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shoe_data <- data.frame( ShoeSize = c(6.5, 9.0, 8.5, 8.5, 10.5, 7.0, 9.5, 9.0, 13.0, 7.5, 10.5, 8.5, 12.0, 10.5,
13.0, 11.5, 8.5, 5.0, 10.0, 6.5, 7.5, 8.5, 10.5, 8.5, 10.5, 11.0, 9.0, 13.0), Height = c(66.0, 68.0, 64.5, 65.0, 70.0,
64.0, 70.0, 71.0, 72.0, 64.0, 74.5, 67.0, 71.0, 71.0, 77.0, 72.0, 59.0, 62.0, 72.0, 66.0, 64.0, 67.0, 73.0, 69.0, 72.0,
70.0, 69.0, 70.0), Gender = c("F", "F", "F", "F", "M", "F", "F", "F", "M", "F", "M", "F", "M", "M", "M",
"M", "F", "F", "M", "F", "F", "M", "M", "M", "M", "M") )

str(shoe_data) summary(shoe_data)

males <- shoe_data[shoe_dataGender == "M",] females <- shoe_data[shoe_dataGender == "F",]

print(males) print(females)

mean_shoe_size <- mean(shoe_data$ShoeSize) mean_height <- mean(shoe_data$Height)

print(paste("Mean Shoe Size:", mean_shoe_size)) print(paste("Mean Height:", mean_height))

correlation <- cor(shoe_data$ShoeSize, shoe_data$Height) print(paste("Correlation:", correlation)) print("Yes,
there is a positive relationship between shoe size and height.")

months_vector <- c("March", "April", "January", "November", "January", "September", "October", "September", "November",
"January", "November", "November", "February", "May", "August", "July", "December", "August", "August", "September", "November",
"April")

factor_months_vector <- factor(months_vector) print(factor_months_vector)

summary(months_vector) summary(factor_months_vector)

direction <- c("East", "West", "North") frequency <- c(1, 4, 3)

factor_data <- rep(direction, frequency) print(factor_data)

new_order_data <- factor(factor_data, levels = c("East", "West", "North")) print(new_order_data)

import_data <- read.csv("import_march.csv") View(import_data) print(import_data)

random_search <- function() { num <- readline(prompt = "Enter a number from 1 to 50:") num <-
as.integer(num)

if (num < 1 || num > 50) { print("The number selected is beyond the range of 1 to 50") } else if (num ==
20) { print("TRUE") } else { print(num) } }

min_bills <- function(price) { bills <- c(1000, 500, 200, 100, 50) total_bills <- 0 remaining <- price
for (bill in bills) { count <- remaining %% bill total_bills <- total_bills + count remaining <- remaining -
%% bill }

print(paste("Minimum number of bills needed:", total_bills)) return(total_bills) }

min_bills(350)

students <- data.frame( Name = c("Annie", "Thea", "Steve", "Hanna"), Grade1 = c(85, 65, 75, 95), Grade2 =
c(65, 75, 55, 75), Grade3 = c(85, 90, 80, 100), Grade4 = c(100, 90, 85, 90) )

print(students)

for (i in 1:nrow(students)) { avg <- (students$Grade1[i] + students$Grade2[i] + students$Grade3[i] +
students$Grade4[i]) / 4 if (avg > 90) { print(paste(students$Name[i], "'s average grade this semester is",
avg)) } }

for (j in 2:5) { test_avg <- (students[1, j] + students[2, j] + students[3, j] + students[4, j]) / 4 if (test_avg <
80) { print(paste("The", j-1, "test was difficult.")) } }

for (i in 1:nrow(students)) { grades <- c(students$Grade1[i], students$Grade2[i], students$Grade3[i], students$Grade4[i])
max_grade <- grades[1] for (grade in grades) { if (grade > max_grade) { max_grade <- grade } } if
(max_grade > 90) { print(paste(students$Name[i], "'s highest grade this semester is", max_grade)) } }

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