Week2_lab

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```
#Vectors:
vector_a <- c(1,2,3,4,5)
print(vector_a)
```

```
## [1] 1 2 3 4 5
```

```
# Adding and Mutiply Vectors
a <- c(1,2,3)
b <- c(3,4,5)

d = c(a + b)
cat("Addition of vectors", a ,"and",b,"is", d)
```

```
## Addition of vectors 1 2 3 and 3 4 5 is 4 6 8
```

```
e = c(a *b)
cat("Multiplication of vectors", a ,"and",b,"is", e)
```

```
## Multiplication of vectors 1 2 3 and 3 4 5 is 3 8 15
```

```
#Matrices:

matrix_a <- matrix(c(1,2,3,4,5,6,7,8) , nrow = 4,  ncol =2)
print(matrix_a)
```

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

```
# Factors:

factor_a <- factor(c("Male", "Female", "Male", "Male"), levels = c("Male", "Female"))
print(factor_a)
```

```
## [1] Male   Female Male   Male
## Levels: Male Female
```

```r
# Data Frames:
student_data_frame <- data.frame(name = c("John", "Jane", "Mike"),
                                 age = c(25, 30, 35),
                                 grade = c("A","B","A+") )
print(student_data_frame)
```

```
##   name age grade
## 1 John  25     A
## 2 Jane  30     B
## 3 Mike  35    A+
```

```r
# Example 5: Arithmetic operations
result <- 35 + 40
print(result)
```

```
## [1] 75
```