

DAY -02

CODE:

```
1.# Define the vectors x and y
x <- seq(1, 43, along.with = Id)
y <- seq(-20, 0, along.with = Id)

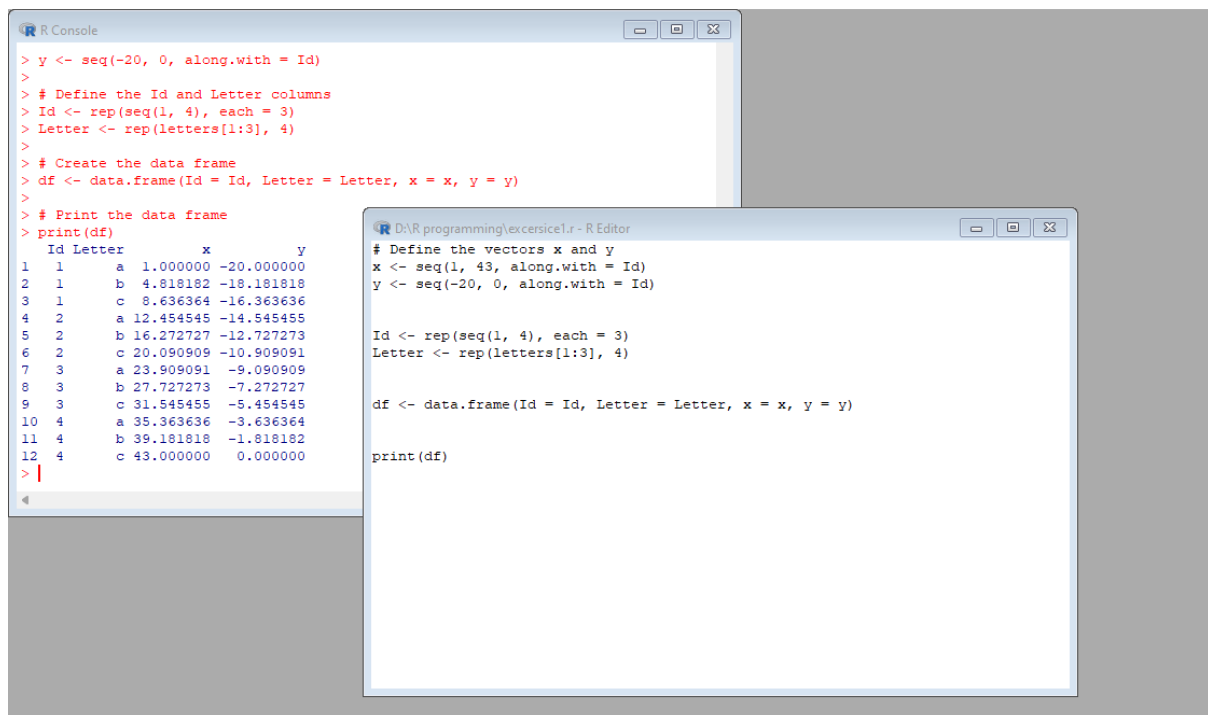
# Define the Id and Letter columns
Id <- rep(seq(1, 4), each = 3)
Letter <- rep(letters[1:3], 4)

# 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)
```

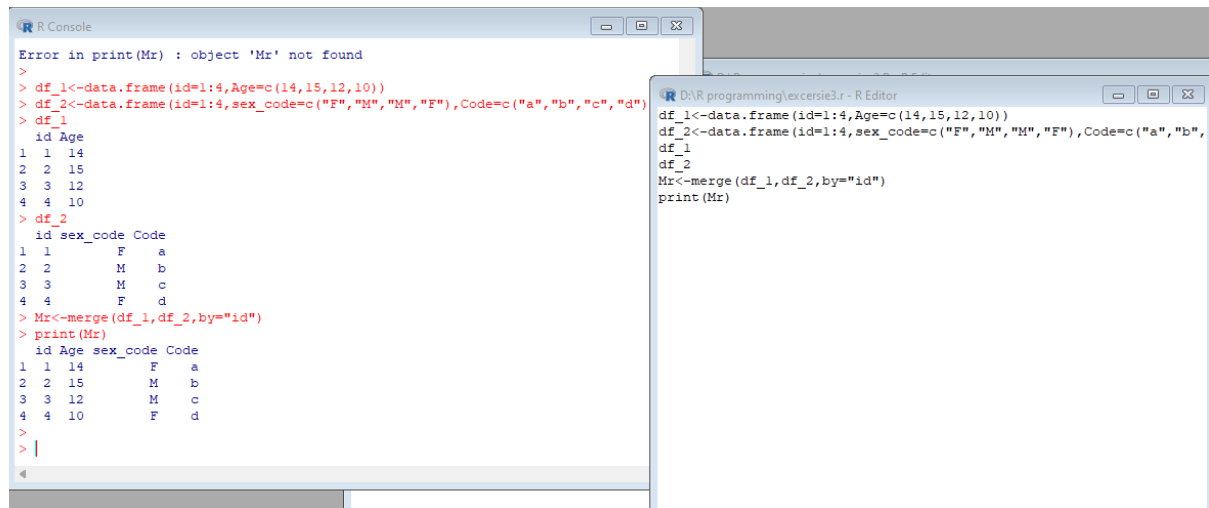
	id	Age	sex_code	Code
--	----	-----	----------	------

1	1	14	F	a
---	---	----	---	---

2	2	15	M	b
---	---	----	---	---

3	3	12	M	c
---	---	----	---	---

4	4	10	F	d
---	---	----	---	---



The screenshot shows two windows from an R environment. The 'R Console' window on the left displays the following code and output:

```
Error in print(Mr) : object 'Mr' not found
> 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
  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
>
> |
```

The 'R Editor' window on the right shows the same code being typed into a script:

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

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:

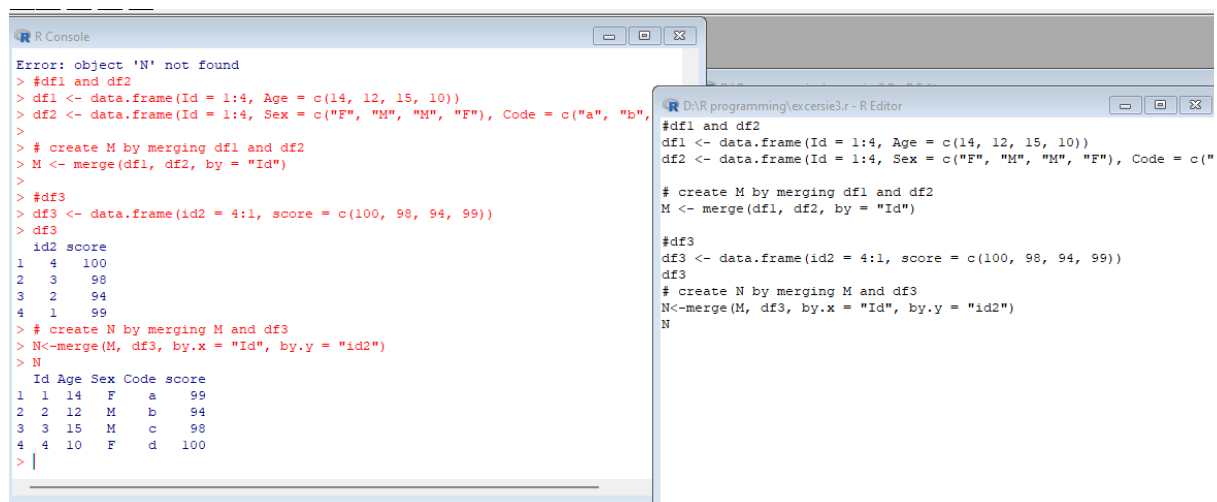
```
Id Age Sex Code score
```

```
1 1 14 F a 99
```

```
2 2 12 M b 94
```

```
3 3 15 M c 98
```

```
4 4 10 F d 100
```



The screenshot shows two windows from an R environment. The 'R Console' window on the left displays the execution of R code and its output. It starts with an error message 'Error: object 'N' not found', followed by the creation of data frames df1, df2, and df3. It then merges df1 and df2 into M, and finally merges M and df3 into N. The output of N is displayed as a data frame with columns Id, Age, Sex, Code, and score. The 'R Editor' window on the right shows the source code for the script, which includes the same R code as the console, plus comments and the final command to print N.

```
R Console
Error: object 'N' not found
> #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",
>
> # 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
  id2 score
1    4  100
2    3   98
3    2   94
4    1   99
> # create N by merging M and df3
> N<-merge(M, df3, by.x = "Id", by.y = "id2")
> N
  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
> |

R Editor
D:\R programming\excersie3.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("
# 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
```

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", "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
```