# (a) Min-Max Normalization Example

min\_F <- 50000

max\_F <- 100000

v <- 80000

# Apply Min-Max Normalization Formula: (v - min) / (max - min)

normalized\_v <- (v - min\_F) / (max\_F - min\_F)

cat("Min-Max Normalized Value for v = $80,000:", normalized\_v, "\n")

# (b) Normalize the dataset using Min-Max and Z-Score

data\_values <- c(200, 300, 400, 600, 1000)

# Min-Max Normalization (Scaling to [0,1])

min\_val <- min(data\_values)

max\_val <- max(data\_values)

min\_max\_normalized <- (data\_values - min\_val) / (max\_val - min\_val)

cat("Min-Max Normalized Data:", min\_max\_normalized, "\n")

# Z-Score Normalization (Standardization)

mean\_val <- mean(data\_values)

sd\_val <- sd(data\_values)

z\_score\_normalized <- (data\_values - mean\_val) / sd\_val

cat("Z-Score Normalized Data:", z\_score\_normalized, "\n")