**C# Rest Service Project (Technical Assignment)**

This document is created for give informations about the web api project which is developed for technical assignment of C-Teleport company.

**Main goal of Project:**

A rest service is developed in scope of this project. This service is using for calculation of distance in miles between two airports.

**Some technical details:**

* “GetDistances” method is the name of service and takes two arguments (airport1, airport2). It is possible to call the service on browser after run the project. Input(request) format is represented like “airport1/airport2” which means airport’s iata codes (For exp: IST/ADB, TXL/NUE etc..)
* “In memory caching” is used in project. After distance calculation is done, the result is stored in cache, by this way if user tries to measure distance for same airports later, the service returns result directly from cache. This cache is alive during running of project. (Normally for the web applications which is using by millions of users, some popular cache techniques are using (such as Redis). It is clear that this kind of services should has caching mechanism to provide a well performance.
* “In memory database” is used in project. Repository pattern is implemented. When the api is called, if requested airport doesn’t exist in database, firstly, external api is calling.After that, response of api is parsing and airport object is saving to database to use for next operations.(If requested iata code exists in database, we don’t need to call external api, we can directly return informations.This also increases performance.
* Async programming is used for implementation of service.Necessary operations for both airports can be done in different threads, so the service can return response faster.