

My First Quarto Report

Submission File

[Runcheng]

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:

```
-----
R version: R version 4.5.1 (2025-06-13 ucrt)
OS:        Windows 11 x64 (build 26100)
RStudio:   2024.12.1.563
Date/time: 2025-09-06 21:57:52
```

STUDENT INFORMATION:

```
-----
Student Name: Runcheng112
x500 ID:      your_x500_here
```

TEST RESULTS:

```
-----
R Version          | PASS | R version 4.5.1 (2025-06-13 ucrt) is sufficient ( 4.4.0)
RStudio Version    | PASS | RStudio version 2024.12.1.563 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: Runcheng112
```

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/%5Byour-username%5D/apec8221-%5Byour-x500id%5>

Part 3: Embedded Quarto Document

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

Hello World!

Objective

Create my first Quarto document for APEC 8221.

Data Here is a data frame of pets:

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

Analysis

```
pets
```

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

```
max(pets$age)
```

```
[1] 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...]

```
# Create the 'my_age' object below  
my_age <- 27
```

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...]

```
# Create the 'favorite_numbers' vector below  
favorite_numbers <- c(6,10,1)
```

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] 10
```

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.

```
# 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)
)
```

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

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

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

```
'data.frame':  3 obs. of  3 variables:
 $ name  : chr  "Fido" "Whiskers" "Nemo"
 $ animal: chr  "Dog" "Cat" "Fish"
 $ age   : num  5 8 2
```

```
# 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: `[help(mean)]`

```
# 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.  
help\(mean\)
```