Contoso Gaming Platform

**Instructions:**

1. We value Polyglot but request you to use C#, Java or Python.
2. Certain file extensions may be blocked for security. Make sure that your code does not have any executables.
3. In addition to the code & deployed artifacts, you must include a read me for any specific instruction and assumptions you have made.
4. Submit the production quality code that you would write as part of development process.
5. Please deploy your application in AWS (Credits will be shared separately) and share the public endpoint of your service.
6. Please share the source code and read me (with instructions to deploy, with your choice of compute option) as a zip folder (excluding any binary or packages).

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| You are tasked to implement the back-end platform for a Multi-player Gaming software. The goal is to build an API to locate the actors in the game. All actors are tagged to the Landmarks and the purpose of the API is to provide routes between landmarks to suggest routes to the actors. In order to achieve this, the game engine should be able to calculate -     * The distance along certain routes via landmarks * The number of different routes between landmarks.     The input to the program should consist of set of data represented by Starting Landmark, Ending Landmark and directed distance. A given route should not appear more than once. The starting and ending landmark cannot be the same for a given route. For input data you can use a formatted input so for e.g. A route from A to B landmarks with a distance of 3Km will be represented as AB3. For queries where no path exists between 2 landmarks, output should be. returned as “Path not found".    The Program should be able to answer following question -     1. The distance between landmarks via the route A-B-C . 2. The distance between landmarks via the route A-E-B-C-D. 3. The distance between landmarks via the route A-E-D . 4. The number of routes starting at A and ending at C with a maximum of 2 stops.    Sample input to test with   AB3, BC9, CD3, DE6, AD4, DA5, CE2, AE4,EB1   Expected Output from Sample Input    * 12 * 17 * Path not found. * 2    Deployment -   Once the API is developed, please enable the Swagger specification along with Swagger UI for the same and deploy it in your choice of appropriate Cloud compute option.   Guidance -    1. Building a front end is not necessary (Swagger UI for testing is enough), however we will be happy to see your skills. 2. Feel free to make assumption and document those as part of your brief. 3. Unit testing is optional but would be good to see the approach you take for that. 4. Briefly describe your approach for Source control management with Continuous integration and deployment. 5. Focus on the design of the application source code to make it easy to extend. 6. You can use in memory data for persisting any data. No Database integration is required. The design should be extendable for that at the later stage. |