Question:

Project Objectives:

Before stating the scope of work needed for this project, it's essential first to identify all of its objectives. Noting the goals that this project is aiming to achieve will help in determining its inclusions and limits.

1.Build a simple quiz game that asks users a series of questions.

2. Implement a scoring system to evaluate the user's performance.

3.Enhance user interaction by allowing them to input their answers.

4.Reinforce Python fundamentals, including data structures, control flow, and user input handling.

5.Gain practical experience in structuring a small Python project.

Requirements and Features

Questions and Options: Design the quiz with at least three questions. Each question should have multiple-choice options.

Scoring System: Implement a scoring mechanism to track the user's correct answers. User Input: Allow users to input their answers. Use appropriate validation to handle user input.

Feedback: Provide feedback on each question, indicating whether the user's answer was correct or incorrect. Display the correct answer if the user is wrong.

Final Score: Display the user's final score at the end of the quiz.

Customization: Make it easy to customize the quiz by modifying the questions, options, and correct answers.

Code Structure: Organize your code into functions or classes for better readability and maintainability.

Source Code:

```
class Quiz:
    def __init__(self):
        self.questions = []
        self.answers = []
        self.score = 0
    def add_question(self, question, answer):
        self.questions.append(question)
        self.answers.append(answer)
```

```
 def display_question(self, question):
      print(question)
def display_options(self, options):
     for i, option in enumerate(options, 1):
          print(f"{i}. {option}")
def get_user_input(self):
     while True:
           try:
                choice = int(input("Enter your choice: "))
                if 1 <= choice <= 4:
                     return choice
                else:
                      print("Invalid choice. Please enter a number between 1 and 4.")
          except ValueError:
                print("Invalid input. Please enter a number.")


def check_answer(self, user_choice, answer):
      if user_choice == answer:
           print("Correct!")
           self.score += 1
     else:
            print("Incorrect. The correct answer is:", answer)
def run_quiz(self):
      for i in range(len(self.questions)):
           print(f"\nQuestion {i + 1}:")
           self.display_question(self.questions[i])
           self.display_options(self.answers[i])
          user_choice = self.get_user_input()
           self.check_answer(user_choice, self.answers[i])
```

```
            print("\nQuiz completed!")
            print(f"Your final score is: {self.score}/{len(self.questions)}")
if __name__ == "__main__":
    quiz = Quiz()
    quiz.add_question("What is the capital of France?", 3)
    quiz.add_question("What is 2 + 2?", 1)
    quiz.add_question("Which planet is known as the Red Planet?", 2)
    quiz.run_quiz()
```