> # Htet Khant Linn - Assignment 1

>

> # ----------- Part 1: Getting Started with R --------------

>

> # ----------- 1. Basic Arithmetic -------------

>

> a <- c(1, 2, 3, 4)

> b <- c(5, 6, 7, 8)

>

> print("Addition")

[1] "Addition"

> a+b

[1] 6 8 10 12

>

> print("Subtraction")

[1] "Subtraction"

> a-b

[1] -4 -4 -4 -4

>

> print("Multiplication")

[1] "Multiplication"

> a\*b

[1] 5 12 21 32

>

> print("Division")

[1] "Division"

> a/b

[1] 0.2000000 0.3333333 0.4285714 0.5000000

>

>

>

> # ----------- 2. Using Variables --------------

>

> my\_name <- 'Htet Khant Linn'

> my\_age <- 23

> my\_fav\_num <- 7

>

> sentence <- paste('My name is', my\_name, '. I am', my\_age, ' years old. And my favorite number is ', my\_fav\_num, '.')

>

> print(sentence)

[1] "My name is Htet Khant Linn . I am 23 years old. And my favorite number is 7 ."

>

>

> # ----------- Part 2: Data Types and Structures --------------

>

> # ----------- 1. Vectors --------------

>

> num\_vector <- c(5, 10, 15, 20, 25)

>

> char\_vector <- c("Charles", "John","Aung", "Htet", "Harry")

>

> length(num\_vector)

[1] 5

> sum(num\_vector)

[1] 75

> mean(num\_vector)

[1] 15

>

>

> # ----------- 2. Data Frames --------------

>

> player\_dataframe <- data.frame(Name = c("Pele", "Messi", "Maradona", "Ronaldo", "Bruno"),

+ Age = c(60, 45, 50, 70, 49),

+ Score = c(70, 98, 97, 96, 65))

> # extracting all data

> player\_dataframe

Name Age Score

1 Pele 60 70

2 Messi 45 98

3 Maradona 50 97

4 Ronaldo 70 96

5 Bruno 49 65

>

>

> str(player\_dataframe)

'data.frame': 5 obs. of 3 variables:

$ Name : chr "Pele" "Messi" "Maradona" "Ronaldo" ...

$ Age : num 60 45 50 70 49

$ Score: num 70 98 97 96 65

> summary(player\_dataframe)

Name Age Score

Length:5 Min. :45.0 Min. :65.0

Class :character 1st Qu.:49.0 1st Qu.:70.0

Mode :character Median :50.0 Median :96.0

Mean :54.8 Mean :85.2

3rd Qu.:60.0 3rd Qu.:97.0

Max. :70.0 Max. :98.0

> head(player\_dataframe)

Name Age Score

1 Pele 60 70

2 Messi 45 98

3 Maradona 50 97

4 Ronaldo 70 96

5 Bruno 49 65

>

>

>

> # ----------- 3. Indexing and Subsetting --------------

>

> #Extract the second row of your data frame.

> second\_row <- player\_dataframe[2,]

> print("Second row from dataframe")

[1] "Second row from dataframe"

> print(second\_row)

Name Age Score

2 Messi 45 98

>

> # Extract the “Score” column.

> score\_col <- player\_dataframe$Score

> print("Score column")

[1] "Score column"

> print(score\_col)

[1] 70 98 97 96 65

>

> #Filter rows where Score > 80.

> score\_80 <- player\_dataframe[player\_dataframe$Score > 80, ]

> print("Score greater than 80")

[1] "Score greater than 80"

> print(score\_80)

Name Age Score

2 Messi 45 98

3 Maradona 50 97

4 Ronaldo 70 96

>

> # ----------- End of Assignment --------------

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