**Read Me - Instructions**

1. Install JDK 1.7 or above
2. Install Maven and .m2/settings.xml with repository settings
3. Install Tomcat 8 version
4. Build & Deploy the application in to Tomcat
5. Run the application in ROOT – make necessary setting in Tomcat server.xml as below
   1. <Host name="localhost" appBase="webapps" unpackWARs="true" autoDeploy="false" deployOnStartup="false">

<Context path="" docBase="myapi-0.0.1-SNAPSHOT"></Context>

1. Access the application by <http://localhost:8080/nbiDocs> - this would open the SWAGGER UI where the below APIs are exposed –
   1. To display the Transactions with monthly breakdowns in JSON format
   2. Additional API - To display the Transactions with filtering the Donut SPENT Transactions
2. Scroll down to verify the above API Responses
3. Pushed the myapi project to Github and the URL is - <https://github.com/sramaraj1978/myapi.git>

**Technical Design**

1. Used JDK 1.7 Spring
2. Used CXF based REST API to expose
3. Used Maven project
4. Used Swagger Tool API for REST documentation and for Testing Purpose
5. Use the below request payload to access/request API

{"args":

{"uid": 1110590645,

"token": "219F172C33C374EB52B09869684705D2",

"api-token": "AppTokenForInterview",

"json-strict-mode": false,

"json-verbose-response": false}

}

1. Find the screenshots below from Swagger UI.

Below Non Functional requirements are not covered -

1. Overall exception, Junit, Logging etc
2. UI screen display etc

**Actual Request** -

{"args":

{"uid": 1110590645,

"token": "219F172C33C374EB52B09869684705D2",

"api-token": "AppTokenForInterview",

"json-strict-mode": false,

"json-verbose-response": false}

}

**Actual Result – Monthwise spent/income and overall Average – (considering Donut spent value)**

{

"transactionStatementResponses": [

{

"yearMonth": "2014-11",

"monthlyStatement": {

"spent": "$-1490.73",

"income": "$3429.79"

}

},

{

"yearMonth": "2014-12",

"monthlyStatement": {

"spent": "$-4557.91",

"income": "$3949.51"

}

},

{

"yearMonth": "2015-1",

"monthlyStatement": {

"spent": "$-4614.34",

"income": "$3954.32"

}

},

{

"yearMonth": "2015-10",

"monthlyStatement": {

"spent": "$-1722.11",

"income": "$3922.72"

}

},

{

"yearMonth": "2015-11",

"monthlyStatement": {

"spent": "$-3289.24",

"income": "$1717.43"

}

},

{

"yearMonth": "2015-12",

"monthlyStatement": {

"spent": "$-1722.98",

"income": "$3977.78"

}

},

{

"yearMonth": "2015-2",

"monthlyStatement": {

"spent": "$-3746.74",

"income": "$3925.98"

}

},

{

"yearMonth": "2015-3",

"monthlyStatement": {

"spent": "$-2794.91",

"income": "$3936.64"

}

},

{

"yearMonth": "2015-4",

"monthlyStatement": {

"spent": "$-3382.37",

"income": "$3942.73"

}

},

{

"yearMonth": "2015-5",

"monthlyStatement": {

"spent": "$-2420.34",

"income": "$3943.68"

}

},

{

"yearMonth": "2015-6",

"monthlyStatement": {

"spent": "$-2672.32",

"income": "$3416.4"

}

},

{

"yearMonth": "2015-7",

"monthlyStatement": {

"spent": "$-3870.99",

"income": "$3918.23"

}

},

{

"yearMonth": "2015-8",

"monthlyStatement": {

"spent": "$-2507.62",

"income": "$3917.18"

}

},

{

"yearMonth": "2015-9",

"monthlyStatement": {

"spent": "$-1281.0",

"income": "$3384.88"

}

},

{

"yearMonth": "2016-1",

"monthlyStatement": {

"spent": "$-1836.42",

"income": "$1725.57"

}

},

{

"yearMonth": "2016-10",

"monthlyStatement": {

"spent": "$-1809.5",

"income": "$2229.63"

}

},

{

"yearMonth": "2016-11",

"monthlyStatement": {

"spent": "$-1888.0",

"income": "$2209.91"

}

},

{

"yearMonth": "2016-12",

"monthlyStatement": {

"spent": "$-3461.3",

"income": "$3441.83"

}

},

{

"yearMonth": "2016-2",

"monthlyStatement": {

"spent": "$-1394.24",

"income": "$2242.89"

}

},

{

"yearMonth": "2016-3",

"monthlyStatement": {

"spent": "$-1696.42",

"income": "$3451.38"

}

},

{

"yearMonth": "2016-4",

"monthlyStatement": {

"spent": "$-4114.72",

"income": "$3386.61"

}

},

{

"yearMonth": "2016-5",

"monthlyStatement": {

"spent": "$-2527.29",

"income": "$3917.4"

}

},

{

"yearMonth": "2016-6",

"monthlyStatement": {

"spent": "$-3505.86",

"income": "$3991.18"

}

},

{

"yearMonth": "2016-7",

"monthlyStatement": {

"spent": "$-3218.59",

"income": "$3927.78"

}

},

{

"yearMonth": "2016-8",

"monthlyStatement": {

"spent": "$-3192.72",

"income": "$3928.23"

}

},

{

"yearMonth": "2016-9",

"monthlyStatement": {

"spent": "$-2154.35",

"income": "$3922.33"

}

},

{

"yearMonth": "2017-1",

"monthlyStatement": {

"spent": "$-1675.03",

"income": "$3966.25"

}

},

{

"yearMonth": "2017-2",

"monthlyStatement": {

"spent": "$-2663.17",

"income": "$3486.48"

}

},

{

"yearMonth": "2017-3",

"monthlyStatement": {

"spent": "$-4218.89",

"income": "$3470.61"

}

}

],

"transactionAverageStatementResponse": {

"average": "average",

"monthlyStatement": {

"spent": "$-2738.97",

"income": "$3470.18"

}

}

}

**Actual Result with Donut Filtered**

{

"transactionStatementResponses": [

{

"yearMonth": "2014-11",

"monthlyStatement": {

"spent": "$-1575.01",

"income": "$3429.79"

}

},

{

"yearMonth": "2014-12",

"monthlyStatement": {

"spent": "$-4592.47",

"income": "$3949.51"

}

},

{

"yearMonth": "2015-1",

"monthlyStatement": {

"spent": "$-4709.8",

"income": "$3954.32"

}

},

{

"yearMonth": "2015-10",

"monthlyStatement": {

"spent": "$-1741.59",

"income": "$3922.72"

}

},

{

"yearMonth": "2015-11",

"monthlyStatement": {

"spent": "$-3289.24",

"income": "$1717.43"

}

},

{

"yearMonth": "2015-12",

"monthlyStatement": {

"spent": "$-1741.99",

"income": "$3977.78"

}

},

{

"yearMonth": "2015-2",

"monthlyStatement": {

"spent": "$-3801.43",

"income": "$3925.98"

}

},

{

"yearMonth": "2015-3",

"monthlyStatement": {

"spent": "$-2853.7",

"income": "$3936.64"

}

},

{

"yearMonth": "2015-4",

"monthlyStatement": {

"spent": "$-3450.18",

"income": "$3942.73"

}

},

{

"yearMonth": "2015-5",

"monthlyStatement": {

"spent": "$-2466.0",

"income": "$3943.68"

}

},

{

"yearMonth": "2015-6",

"monthlyStatement": {

"spent": "$-2694.43",

"income": "$3416.4"

}

},

{

"yearMonth": "2015-7",

"monthlyStatement": {

"spent": "$-3905.16",

"income": "$3918.23"

}

},

{

"yearMonth": "2015-8",

"monthlyStatement": {

"spent": "$-2530.53",

"income": "$3917.18"

}

},

{

"yearMonth": "2015-9",

"monthlyStatement": {

"spent": "$-1302.64",

"income": "$3384.88"

}

},

{

"yearMonth": "2016-1",

"monthlyStatement": {

"spent": "$-1871.8",

"income": "$1725.57"

}

},

{

"yearMonth": "2016-10",

"monthlyStatement": {

"spent": "$-1852.55",

"income": "$2229.63"

}

},

{

"yearMonth": "2016-11",

"monthlyStatement": {

"spent": "$-1921.3",

"income": "$2209.91"

}

},

{

"yearMonth": "2016-12",

"monthlyStatement": {

"spent": "$-3494.16",

"income": "$3441.83"

}

},

{

"yearMonth": "2016-2",

"monthlyStatement": {

"spent": "$-1463.89",

"income": "$2242.89"

}

},

{

"yearMonth": "2016-3",

"monthlyStatement": {

"spent": "$-1732.64",

"income": "$3451.38"

}

},

{

"yearMonth": "2016-4",

"monthlyStatement": {

"spent": "$-4123.42",

"income": "$3386.61"

}

},

{

"yearMonth": "2016-5",

"monthlyStatement": {

"spent": "$-2543.51",

"income": "$3917.4"

}

},

{

"yearMonth": "2016-6",

"monthlyStatement": {

"spent": "$-3535.49",

"income": "$3991.18"

}

},

{

"yearMonth": "2016-7",

"monthlyStatement": {

"spent": "$-3265.07",

"income": "$3927.78"

}

},

{

"yearMonth": "2016-8",

"monthlyStatement": {

"spent": "$-3252.43",

"income": "$3928.23"

}

},

{

"yearMonth": "2016-9",

"monthlyStatement": {

"spent": "$-2211.6",

"income": "$3922.33"

}

},

{

"yearMonth": "2017-1",

"monthlyStatement": {

"spent": "$-1710.81",

"income": "$3966.25"

}

},

{

"yearMonth": "2017-2",

"monthlyStatement": {

"spent": "$-2747.19",

"income": "$3486.48"

}

},

{

"yearMonth": "2017-3",

"monthlyStatement": {

"spent": "$-4236.78",

"income": "$3470.61"

}

}

],

"transactionAverageStatementResponse": {

"average": "average",

"monthlyStatement": {

"spent": "$-2779.89",

"income": "$3470.18"

}

}

}

Find below the screenshots –









