```
colnames(df2) <- c("A", "B", "C")

#From a list
my_list <- list(A = c(1, 2), B = c("A", "B"))
df3 <- as.data.frame(my_list)
```

b) Indexing and selecting data

```
# Selecting a specific row
df[2, ]

# Selecting a specific column
df$Age

# Selecting multiple columns
df[, c("Name", "Age")]

# Selecting rows where a condition is true
df[df$Age > 30, ]
```

c) Adding, removing, and renaming columns:

```
# Adding a new column
df$City <- c("NYC", "LA", "Chicago")

# Removing a column
df$City <- NULL

# Renaming a column
colnames(df) <- c("Full Name", "Years", "Sex")
```

d) Sorting data:

```
# Sorting by a single column
df[order(df$Years), ]

# Sorting by multiple columns
df[order(df$Sex, df$Years), ]
```

e Grouping and aggregating data:

```
library(dplyr)

# Grouping by a single column
df %>% group_by(Sex) %>% summarize(mean_age = mean(Years))

# Grouping by multiple columns
df %>% group_by(Sex, Years) %>% summarize(count = n())
```

3) Create the contingency table for the given raw data in R

```
# Sample data
raw_data <- c("A", "A", "B", "B", "A", "B", "C", "C", "C")

# Creating the contingency table
table(raw_data)
# Output:
# raw_data
# A B C
# 3 3 3
```