Homework Grading Report

Student Name:	JULISSA AGUIRRE
Assignment:	Assignment 1 - Introduction to R
Graded On:	September 27, 2025 at 10:17 PM
Final Score:	34.4 / 37.5 points (91.7%)

Score Summary

Overall Performance: Excellent (91.7%)

Instructor Assessment

Excellent work, Julissa! This assignment demonstrates a strong foundation in R and a thoughtful approach to data analysis. Your reflections are particularly impressive, showing a genuine understanding of the challenges and importance of data quality. Continue to build on this foundation by practicing data cleaning and transformation techniques, and don't hesitate to explore more advanced data analysis tools and methods. Your ability to reflect on your learning process will be invaluable as you progress in your business analytics journey.

Reflection & Critical Thinking

• Julissa demonstrates a strong ability to reflect on the data loading and inspection process. Her responses to the reflection questions are thoughtful and show an understanding of the importance of data quality and appropriate data types. She correctly identifies potential issues and considers the implications for analysis. The responses aren't just descriptive; they show why certain aspects are important for business analytics.

Analytical Strengths

• Successfully loaded data from both CSV and Excel formats using appropriate R packages. Demonstrated a basic understanding of data inspection techniques (e.g., observing data types, identifying potential missing values). The code is clean and well-commented, making it easy to follow. The student correctly identified the need to convert the 'Date' column to a datetime format for time-based analysis.

Business Application

• Julissa understands the practical implications of data quality. Identifying the need for correct data types (Date, Amount) directly relates to the ability to perform meaningful business calculations and analysis. The recognition that missing values can impact analysis demonstrates an understanding of real-world data challenges.

Learning Demonstration

• The student clearly demonstrates learning by articulating the importance of data types and data quality. The responses to the reflection questions show a growing awareness of the steps involved in preparing data for analysis. The ability to identify which dataset was most ready for analysis and which required the most preprocessing indicates a solid grasp of the initial data analysis workflow.

Areas for Development

• While the student identified potential data quality issues, the next step would be to demonstrate how to address them (e.g., using `na.omit()` or `mutate()` to handle missing values, or `as.Date()` to convert the Date column). Future assignments should focus on not just identifying problems, but also implementing solutions. Exploring more advanced data inspection techniques (e.g., summary statistics, visualizations) would also be beneficial.

Recommendations for Future Work

• Continue to practice data cleaning and transformation techniques. Explore different R packages for data manipulation (e.g., `dplyr`). Focus on developing a workflow that includes both data inspection and data cleaning/transformation. Consider adding visualizations to your data inspection process to gain a more intuitive understanding of the data.

Technical Analysis

Code Strengths:

• Successfully imported and displayed data from both CSV and Excel sources

• Demonstrated understanding of basic R functions for data inspection (head, str, summary)

• Used appropriate packages (tidyverse, readxl) for the assignment tasks

Code Improvement Suggestions:

• Fix variable name inconsistencies in print statements - e.g., 'First 10 rows of sales_df:' should refer to ratings_df and comments_df respectively

• Remove duplicate code blocks for inspecting data frames (e.g., repeated head(), str(), summary() calls)

• Consider using more descriptive variable names or comments to improve readability

Technical Observations:

• The student shows good foundational understanding of R's data import and exploration capabilities. The approach aligns with the assignment requirements, though there are some logical inconsistencies in output labeling that should be corrected.

• Code execution appears functional but could benefit from cleaner structure to enhance maintainability and clarity.

Additional Code Enhancement Examples:

Data Exploration Enhancement:

```
# More comprehensive data inspection
```

```
glimpse(sales_df) # dplyr alternative to str()
```

```
skimr::skim(sales_df) # Detailed summary statistics
```

```
DataExplorer::plot_missing(sales_df) # Visualize missing data
```

Data Visualization:

```
# Basic plots for data exploration
```

```
ggplot(sales_df, aes(x = amount)) + geom_histogram()
```

```
ggplot(sales_df, aes(x = category, y = amount)) + geom_boxplot()
```

Data Cleaning:

```
# Handle missing values
```

```
sales_df <- sales_df %>%
```

```
filter(!is.na(amount)) %>%
```

```
mutate(amount = ifelse(amount < 0, 0, amount))
```

Performance by Category