

# DETAILED LAB ASSIGNMENT 4

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<b>Subject:</b>	JavaScript Lab
<b>Assignment:</b>	Quiz Game Using JavaScript Console

## 1. Problem Statement

Create a fully functional JavaScript quiz game that runs entirely inside the browser console. The game will consist of multiple questions stored in an array. The user will input answers through `prompt()`, receive feedback through `alert()`, and at the end, the total score will be shown.

## 2. Objective

The main objective of this assignment is to understand JavaScript fundamentals such as arrays, loops, conditionals, functions, input handling, and output operations.

## 3. Theory & Concepts Used

- 1. Arrays:** Used to store multiple questions and answers.
- 2. Functions:** Used to structure code and improve reusability.
- 3. Loops:** For iterating through quiz questions.
- 4. Conditionals:** To check right or wrong answers.
- 5. `prompt()`:** Takes input from user.
- 6. `alert()`:** Gives immediate feedback.
- 7. String Methods:** `toLowerCase()` and `trim()` for accurate comparison.

## 4. Step-by-Step Explanation

**Step 1:** Create an array containing objects. Each object stores 'question' and 'answer'.

**Step 2:** Create a function `runQuiz()` that contains entire quiz logic.

**Step 3:** Start score = 0.

**Step 4:** Use for loop to ask every question using prompt().

**Step 5:** Normalize user input to avoid errors.

**Step 6:** Compare user input with correct answer.

**Step 7:** Display correct/incorrect message.

**Step 8:** Show final score after loop ends.

## 5. Final JavaScript Code

```
// JavaScript Quiz Game - Detailed Assignment
// Created by Ayush Kumar

const quizQuestions = [
  { question: "What is JavaScript used for?", answer: "scripting" },
  { question: "What is the full form of DOM?", answer: "document object model" },
  { question: "Which function prints output to console?", answer: "console.log" },
  { question: "Which keyword declares a variable?", answer: "var" },
  { question: "JavaScript is _____ language?", answer: "interpreted" }
];

function runQuiz() {
  let score = 0;

  for (let i = 0; i < quizQuestions.length; i++) {
    let userAnswer = prompt(quizQuestions[i].question);

    if (!userAnswer) userAnswer = "";

    userAnswer = userAnswer.toLowerCase().trim();

    if (userAnswer === quizQuestions[i].answer) {
      alert("Correct Answer!");
      score++;
    } else {
      alert("Wrong Answer! Correct is: " + quizQuestions[i].answer);
    }
  }

  alert("Quiz Completed! Your Score: " + score + "/" + quizQuestions.length);
}

runQuiz();
```

## 6. Expected Output Screenshot (Description)

When the user runs the quiz in the browser console: 1. Prompt windows appear showing questions. 2. User types answers. 3. Alerts show correct/incorrect feedback. 4. Final alert displays total score.

## 7. Conclusion

This assignment successfully demonstrates JavaScript fundamentals including arrays, loops, conditionals, functions, and user interaction using `prompt()` and `alert()`. The program works smoothly in the browser console and fulfills all requirements.

