My First Quarto Report

Submission File

[Yunshu Yang]

Part 1: Software Installation & Verification

Below are the results from my run of the `setup-tests_autosave.R` script.

```
========================================
--- FIRST ATTEMPT ---
========================================
========================================
   APEC 8221 SETUP VERIFICATION REPORT
========================================

DIAGNOSTIC INFORMATION:
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R version: R version 4.5.1 (2025-06-13)
OS:        macOS Sequoia 15.5
RStudio:   2025.5.1.513
Date/time: 2025-09-07 19:41:22

STUDENT INFORMATION:
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Student Name: Yunshu Yang
x500 ID:      yang9291

TEST RESULTS:
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R Version            |   PASS | R version 4.5.1 (2025-06-13) is sufficient (  4.4.0)
RStudio Version      |   PASS | RStudio version 2025.5.1.513 is sufficient (  2023.06.0)
Core Packages        |   PASS | All required packages are installed
TinyTeX (for PDF)    |   PASS | TinyTeX is installed
Git Installed        |   PASS | Git executable found by 'gert' package
Git User Configured  |   PASS | Git user.name is set to: Yunshu Yang
```

```
Tidyverse Function    |   PASS | dplyr pipe and summarize functions work
ggplot2 Plotting      |   PASS | ggplot object created successfully
File System Write     |   PASS | Can write and read a file successfully
```

Part 2: Git & GitHub Repository

My GitHub repo URL is https://github.com/yunshuyang1129/apec8221-yang9291.git

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Part 3: Embedded Quarto Document

This section embeds the content from the `assignment-0-quarto.qmd` file you created.

```
## Objective
This is my first Quarto document for APEC 8221

## Data
Here is a data frame of pets:
```

```r
pets <- data.frame(
  name   = c("Fido", "Whiskers", "Nemo"),
  animal = c("Dog",  "Cat",      "Fish"),
  age    = c(5, 8, 2)
)
```

```r
pets
```

```
      name animal age
1     Fido    Dog   5
2 Whiskers    Cat   8
3     Nemo   Fish   2
```

```r
max_age <- max(pets$age)
max_age
```

```
[1] 8
```

Now, let's see the output when we print the data frame:

```
## Analysis

The maximum age of the pets is 8.
```

Part 4: R Basics Knowledge Check

1. Objects and Assignment

Question: What is the primary assignment operator in R? Use it to create an object named `my_age` that holds your age in years.

Answer: [Your text answer here...]

```r
# Create the 'my_age' object below
my_age <- 24
my_age
```

```
[1] 24
```

2. Vectors

Question: What is the purpose of the `c()` function in R? Use it to create a vector named `favorite_numbers` containing three of your favorite numbers.

Answer: [Your text answer here...]

```r
# Create the 'favorite_numbers' vector below
favorite_numbers <- c(7, 13, 21)
favorite_numbers
```

```
[1]  7 13 21
```

3. Subsetting Vectors

Question: Write the code that would select the *second* number from the `favorite_numbers` vector you just created.

```
# Write your subsetting code below
favorite_numbers[2]
```

```
[1] 13
```

4. Missing Values and Logic

Question: The code chunk below creates a vector `x` with missing values (`NA`). a. Write a line of code that returns a logical vector (`TRUE`/`FALSE`) indicating which elements are missing. b. Write a line of code that *counts* how many total missing values are in the vector.

```
# This vector is for the exercise
x <- c(1, 5, NA, 10, NA, 20)
```

```
# a) Return a logical vector indicating missing elements
is.na(x)
```

```
[1] FALSE FALSE  TRUE FALSE  TRUE FALSE
```

```
# b) Count the total number of missing values
sum(is.na(x))
```

```
[1] 2
```

5. Data Frames and Inspection

Question: The code chunk below creates a simple data frame called `pets`. a. Use a function to look at the first few rows of the data frame. b. Use a function to get a summary of the structure of the data frame. c. Write the code to select *only* the `age` column from the data frame.

```r
# This data frame is for the exercise
pets <- data.frame(
  name = c("Fido", "Whiskers", "Nemo"),
  animal = c("Dog", "Cat", "Fish"),
  age = c(5, 8, 2)
)
```

```r
# a) Look at the first few rows
head(pets)
```

```
      name animal age
1     Fido    Dog   5
2 Whiskers    Cat   8
3     Nemo   Fish   2
```

```r
# b) Get a summary of the structure
head(pets)
```

```
      name animal age
1     Fido    Dog   5
2 Whiskers    Cat   8
3     Nemo   Fish   2
```

```r
# c) Select only the 'age' column
pets$age
```

```
[1] 5 8 2
```

6. Workspace and Files

Question: a. What function would you use to see a list of all the objects currently in your R environment? b. What function would you use to find out your current working directory?

Answer: a. [ls()] b. [getwd()]

7. Getting Help

Question: Which function in R can you use to open the help documentation for another function? In the code chunk below, write the code you would use to see the help file for the `mean()` function.

Answer: [?function_name or help("function_name")]

```
# Write the code to see the help file for the mean() function below.
# I've set eval: false so this chunk won't cause an error when you render.
?mean
help("mean")
```