3.6.3 Write the Winning Candidate's Results to a Text File

You're almost finished! There is one last piece of coding that you need to do: save the winning candidate's results to the `election_results.txt` file and print these results to the VS Code output terminal. Tom is going to give you some instructions but then let you to work independently to finish this last piece of coding.

We are almost done! There is one more modification to make to the original script—to save the winning candidate's election results to the `election_results.txt` file.

We have already printed the `winning_candidate_summary` to the terminal, so all we have to do is write this variable to the text file.

Add the following code at the end of your file, and make sure it is aligned with the `for` loop, `for candidate in candidate_votes:`

```
# Save the winning candidate's name to the text file.
txt_file.write(winning_candidate_summary)
```

The final code should look like this:

```
# Add our dependencies.
import csv
import os
# Assign a variable to load a file from a path.
file_to_load = os.path.join("Resources", "election_results.csv")
# Assign a variable to save the file to a path.
```

```
file_to_save = os.path.join("analysis", "election_analysis.txt")
# Initialize a total vote counter.
total_votes = 0
# Candidate options and candidate votes.
candidate_options = []
candidate_votes = {}
# Track the winning candidate, vote count, and percentage.
winning_candidate = ""
winning_count = 0
winning_percentage = 0
# Open the election results and read the file.
with open(file_to_load) as election_data:
    file_reader = csv.reader(election_data)
    # Read the header row.
    headers = next(file_reader)
    # Print each row in the CSV file.
    for row in file_reader:
        # Add to the total vote count.
        total_votes += 1
        # Get the candidate name from each row.
        candidate_name = row[2]
        # If the candidate does not match any existing candidate, add the
        # the candidate list.
        if candidate_name not in candidate_options:
            # Add the candidate name to the candidate list.
            candidate_options.append(candidate_name)
            # And begin tracking that candidate's voter count.
            candidate_votes[candidate_name] = 0
        # Add a vote to that candidate's count.
        candidate_votes[candidate_name] += 1

# Save the results to our text file.
with open(file_to_save, "w") as txt_file:
    # After opening the file print the final vote count to the terminal.
    election_results = (
        f"\nElection Results\n"
        f"-------------------------\n"
        f"Total Votes: {total_votes:,}\n"
        f"-------------------------\n")
    print(election_results, end="")
    # After printing the final vote count to the terminal save the final vot
    txt_file.write(election_results)
    for candidate_name in candidate_votes:
        # Retrieve vote count and percentage.
        votes = candidate_votes[candidate_name]
        vote_percentage = float(votes) / float(total_votes) * 100
        candidate_results = (
            f"{candidate_name}: {vote_percentage:.1f}% ({votes:,})\n")

        # Print each candidate's voter count and percentage to the terminal.
        print(candidate_results)
        #  Save the candidate results to our text file.
        txt_file.write(candidate_results)
        # Determine winning vote count, winning percentage, and winning cand
```

```
        if (votes > winning_count) and (vote_percentage > winning_percentage
            winning_count = votes
            winning_candidate = candidate_name
            winning_percentage = vote_percentage
    # Print the winning candidate's results to the terminal.
    winning_candidate_summary = (
        f"-------------------------\n"
        f"Winner: {winning_candidate}\n"
        f"Winning Vote Count: {winning_count:,}\n"
        f"Winning Percentage: {winning_percentage:.1f}%\n"
        f"-------------------------\n")
    print(winning_candidate_summary)
    # Save the winning candidate's results to the text file.
    txt_file.write(winning_candidate_summary)
```

When we execute this code, we get the overall election results, each candidate's results, and the winning candidate summary printed to the terminal in VS Code, as well as saved to the `election_results.txt` file.

Congratulations on a job well done! This was a long script that required a lot of coding and modification, and you put in a lot of hard work getting up-to-speed in Python. You should feel proud of what you have accomplished.