RWorksheet_Orada#3a.Rmd

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```
LETTERS[seq(1, 11, by= 1)]
```

```
##  [1] "A" "B" "C" "D" "E" "F" "G" "H" "I" "J" "K"
```

```
LETTERS[seq(1,26, by=2)]
```

```
##  [1] "A" "C" "E" "G" "I" "K" "M" "O" "Q" "S" "U" "W" "Y"
```

```
LETTERS[c(1,5,9,15,21)]
```

```
## [1] "A" "E" "I" "O" "U"
```

```
letters[seq(22,26,by=1)]
```

```
## [1] "v" "w" "x" "y" "z"
```

```
letters[seq(15,24,by=1)]
```

```
##  [1] "o" "p" "q" "r" "s" "t" "u" "v" "w" "x"
```

```
 city <- c("Tuguegarao City", "Manila", "Iloilo City", "Tacloban", "Samal Island", "Davao City")
print(city)
```

```
## [1] "Tuguegarao City" "Manila"          "Iloilo City"     "Tacloban"
## [5] "Samal Island"    "Davao City"
```

```
 temp <- c(42, 39, 34, 34, 30, 27)
print(temp)
```

```
## [1] 42 39 34 34 30 27
```

```
df_temp <- data.frame(city, temp)
print(df_temp)
```

```
##              city temp
## 1 Tuguegarao City   42
## 2          Manila   39
## 3     Iloilo City   34
## 4        Tacloban   34
## 5    Samal Island   30
## 6      Davao City   27
```

```
names(df_temp) <- c("City", "Temperature")
print(df_temp)
```

```
##              City Temperature
## 1 Tuguegarao City          42
## 2          Manila          39
## 3     Iloilo City          34
```

```
## 4        Tacloban          34
## 5    Samal Island          30
## 6      Davao City          27
```

```
str(df_temp)
```

```
## 'data.frame':    6 obs. of  2 variables:
##  $ City       : chr  "Tuguegarao City" "Manila" "Iloilo City" "Tacloban" ...
##  $ Temperature: num  42 39 34 34 30 27
```

```
df_temp[3:4, ]
```

```
##          City Temperature
## 3 Iloilo City          34
## 4    Tacloban          34
```

```
# City with Highest Temperature
df_temp[which.max(df_temp$Temperature), ]
```

```
##              City Temperature
## 1 Tuguegarao City          42
```

```
# City with Lowest Temperature
df_temp[which.min(df_temp$Temperature), ]
```

```
##         City Temperature
## 6 Davao City          27
```

```
vector_data <- c(1:8, 11:14)
mat_a <- matrix(vector_data, nrow = 3, ncol = 4)
print(mat_a)
```

```
##      [,1] [,2] [,3] [,4]
## [1,]    1    4    7   12
## [2,]    2    5    8   13
## [3,]    3    6   11   14
```

```
 mat_b <- mat_a * 2
print(mat_b)
```

```
##      [,1] [,2] [,3] [,4]
## [1,]    2    8   14   24
## [2,]    4   10   16   26
## [3,]    6   12   22   28
```

```
 mat_a[2, ]
```

```
## [1]  2  5  8 13
```

```
 mat_a[1:2, 3:4]
```

```
##      [,1] [,2]
## [1,]    7   12
## [2,]    8   13
```

```
mat_a[3, c(2, 3)]
```

```
## [1]  6 11
```

```
mat_a[, 4]
```

```
## [1] 12 13 14
```

```r
dimnames(mat_b) <- list(
    row_names = c("isa", "dalawa", "tatlo"),
    col_names = c("uno", "dos", "tres", "quatro")
)
print(mat_b)
```

```
##          col_names
## row_names uno dos tres quatro
##    isa      2   8   14     24
##    dalawa   4  10   16     26
##    tatlo    6  12   22     28
```

```r
dim(mat_a) <- c(6, 2)
print(mat_a)
```

```
##      [,1] [,2]
## [1,]    1    7
## [2,]    2    8
## [3,]    3   11
## [4,]    4   12
## [5,]    5   13
## [6,]    6   14
```

```r
dim(mat_a) <- c(6, 2)
print(mat_a)
```

```
##      [,1] [,2]
## [1,]    1    7
## [2,]    2    8
## [3,]    3   11
## [4,]    4   12
## [5,]    5   13
## [6,]    6   14
```

```r
array_data <- c(1, 2, 3, 6, 7, 8, 9, 0, 3, 4, 5, 1)
array_repeated <- rep(array_data, times = 2)
arr_3d <- array(array_repeated, dim = c(2, 4, 3))
print(arr_3d)
```

```
## , , 1
##
##      [,1] [,2] [,3] [,4]
## [1,]    1    3    7    9
## [2,]    2    6    8    0
##
## , , 2
##
##      [,1] [,2] [,3] [,4]
## [1,]    3    5    1    3
## [2,]    4    1    2    6
##
## , , 3
##
##      [,1] [,2] [,3] [,4]
## [1,]    7    9    3    5
## [2,]    8    0    4    1
```

```r
length(dim(arr_3d))
```

```
## [1] 3
```

```r
dimnames(arr_3d) <- list(
    row_names = letters[1:2],       # "a", "b"
    col_names = LETTERS[1:4],       # "A", "B", "C", "D"
    dim_names = c("1st-Dimensional Array", "2nd-Dimensional Array", "3rd-Dimensional Array")
)
print(arr_3d)
```

```
## , , dim_names = 1st-Dimensional Array
##
##          col_names
## row_names A B C D
##         a 1 3 7 9
##         b 2 6 8 0
##
## , , dim_names = 2nd-Dimensional Array
##
##          col_names
## row_names A B C D
##         a 3 5 1 3
##         b 4 1 2 6
##
## , , dim_names = 3rd-Dimensional Array
##
##          col_names
## row_names A B C D
##         a 7 9 3 5
##         b 8 0 4 1
```