", "d"))

df1

df2

Merge df1 and df2 to create M

M <- merge(df1, df2)

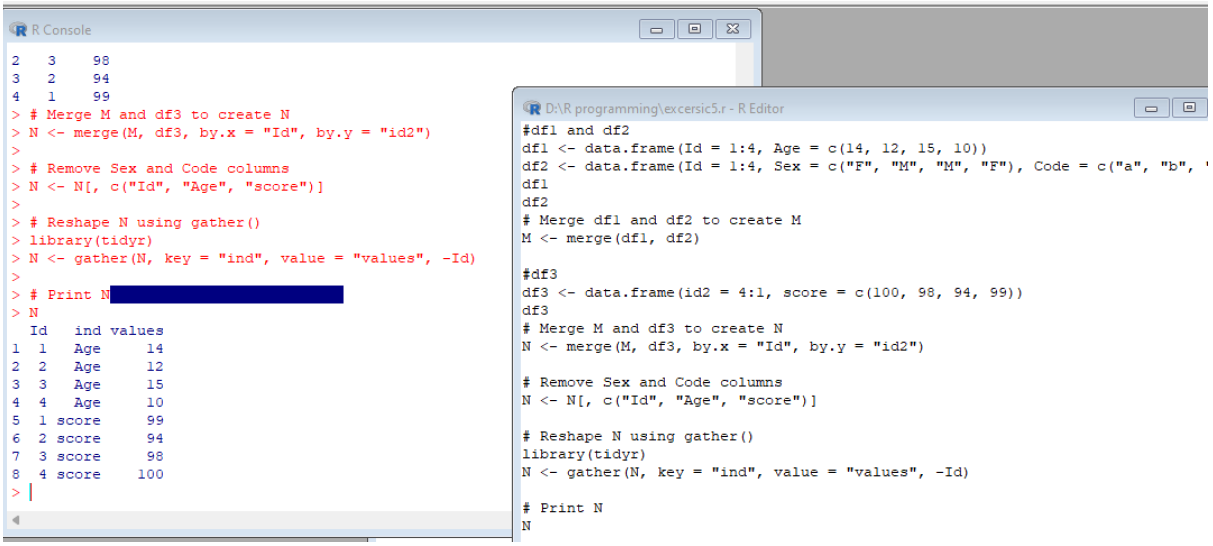
#df3

df3 <- data.frame(id2 = 4:1, score = c(100, 98, 94, 99))

```
df3

# Merge M and df3 to create N

N <- merge(M, df3, by.x = "Id", by.y = "id2")


# Remove Sex and Code columns

N <- N[, c("Id", "Age", "score")]


# Reshape N using gather()

library(tidyr)

N <- gather(N, key = "ind", value = "values", -Id)


# Print N

N
```

Output:

```
  Id   ind values
1  1   Age     14
2  2   Age     12
3  3   Age     15
4  4   Age     10
5  1 score     99
6  2 score     94
7  3 score     98
8  4 score    100
```


R Console
2 3 98
3 2 94
4 1 99
> # Merge M and df3 to create N
> N <- merge(M, df3, by.x = "Id", by.y = "id2")
>
> # Remove Sex and Code columns
> N <- N[, c("Id", "Age", "score")]
>
> # Reshape N using gather()
> library(tidyr)
> N <- gather(N, key = "ind", value = "values", -Id)
>
> # Print N
> N
Id ind values
1 1 Age 14
2 2 Age 12
3 3 Age 15
4 4 Age 10
5 1 score 99
6 2 score 94
7 3 score 98
8 4 score 100
> D:\R programming\excersic5.r - R Editor
#df1 and df2
df1 <- data.frame(Id = 1:4, Age = c(14, 12, 15, 10))
df2 <- data.frame(Id = 1:4, Sex = c("F", "M", "M", "F"), Code = c("a", "b",
df1
df2
# Merge df1 and df2 to create M
M <- merge(df1, df2)
#df3
df3 <- data.frame(id2 = 4:1, score = c(100, 98, 94, 99))
df3
# Merge M and df3 to create N
N <- merge(M, df3, by.x = "Id", by.y = "id2")
# Remove Sex and Code columns
N <- N[, c("Id", "Age", "score")]
# Reshape N using gather()
library(tidyr)
N <- gather(N, key = "ind", value = "values", -Id)
# Print N
N