Rworksheet_Juntanilla#3a.Rmd

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R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

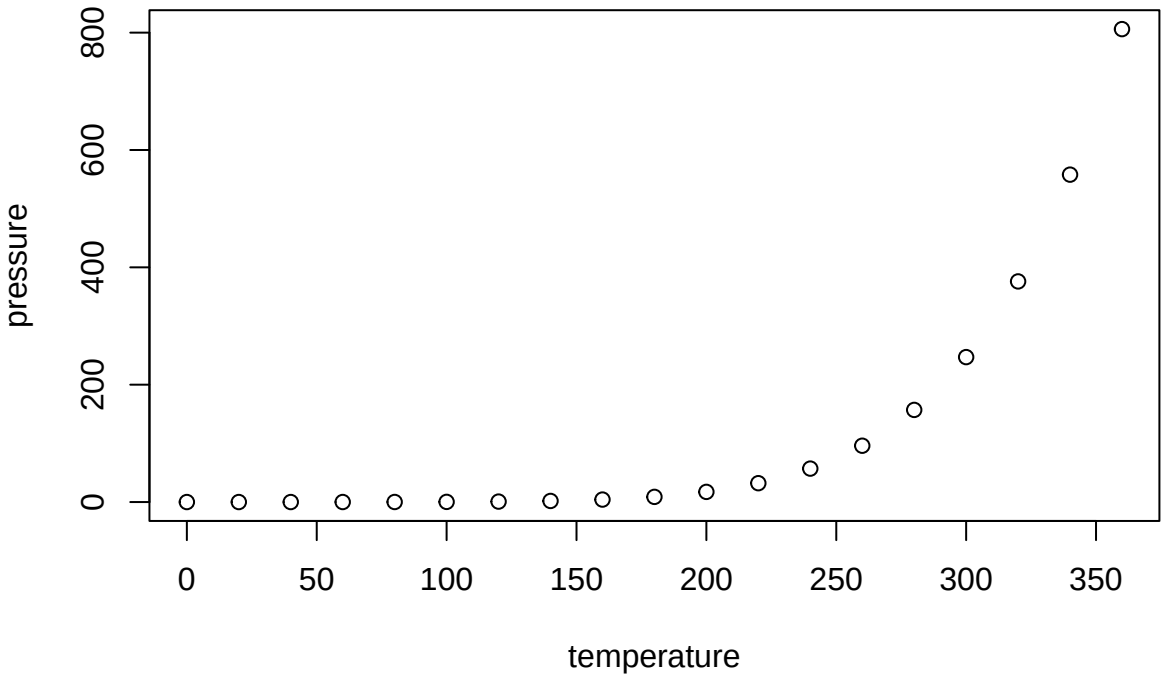
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed           dist       
##  Min.   : 4.0   Min.   :  2.00  
##  1st Qu.:12.0   1st Qu.: 26.00  
##  Median :15.0   Median : 36.00  
##  Mean   :15.4   Mean   : 42.98  
##  3rd Qu.:19.0   3rd Qu.: 56.00  
##  Max.   :25.0   Max.   :120.00
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.

code here

1.There is a built-in vector LETTERS contains the uppercase letters of the alphabet and letters which contains the lowercase letters of the alphabet.

Upper_Alphabet <- LETTERS[1:26] Upper_Alphabet

1a.You need to produce a vector that contains the first 11 letters.

First_elev_let <- Upper_Alphabet[1:11] First_elev_let

1b. Produce a vector that contains the odd numbered letters.

Upper_Alphabet <- LETTERS Odd_let <- Upper_Alphabet[seq(1,length(Upper_Alphabet), by = 2)] Odd_let

1c. Produce a vector that contains the vowels

vowels_let <- Upper_Alphabet[c(1,5,9,15,21)] vowels_let

Based on the above vector letters:

1

Lower_Alphabet <- letters[1:26] Lower_Alphabet

1d. Produce a vector that contains the last 5 lowercase letters.

Last_five_let <- letters[22:26] Last_five_let

1e. Produce a vector that contains letters between 15 to 24 letters in lowercase.

let_between <- letters[15:24] let_between

2. Create a vector(not a dataframe) with the average temperatures in April for Tugue-garao City, Manila, Iloilo City, Tacloban, Samal Island, and Davao City. The average temperatures in Celcius are 42, 39, 34, 34, 30, and 27 degrees.

2a. What is the R code and its result for creating a character vector for the city/town of Tuguegarao City, Manila, Iloilo City, Tacloban,Samal Island, and Davao City? Name the object as city. The names should follow the same order as in the instruction.

city_names <- c("Tuguegarao City", "Manila", "Iloilo City", "Tacloban", "Samal Island", "Davao City") city_names

2b. The average temperatures in Celcius are 42, 39, 34, 34, 30, and 27 degrees.Name the object as temp.

temp_city <- c(42, 39, 34, 34, 30, 27) temp_city

2c. Create a dataframe to combine the city and the temp by using 'data.frame(). What the R code and its result?

data_city <- data.frame(City = city_names, Temperature = temp_city) data_city

2d. Associate the dataframe you have created in 2.(c) by naming the columns using the names() function. Change the column names by using names() function as City and Temperature.

names(data_city) <- c("City", "Temperature") View(data_city)

2e. Print the structure by using str() function. Describe the output.

str(data_city)

2f. From the answer in d, what is the content of row 3 and row 4 What is its R code and its output?

row_city <- data_city[3:4,] row_city

2g. From the answer in d, display the city with highest temperature and the city with the lowest temperature. What is its R code and its output?

highest_temp <- data_city[data_city$Temperature == max(data_city$Temperature),] highest_temp

2g.Lowest Temperature

lowest_temp <- data_city[data_city$Temperature == min(data_city$Temperature),] lowest_temp

USING MATRIX

3.

matrix_1 <- matrix(c(1:8,11:14), ncol = 4, nrow = 3) matrix_1

3b.

matrix_mul_2 <- matrix_1 * 2 matrix_mul_2

3c.

row2 <- matrix_1[2,] row2

3d.

dis_matrix <- matrix_1[1:2, 3:4] dis_matrix

3e.

dis_matrix_2 <- matrix_1[3 , 2:3] dis_matrix_2

3f.

column_4 <- matrix_1[, 4] column_4

3g.

rownames(matrix_1) <- c("isa", "dalawa", "tatlo") colnames(matrix_1) <- c("uno", "dos", "tres", "quatro") matrix_1

3h.

matrix_2 <- matrix_1 dim(matrix_2) <- c(6,2) matrix_2

USING ARRAYS

4 An array contains 1, 2, 3, 6, 7, 8, 9, 0, 3, 4, 5, 1

array_1 <- c(1, 2, 3, 6, 7, 8, 9, 0, 3, 4, 5, 1) array_1

4a.

new_array <- array(array_1 , dim = c(2, 4 ,3)) new_array

4b.

dim(new_array)

4c.

colnames(new_array) <- c(“A”,“B”,“C”,“D”) new_array

rownames(new_array) <- c(“a”,“b”) new_array

dimnames(new_array)[[3]] <- c(“1st-Dimensional Array”, “2nd-Dimensional Array”, “3rd-Dimensional Array”) new_array