

Python Quiz Project - Step by Step Guide

This document explains the complete step-by-step guide to creating a Python-based Quiz Application.

The quiz includes multiple-choice questions and allows users to answer and get scores at the end.

Project Structure:

/python-quiz-project

- quiz.py # Main script
- quiz_data.json # Stores questions
- README.md # Project explanation

How It Works:

1. The script saves quiz questions into a JSON file.
2. It loads the questions and presents them to the user.
3. The user selects answers (A, B, C, or D).
4. The script checks answers and calculates the final score.

Complete Code:

```
import json

quiz_data = {
    "questions": [
        {"question": "What is the capital of France?", "options": ["A. Berlin", "B. Madrid", "C. Paris", "D. Rome"], "answer": "C"},
        {"question": "Which programming language is known for web development?", "options": ["A. Python", "B. Java", "C. HTML", "D. C++"], "answer": "C"},
        {"question": "What is 5 + 7?", "options": ["A. 10", "B. 12", "C. 14", "D. 15"], "answer": "B"}
    ]
}

def save_questions():
    with open("quiz_data.json", "w") as file:
        json.dump(quiz_data, file, indent=4)

def load_questions():
    with open("quiz_data.json", "r") as file:
        return json.load(file)

def run_quiz():
```

```
score = 0
data = load_questions()
print("Welcome to the Python Quiz!\n")
for idx, q in enumerate(data['questions'], start=1):
    print(f"{idx}. {q['question']}")
    for opt in q['options']:
        print(opt)
    user_answer = input("Enter your answer (A, B, C, or D): ").strip().upper()
    if user_answer == q["answer"]:
        print("Correct!\n")
        score += 1
    else:
        print(f"Wrong! The correct answer was {q["answer"]}\n")
print(f"Quiz Over! Your final score is: {score}/{len(data["questions"])}")
if __name__ == "__main__":
    save_questions()
    run_quiz()
```