

REVIEW JAVASCRIPT FUNDAMENTALS BY BUILDING A GRADEBOOK APP

Introduction:

In this mini project, you will get to review JavaScript fundamentals like functions, variables, conditionals and more by building a gradebook app.

This will give you an opportunity to solve small problems and get a better understanding of the basics.

Step 1:

A teacher has finished grading their students' tests and needs your help to calculate the average score for the class.

Complete the `getAverage` function which takes in an array of test scores and returns the average score.

The average is calculated by adding up all the scores and dividing by the total number of scores.

Example Code:

```
average = sum of all scores / total number of scores
```

A couple of function calls have been provided for you so you can test out your code.

Tips

- You can use a loop to iterate over the `scores` array and add up all the scores.
- You can use the `length` property to get the total number of scores.

Step 2:

Now the teacher needs your help converting the student score to a letter grade.

Complete the `getGrade` function that takes a number `score` as a parameter. Your function should return a string representing a letter grade based on the score.

Here are the scores and their corresponding letter grades:

Score Range	Grade
100	"A++"
90 - 99	"A"
80 - 89	"B"
70 - 79	"C"
60 - 69	"D"
0 - 59	"F"

Tips

- Remember that you learned about conditional statements (`if`, `else if`, and `else`).
- Remember that you learned about comparison operators (`>`, `<`, `>=`, `<=`, `==`).

Step 3:

The teacher is really happy with the program you have created so far. But now they want to have an easy way to check if a student has a passing grade. A passing grade is anything that is not an "F".

Complete the function `hasPassingGrade` that takes a student score as a parameter. Your function should return `true` if the student has a passing grade and `false` if they do not.

Tips

- Use the `getGrade` function to get the student's grade. Then check if the grade is passing or not.

Step 4:

Now that the teacher has all of the information they need, they want to be able to message the student with the results.

Complete the `studentMsg` function with `totalScores` and `studentScore` for parameters. The function should return a string representing a message to the student.

If the student passed the course, the string should follow this format:

Example Code:

Class average: average-goes-here. Your grade: grade-goes-here. You passed the course.

If the student failed the course, the string should follow this format:

Example Code:

Class average: average-goes-here. Your grade: grade-goes-here. You failed the course.

Replace `average-goes-here` with the average of the total scores.

Replace `grade-goes-here` with the student's grade.

Tips

- Use the `getAverage` function to get the class average.
- Use the `getGrade` function to get the student's grade.
- Use string concatenation (+) to build the message.
- Be careful with the punctuation and spaces in the message.