# Import the random module to use the choice() function later

import random

def main():

    """

    Main function to run the grade calculator program.

    """

    # Create an empty list to store grades

    grades = []

    # --- 1. Get Grade Input from User ---

    print("Enter grades one by one. Enter -1 to finish.")

    while True:

        grade\_input = input("Enter a grade (-1 to stop): ")

        # Validate that the input is a number

        if grade\_input.lstrip('-').isdigit():

            grade = int(grade\_input)

            if grade == -1:

                break  # Exit the loop if the user enters -1

            else:

                # Add the valid grade to the list

                grades.append(grade)

        else:

            print("Invalid input. Please enter a number.")

    # Print the initial list of grades

    print("\nOriginal list of grades:")

    print(grades)

    # Proceed only if there are grades in the list

    if not grades:

        print("\nNo grades were entered. Exiting program.")

    else:

        # --- 2. Remove the Lowest Grade ---

        print("\n--- Removing the lowest grade ---")

        lowest\_grade = min(grades)

        print(f"The lowest grade is: {lowest\_grade}")

        # Find the index of the first occurrence of the lowest grade

        lowest\_index = grades.index(lowest\_grade)

        # Remove the item at that index

        grades.pop(lowest\_index)

        print("List after removing the lowest grade:")

        print(grades)

    # Proceed only if there are still grades

    if not grades:

        print("\nNo grades left to process.")

    else:

        # --- 3. Remove a Random Grade ---

        print("\n--- Removing a random grade ---")

        random\_grade = random.choice(grades)

        print(f"The random grade to remove is: {random\_grade}")

        # Remove the first occurrence of the randomly chosen value

        grades.remove(random\_grade)

        print("List after removing a random grade:")

        print(grades)

    # Proceed only if there are still grades

    if not grades:

        print("\nNo grades left to process.")

    else:

        # --- 4. Edit a Grade ---

        print("\n--- Editing a grade ---")

        while True:

            # List the current grades with a 1-based index for the user

            print("Current grades:")

            for i, grade in enumerate(grades, start=1):

                print(f"{i}. {grade}")

            edit\_choice\_str = input("Enter the number of the grade you want to edit: ")

            # Validate the user's choice

            if edit\_choice\_str.isdigit():

                edit\_choice = int(edit\_choice\_str)

                if 1 <= edit\_choice <= len(grades):

                    # Get the new grade from the user

                    while True:

                        new\_grade\_str = input(f"Enter the new value for grade #{edit\_choice}: ")

                        if new\_grade\_str.isdigit():

                            new\_grade = int(new\_grade\_str)

                            # Update the list (adjusting for 0-based index)

                            grades[edit\_choice - 1] = new\_grade

                            break # Exit the new grade input loop

                        else:

                            print("Invalid input. Please enter a number for the new grade.")

                    break # Exit the edit choice loop

                else:

                    print(f"Error: Please enter a number between 1 and {len(grades)}.\n")

            else:

                print("Error: Please enter a valid number.\n")

        print("List after editing a grade:")

        print(grades)

        # --- 5. Sort and Reverse the List ---

        print("\n--- Sorting and reversing the list ---")

        grades.sort()   # Sorts the list in numeric order

        grades.reverse() # Reverses the sorted list (highest to lowest)

        print("List after sorting and reversing:")

        print(grades)

        # --- 6. Get Grade Total and Average ---

        print("\n--- Final Grade Summary ---")

        # Use the sum() function to get the total

        total = sum(grades)

        print(f"Grade Total: {total}")

        # Use sum() and len() to calculate the average

        average = total / len(grades)

        print(f"Grade Average: {average:.2f}") # Formatted to 2 decimal places

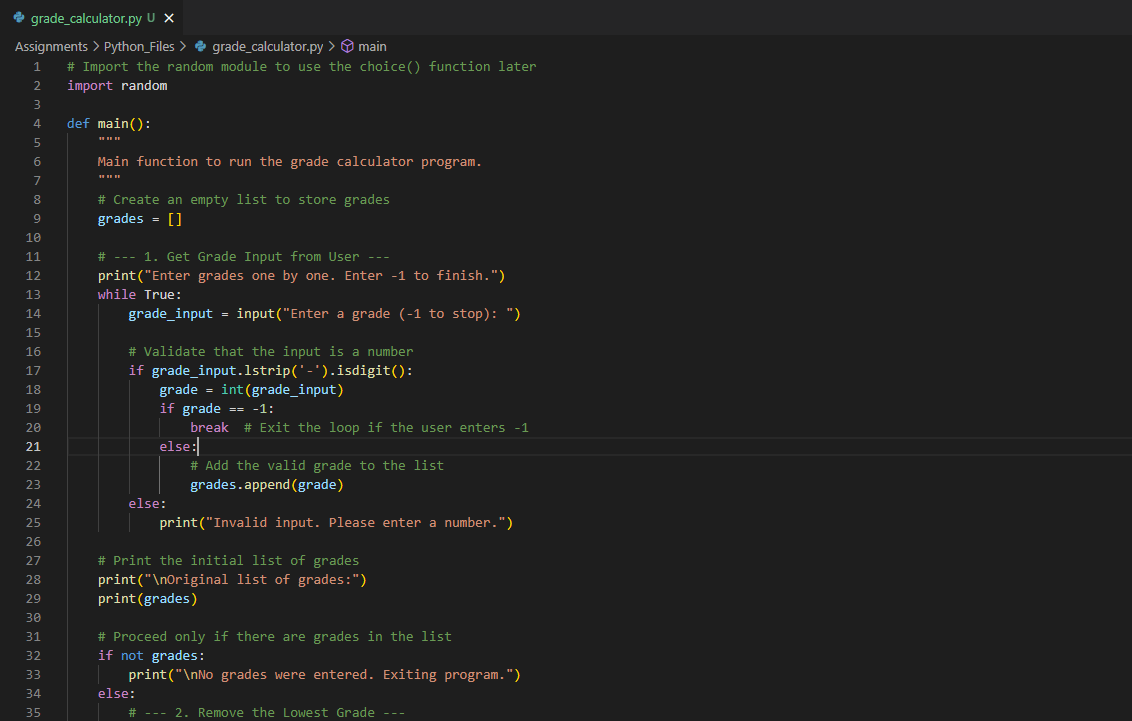
# Call the main function to start the program

if \_\_name\_\_ == "\_\_main\_\_":

    main()

# Final print statement as required by the assignment

print("\nCompleted by, Javier Silva")



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A computer screen shot of a program code

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