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RStudio
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1 # Data for Class A and Class B
2 # Data for Class A and Class B
3 class_a <- c(51, 50, 84, 60, 29, 20, 63, 60, 50)
4 class_b <- c(51, 58, 84, 60, 50, 70, 63, 68, 50)
5 # Calculate mean, median, and range for each class
6 mean_a <- mean(class_a)
7 mean_b <- mean(class_b)
8 median_a <- median(class_a)
9 median_b <- median(class_b)
10 range_a <- max(class_a) - min(class_a)
11 range_b <- max(class_b) - min(class_b)
12
13 # Determine which class scored higher mean, median, and range
14 mean_comparison <- ifelse(mean_a > mean_b, "Class A", "Class B")
15 median_comparison <- ifelse(median_a > median_b, "Class A", "Class B")
16 range_comparison <- ifelse(range_a > range_b, "Class A", "Class B")
17
18 # Print the results
19 cat("Mean:", mean_comparison, "had a higher mean.\n")
20 cat("Median:", median_comparison, "had a higher median.\n")
21 cat("Range:", range_comparison, "had a higher range.\n")
22
26x41 (Top Level) R Script
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R 4.2.2
> # Determine which class scored higher mean, median, and range
> mean_comparison <- ifelse(mean_a > mean_b, "Class A", "Class B")
> median_comparison <- ifelse(median_a > median_b, "Class A", "Class B")
> range_comparison <- ifelse(range_a > range_b, "Class A", "Class B")
> range_comparison <- ifelse(range_a > range_b, "Class A", "Class B")
> # Print the results
> cat("Mean:", mean_comparison, "had a higher mean.\n")
Mean: Class A had a higher mean.
> cat("Median:", median_comparison, "had a higher median.\n")
Median: Class A had a higher median.
> cat("Range:", range_comparison, "had a higher range.\n")
Range: Class A had a higher range.
> # Plot boxplot
> boxplot(class_a, class_b, names = c("Class A", "Class B"), col = c("skyblue", "lightgreen"),
+         main = "Comparison of Exam Scores for Class A and Class B",
+         ylab = "Scores", xlab = "Class")
> par(mfrow=c(1,2), las=1, mar=c(5,5,5,5))
> boxplot(class_a, class_b, names = c("Class A", "Class B"), col = c("skyblue", "lightgreen"),
+         main = "Comparison of Exam Scores for Class A and Class B",
+         ylab = "Scores", xlab = "Class")
```

