```
# Part 2:

# Question: Are there more goals are scored in womens soccer matches than mens?

#1. What is the hypothesis?

# Ho: There are less goals or the same about of goals scored in womens soccer than in mens
soccer.

# H1: There are more goals scored in womens soccer than in mens soccer.

missing_glimpse(women_results)
missing_glimpse(men_results)


#2. Graph the data

women_sum_score <- women_results %>%
  filter(date > "2002-01-01") %>%
  mutate(sum_score = home_score + away_score)

men_sum_score <- men_results %>%
  filter(date > "2002-01-01") %>%
  mutate(sum_score = home_score + away_score)

women_sum_score %>%
  ggplot(aes( x = sum_score))+
  labs(x = " Sum Score", y = "Count", title = "Sum of Women's Scores" )+
  geom_bar()

men_sum_score %>%
  ggplot(aes( x = sum_score))+
  labs(x = " Sum Score", y = "Count", title = "Sum of Men's Scores" )+
  geom_bar()

#3. Perform the Wilcoxon rank-sum test
result <- wilcox.test(women_sum_score$sum_score,men_sum_score$sum_score,
                      alternative = "greater", conf.int = TRUE, conf.level = 0.90)

# Print the result, including the confidence interval
print(result)


result_df <- data.frame("P-Value" = result$p.value,
                        "Result" = ifelse(result$p.value <= 0.10, "reject Ho", "fail to
reject"))

# Result: There are more goals scored in women's soccer than in men's soccer.
```