As a Software Developer for iCAN Technologies, Inc, one of the main focuses of development is RESTful WebAPI creation and consumption. To continue in the interview process, please complete the below programming assignment. There is a 72-hour time limit for this assignment. Once the assignment is completed, please zip all code files and submit them to iCAN for review. Once iCAN has reviewed the code and decided to proceed with your candidacy, a follow-up interview will be scheduled to further discuss the assignment and your skillset.

Guidelines:

1. All code should be written in C#, HTML, javascript/jquery, CSS and should be easily loadable into Visual Studio 2019 or 2022 and be able to be executed locally via Visual Studio running on localhost.
2. While iCAN exclusively uses Microsoft Azure SQL databases, there is no database required for this assignment. However, include a data layer in your code to support both storing and retrieving data using RESTful WebAPI.
3. There are two main exercises for the assignment:
    a. Create a Read/Write RESTful WebAPI. Note that since we do not require a database, then your data objects can be simple.
    b. Consume the WebAPI from an HTML Client. Note that this does not have to be extravagant; however, what is submitted should fully function and be intuitive to navigate.
4. All code must be custom. Do not use/submit third-party libraries, components, or styling.
5. All code and GUI must be in English.

Assignment Scope:

1. Create a RESTful WebAPI that will maintain 10 Students and their Exam Scores.
    a. Each Student will have:
        i. StudentId: 5-digit integer
        ii. FirstName
        iii. LastName
    b. Each Student may have one-to-many Exam Scores:
        i. ExamId: 3-digit integer
        ii. ExamName
        iii. DateTaken: date/time
        iv. Score: integer, value range 0-100.
        v. IsPassed: boolean, true = passed, false = failed, null = not taken.
    c. You do not need to code for adding / deleting Students or Exams; however, you do need to code the ability to update an existing Exam assigned to an existing Student. For example, there should be an endpoint that allows for a Student's existing Exam DateTaken, Score, and/or IsPassed to be updated.
2. Consume the WebAPI from an HTML Client
    a. Provide an endpoint that will list all 10 Students and their Exams.
    b. Provide an endpoint that will list one Student with Exams.
    c. Provide an endpoint that will allow for a Student Exam to be updated: DateTaken, Score, IsPassed.