Lab 9 Class

This is a quiz system which allows students to take quizzes, get each student's quiz score and compute average score of students.

Use constructor functions or class syntax to implement Student, Question and Quiz.

constructor function/class Student:

properties:

studentId: a unique student id

answers: holds an array that records the student's answers for the questions.

method:

addAnswer(question) - add student's question(id, answer) to answers array.

constructor function/class Question:

properties:

qid: unique quesiton id

answer: hold quiz correct answer or student's answer

method:

checkAnswer(answer) - used to check if student's answer is correct

constructor function/class Quiz:

properties:

questions: It's a Map which holds question id and correct answers. The key is question id, the value is the correct answer for this question

students: an array holds all students

methods:

- *scoreStudentBySid(sid)*, computes the quiz score for this student
- *getAverageScore()*, computes the average score over all students

After you complete the Question, Student and Quiz constructor functions, we may use the system as below:

Your system should return the correct result for `getAverageScore()` and `scoreStudentBySid(sid)` as the expected result.

```
const student1 = new Student(10);
student1.addAnswer(new Question(2, 'a'));
student1.addAnswer(new Question(3, 'b'));
student1.addAnswer(new Question(1, 'b'));
const student2 = new Student(11);
student2.addAnswer(new Question(3, 'b'));
student2.addAnswer(new Question(2, 'a'));
student2.addAnswer(new Question(1, 'd'));
const students = [student1, student2];
const questions =[new Question(1, 'b'), new Question(2, 'a'), new
Question(3, 'b')];
const quiz = new Quiz(questions, students);
let scoreforStudent10 = quiz.scoreStudentBySid(10);
console.log(scoreforStudent10); //Expected Result: 3
let scoreforStudent11 = quiz.scoreStudentBySid(11);
console.log(scoreforStudent11); //Expected Result: 2
let average = quiz.getAverageScore();
console.log(average); //Expected Reuslt: 2.5
```