Project Title: Python Quiz Game

Objective:

The objective of this project is to create a quiz game using Python. The quiz game will present the user with a series of questions and multiple-choice answers. The user will select an answer for each question, and the program will provide feedback on whether the answer is correct or incorrect. At the end of the quiz, the program will display the user's score.

code:

```
import random

class QuizGame:
    def _init_(self, questions):
        self.questions = questions
        self.current_question_index = 0
        self.score = 0

    def play(self):
        while self.more_questions():
            self.ask_question()
        self.display_final_score()

    def ask_question(self):
        question = self.current_question()
        print(f"\nQuestion {self.current_question_index + 1}: {question['text']}")
        for i, option in enumerate(question['options']):
            print(f"{i + 1}. {option}")
        user_answer = self.get_user_answer(len(question['options']))
        self.check_answer(user_answer)
        self.current_question_index += 1

    def current_question(self):
        return self.questions[self.current_question_index]
```

```
    def more_questions(self):
        return self.current_question_index < len(self.questions)

    def get_user_answer(self, num_options):
        while True:
            try:
                user_answer = int(input("Enter your answer: "))
                if 1 <= user_answer <= num_options:
                    return user_answer - 1
                else:
                    print("Invalid answer. Please enter a number between 1 and", num_options)
            except ValueError:
                print("Invalid answer. Please enter a number between 1 and", num_options)

    def check_answer(self, user_answer):
        correct_answer = self.current_question()['correct']
        if user_answer == correct_answer:
            print("Correct!")
            self.score += 1
            print(f"Your current score is: {self.score}/{self.current_question_index + 1}")
        else:
            print("Incorrect.")
            print(f"The correct answer is: {self.current_question()['options'][correct_answer]}")
            print(f"Your current score is: {self.score}/{self.current_question_index + 1}")

    def display_final_score(self):
        print("\nFinal Score:")
        print(f"Your final score is: {self.score}/{len(self.questions)}")


def main():
    questions = [
        {
            'text': "What is the capital of France?",
            'options': ["Paris", "Berlin", "Madrid", "Rome"],
            'correct': 0
```

```
        },
        {
            'text': "Which planet is closest to the Sun?",
            'options': ["Mercury", "Venus", "Earth", "Mars"],
            'correct': 1
        },
        {
            'text': "Which is the largest ocean?",
            'options': ["Pacific Ocean", "Atlantic Ocean", "Indian Ocean", "Southern Ocean"],
            'correct': 0
        }
    ]
    random.shuffle(questions)
    game = QuizGame(questions)
    game.play()


if _name_ == "_main_":
    main()
```

Conclusion:

The Python quiz game project aims to provide an interactive and educational experience for users to test their knowledge. By implementing this project, I aim to enhance my proficiency in Python programming, particularly in handling user input, implementing conditional logic, and managing data structures.