**RESTful Web Service with Java**

**Overview**

Create a RESTful web service in Java. The service is deployable by a standard WAR file.

**Requirements**

- The service has two endpoints.

One is to take a Unicode string as a parameter and register it in the service

The other is to take a string id and return all registered strings that match with the string id - - - - String id is a number calculated as follows:

String id is a sum of each character's id

A character id is a sum of the current and previous character's Unicode code point

The character id of the first character in the string is the character's Unicode code point

If the current and previous characters are the same, the character id is the current character's Unicode code point

String id must be calculated without using a loop

Example:

"abc" => 97 + (97 + 98) + (98 + 99)

"abbc" => 97 + (97 + 98) + (98) + (98 + 99)

The registered strings must be persisted so that the strings are still available after a reboot

Use a file for the persistent medium

For easier troubleshooting, the file must be a text file

The REST APIs accept and produce JSON

The service doesn't have to be designed to work reliably in the clustered environment, but it must be reliable as a single node service.

The code must be thoroughly tested by unit tests

**Deliverables**

Source code Build and deployment instruction REST API documentation.

**Build and Deployment Instruction:**

Web services is created with Maven Build and deployed on tomcat server using Eclipse.

Java version: 1.8

**Build using Maven:** Eclipse 🡪 Right click on Project 🡪 Run As 🡪 Maven Build

**Deployment:** Eclipse 🡪 Right click on Project 🡪 Run As 🡪 Run on Server

Create a folder in **temp** file in C: drive.

* URL for Register the String in to services:

<http://localhost:8080/RESTfulExample/rest/json/write/abc>

It will create **Register.txt** file in the **temp** folder.

File will register the string in **Register.txt** as below

489=abc

* URL to fetch the matching String

<http://localhost:8080/RESTfulExample/rest/json/fetch/489>

it will give you matching value in JSON format as below:

["abc"]

**By Ketan Savajiyani**