**Week -9**

**64. Create a list containing a vector, a matrix, and a data frame.**

my\_list <- list(vector = c(1, 2, 3), matrix = matrix(1:4, nrow=2), data\_frame = data.frame(A=1:3, B=4:6))

print(my\_list)

**65. Create a data frame with 3 columns: "Name", "Age", "Salary"**

df\_people <- data.frame(Name = c("ramesh", "rahul", "rakesh"), Age = c(25, 30, 35), Salary = c(50000, 60000, 70000))

print(df\_people)

**66. Filter rows of a data frame where Age > 30.**

filtered\_df <- subset(df\_people, Age > 30)

print(filtered\_df)

**67. Write a loop to calculate the sum of numbers from 1 to 100.**

total\_sum <- sum(1:100)

print(total\_sum)

**68. Write an if-else condition to check if a number is positive, negative, or zero**.

num <- -5

if (num > 0) {

print("Positive")

} else if (num < 0) {

print("Negative")

} else {

print("Zero")

}

**69. Replace all instances of "a" with "o" in a string.**

string\_example <- "banana"

modified\_string <- gsub("a", "o", string\_example)

print(modified\_string)

**70. Combine two strings with a space in between.**

str1 <- "Siva"

str2 <- "Sivani"

combined\_string <- paste(str1, str2)

print(combined\_string)

**71. Filter rows of a data frame where Salary > 50000.**

filtered\_salary\_df <- subset(df\_people, Salary > 50000)

print(filtered\_salary\_df) (Ref:65 Question)

**Assessment:**

**Calculate the correlation between two variables using R**

**Programming**

correlation\_value <- cor(df$x, df$y)

print(correlation\_value)