**Assignment:**

The objective of the assignment is to design 3 RESTful APIs (all annotation based. No XML config.)

which take in raw data for some particular company (as XML), processes it and gives a simplified/user friendly data back (as XML),

which can be later on plotted on graphs/charts.

An overview (with significant details) for the 3 APIs can be found below:

**1) Upload Business Data:**

**Core Objective:**

It will take the raw XML and map it to a Complex Business Object (let's call it 'BusinessData') and as well as process and update a simplified Business Object (let's call it 'BusinessDataReturn') in memory (which can be fetched/returned as an XML later on as and when needed).

The 'BusinessData' XML and 'BusinessDataReturn' XML will have corresponding XSDs.

Sample BusinessData XML contents:

- Company

Industry (which industry it falls under e.g aerospace, automobiles etc.)

Financial Period: year, month

Actual Data:

PE, EPS, Revenue, Income (couple of such fields are to be picked)

Each of the above fields will have a specific unit (currency, percentage, ratio etc.)

e.g.: for EPS or Revenue, it will have $, whereas PE will be a ratio)

Note: The financial data would be monthly data for a certain period (say, for a year) for each company .

**2)** **Upload User Data:**

**Core Objective:**

It will take in an XML containing Team/User specific which will update the previously loaded BusinessData as well the BusinessDataReturn (in memory) and return a boolean.

Sample data:

- Team (2-3 teams)

Users: email, empId (2-3 users in each team)

Coverage: TypeOfCompanyCovered (e.g: Aerospace: Indigo, SpiceJet etc.,

Automobile: Tata, Mahindra etc.)

**3) Fetch Data:**

**Core Objective:**

This fetches the corresponding simplified data (as an XML) based on 2 params:

* Company
* User

The above input data is validated against the stored data like whether the particular user belongs to that particular company (as per the team it belongs to) or not and if he does,

corresponding company’s returned as below:

Sample 'BusinessDataReturn' fields:

* + - * Revenue/year (per year or per quarter etc.)
      * List of PE, EPS etc.
      * Target Price etc.

**Key learning objective of the assignment:**

1) Designing of classes

2) Working of XMLs and XSDs (context, schema, namespace, target namespace)

3) XJC

4) JAXB (marshalling and unmarshalling concepts etc.)