DAY 2

ITA0497-STATISTICS OF R-PROGRAMMING

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Matrix addition

```
> m1 <- matrix(c(1,2,3,4,5,6),nrow=2, ncol = 3)
> m2 <- matrix(c(6,5,4,3,2,1),nrow=2, ncol = 3)
> print(m1)
     [,1] [,2] [,3]
[1,]    1    3    5
[2,]    2    4    6
> print(m2)
     [,1] [,2] [,3]
[1,]    6    4    2
[2,]    5    3    1
> add<-m1+m2
> print(add)
     [,1] [,2] [,3]
[1,]    7    7    7
[2,]    7    7    7
```

Matrix subtraction

```
> m1 <- matrix(c(1,2,3,4,5,6),nrow=2, ncol = 3)
> m2 <- matrix(c(6,5,4,3,2,1),nrow=2, ncol = 3)
> print(m1)
     [,1] [,2] [,3]
[1,]    1    3    5
[2,]    2    4    6
> print(m2)
     [,1] [,2] [,3]
[1,]    6    4    2
[2,]    5    3    1
> sub<-m1-m2
> print(sub)
     [,1] [,2] [,3]
[1,]   -5   -1    3
[2,]   -3    1    5
>
```

Matrix multiplication

```
> m1<-matrix(c(1,2,3,4),nrow=2,ncol=2)
> m2<-matrix(c(5,6,7,8),nrow=2,ncol=2)
> print(m1)
     [,1] [,2]
[1,]    1    3
[2,]    2    4
> print(m2)
     [,1] [,2]
[1,]    5    7
[2,]    6    8
> mul=m1%*%m2
> print(mul)
     [,1] [,2]
[1,]   23   31
[2,]   34   46
>
```

Display values and r installation

```
> name <- readline(prompt = "name ")
name age <- as.numeric(readline(prompt = "age"))
> print(name)
[1] "age <- as.numeric(readline(prompt = \"age\"))"
> print(age)
 [1] 25 30 35 40 45 50 55 60 65 70
> cat("R Version:", R.version.string, "\n")
R Version: R version 4.4.2 (2024-10-31 ucrt)
>
```

Store object in memory

```
> objects <- ls()
> print(objects)
 [1] "a"                          "a.function"               "activity_data"
 [4] "add"                        "after"                    "after_five"
 [7] "age"                        "Amount"                   "andval"
[10] "apple_col"                  "array"                    "b"
[13] "before"                     "c"                        "charval"
[16] "chord_data"                 "class"                    "company"
[19] "cosval"                     "cumulative_sales_data"    "cumulative_sum"
[22] "data"                       "displayArray"             "div"
[25] "east_sales"                 "emp_data"                 "exam_data"
[28] "exp"                        "factor_apple"             "fig"
[31] "fig_co2_vs_humidity"        "fig_co2_vs_temp"          "fig_rating_vs_age"
[34] "fig_rating_vs_price"        "fig_scatter"              "fig_science_vs_attendan
[37] "fig_science_vs_math"        "fig_stock_vs_market"      "fig_stock_vs_volume"
```

Sum

```
> a <- seq(20, 50)
> print(a)
 [1] 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
[31] 50
> means<- mean(seq(20, 60))
> print(means)
[1] 40
> sums <- sum(seq(51, 91))
> print(sums)
[1] 2911
>
```