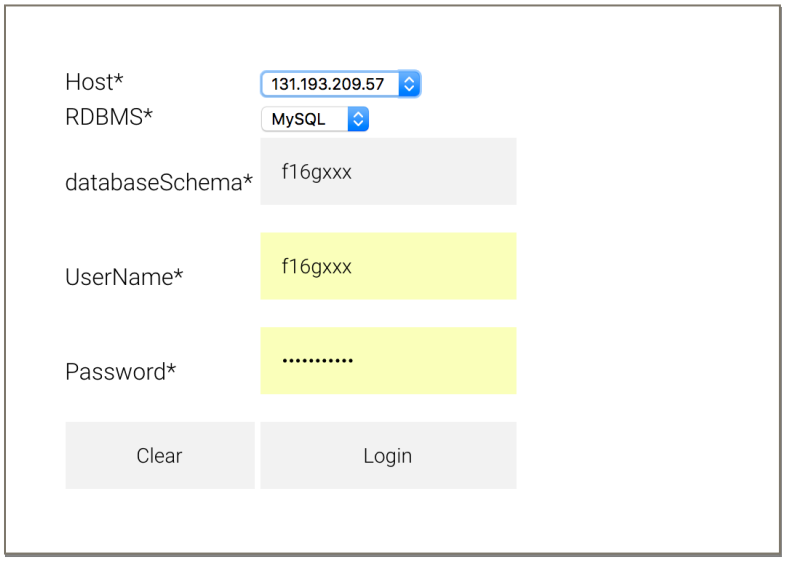
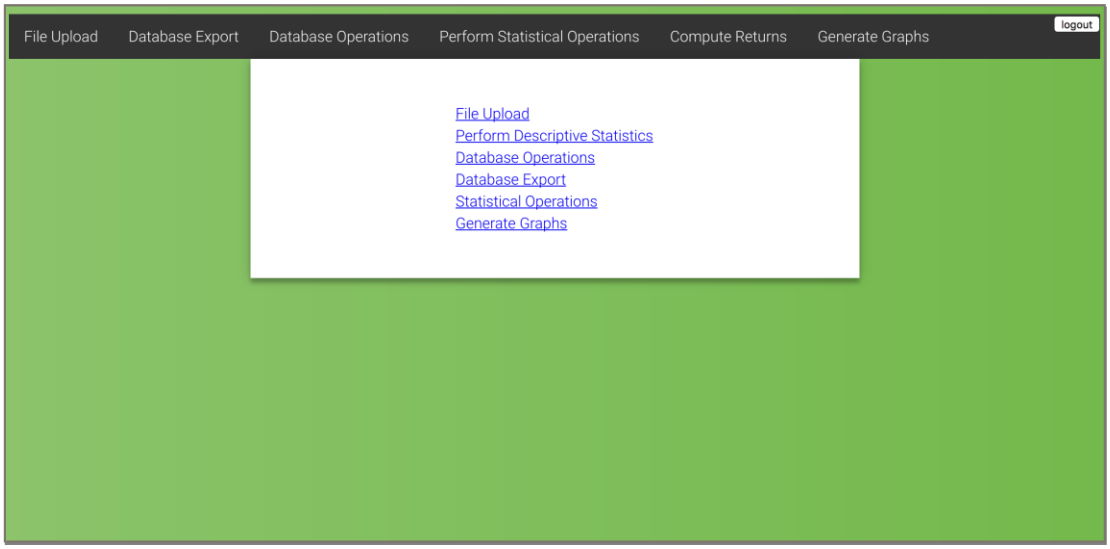
IDS517 Enterprise Application Development

User Guide for s17g308 Data Analysis Application

DATABASE LOGIN

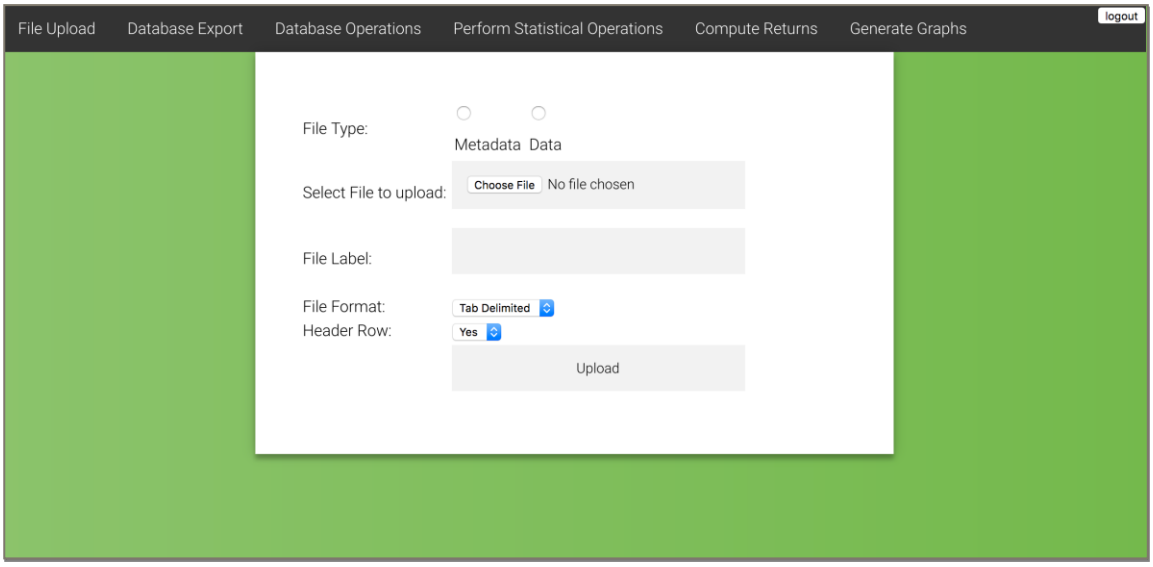


- Login by filling up the correct credentials and selecting the appropriate database server in the database login page.
- When the login is successful, the following page appears:



DATABASE INTERACTION

File Upload:

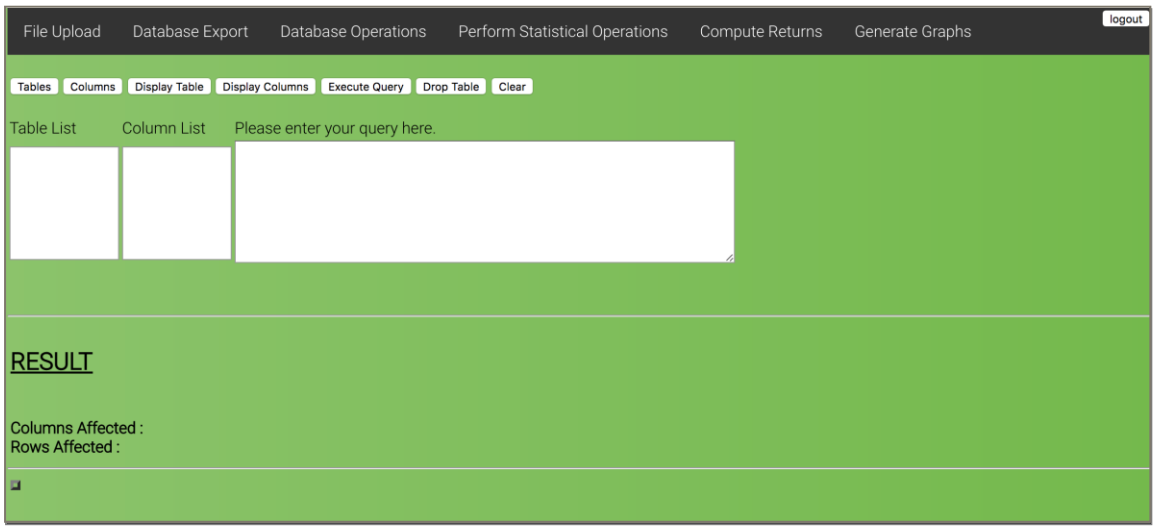


Data files (excel,csv or text) can be uploaded.
The steps include:

- Loading the metadata by choosing the file and naming the file label.
- Loading data to given file label.

It should be ensured that the file format and header row are set according to the requirements of the file type.
After importing the data the user will have the option to unselect rows with problematic data and refrain from importing them altogether.

Database Operations:



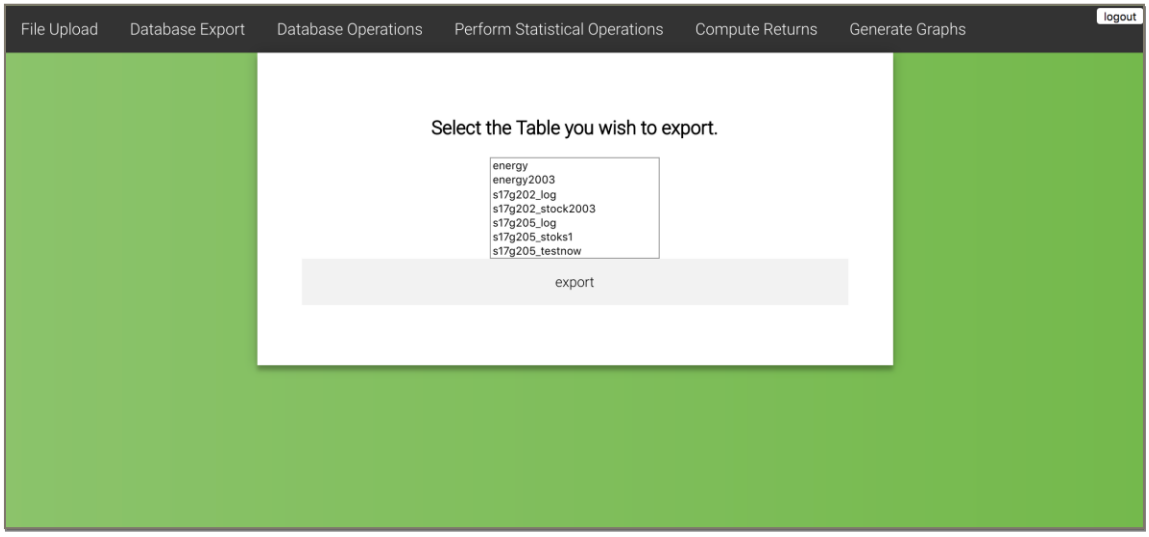
The database operations page consists of tables available in the database and an area to display all the columns of any table selected.

The operations include:

- Selecting a table
- Selecting columns in a table.
- Displaying the table
- Dropping tables
- Executing a query

Specific data can be extracted from the columns by using database queries.

Database Export:



Any data that has been imported based on the acceptable file type (excel, csv or text) can be exported back in the same form as shown above.

STATISTICAL OPERATIONS

This page allows us to perform two types of operations:

- descriptive statistics of the selected column(s) of a given table.
- simple regression analysis of a given table.

Descriptive Statistics:

- On selecting a particular table, enter the column name (from the column list) for which the descriptive statistics are required.
- Click on 'Descriptive Statistics' to get the output.

Dataset	Variable	No. of Obs.	MinValue	Q1	Median	Q3	MaxValue	Mean	Variance	StandardDeviation	Iqr	Range
s17g308_test	GM	252	29.9063	35.7188	37.125	41.859375	53.6875	38.673511111111104	22.022849641868085	4.692850907696523	6.140574999999998	23.7812

Simple Regression:

- On selecting a particular table, enter the column names which are to be designated as 'predictor' and 'response' variable.
- Click on 'Regression Analysis' to obtain the regression parameters.

Regression Equation : SPY=43.75123859977384+ (1.3748214471289977) GM

Regression Model

Predictor	Co-efficient	Standard Error Co-efficient	T-Statistic	P-Value
Constant	43.75123859977384	2.4123953301248426	18.136015292945245	1.5147221438284465E-47
GM	1.3748214471289977	0.06192603385065746	22.201025346537698	3.760245490151447E-61

Model Standard Error	4.604159473608724
R Square(Co-efficient of Determination)	0.6634743966559212
R Square Adjusted(Co-efficient of Determination)	0.6621228882087562

Analysis of Variance

Source	Degrees of Freedom(DF)	Sum of Squares	Mean of Squares	F-Statistic	P-Value
Regression	1.0	10448.160421621487	10448.160421621487	492.88552643760926	0.0
Residual Error	250.0	5299.486321467406	21.197945285869626		
Total	251.0				

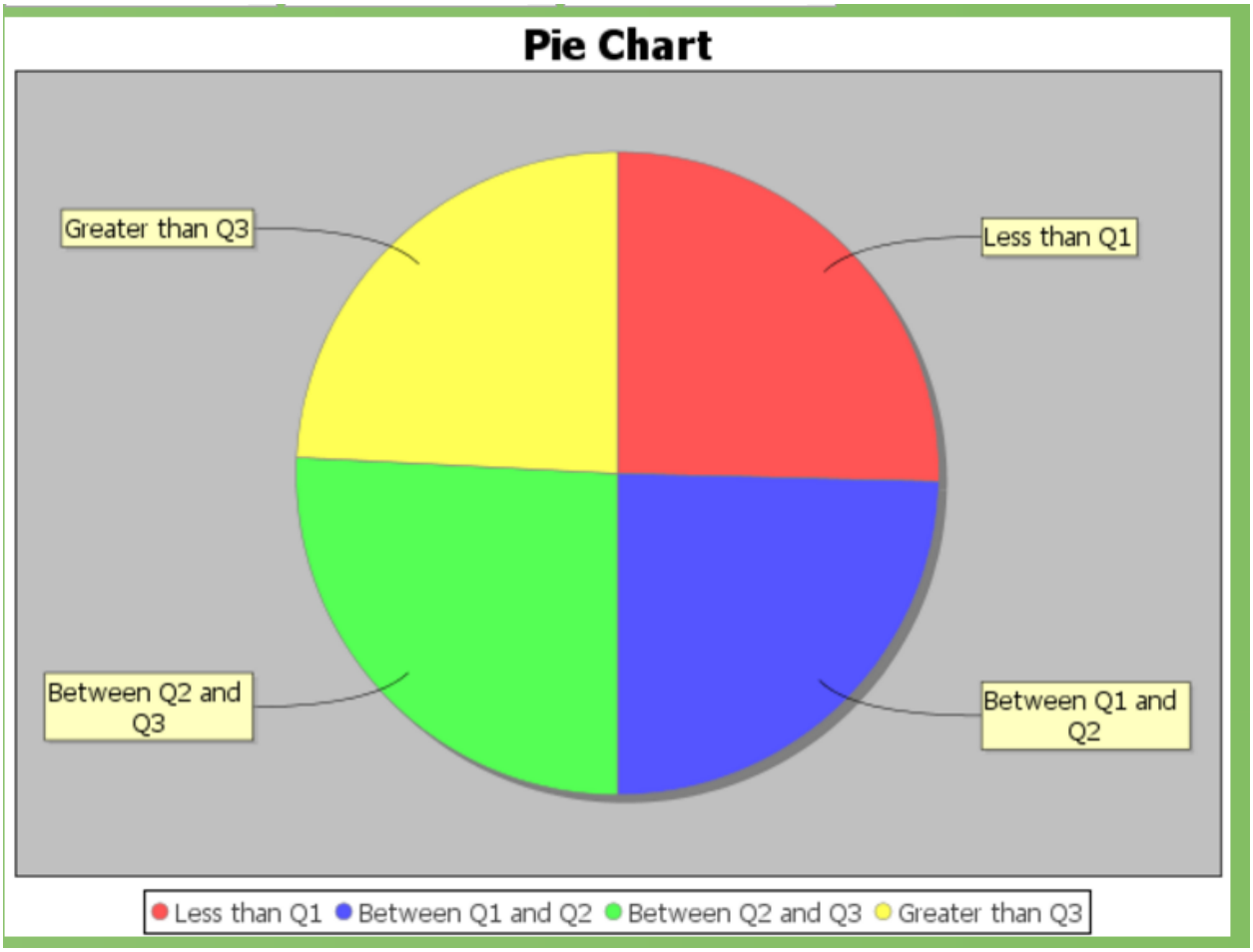
GRAPHICAL ANALYSIS

This page of the application provides the facility to the user to generate four different kind of graphical representation of the selected data values.

We can generate any of the following graphs from this functionality of the application-

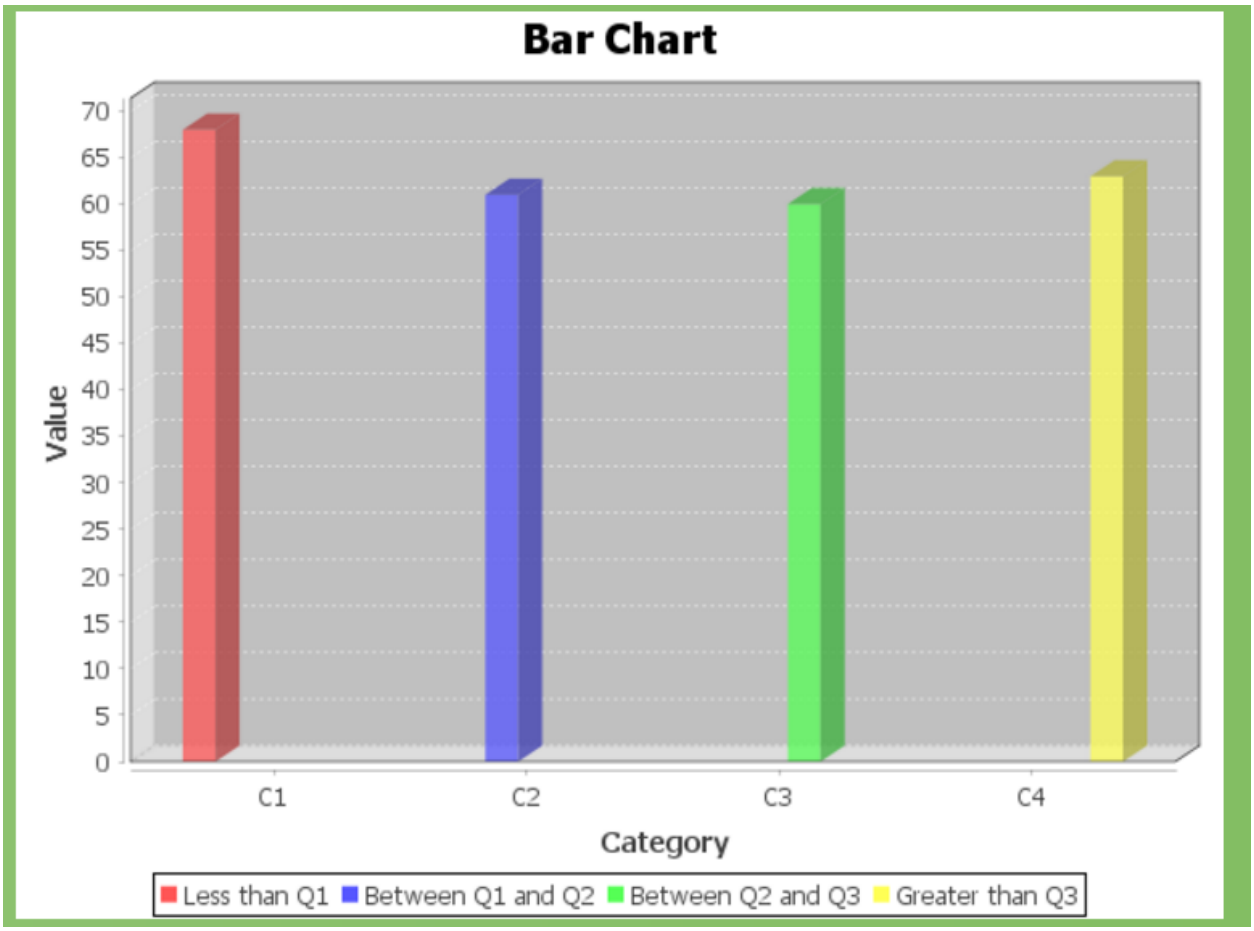
1. Pie Chart

It requires user to select the data set and any one column name from the selected dataset.



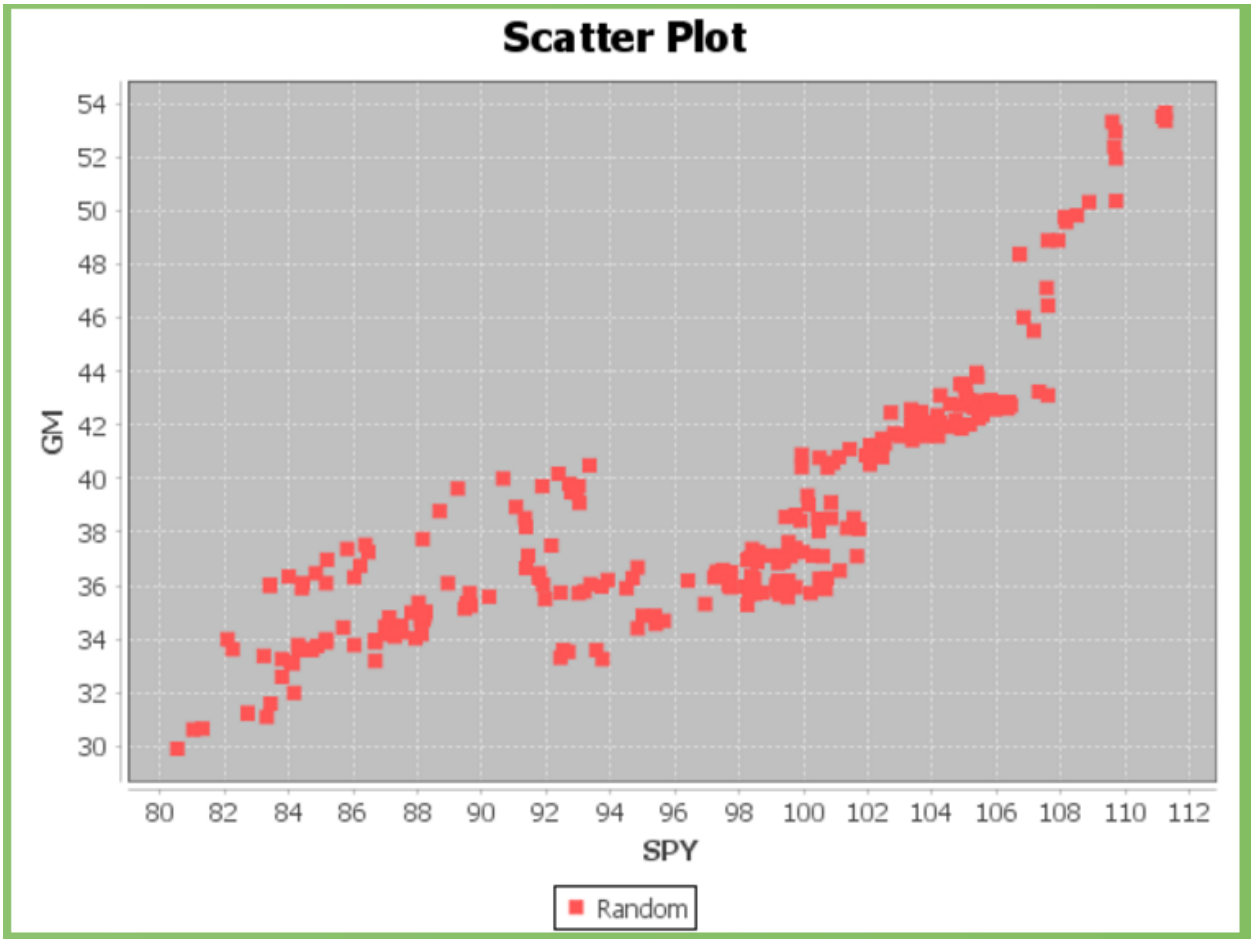
2. Bar Plot

Generation of this plot also requires user to select the data set and any one column name from the selected dataset.



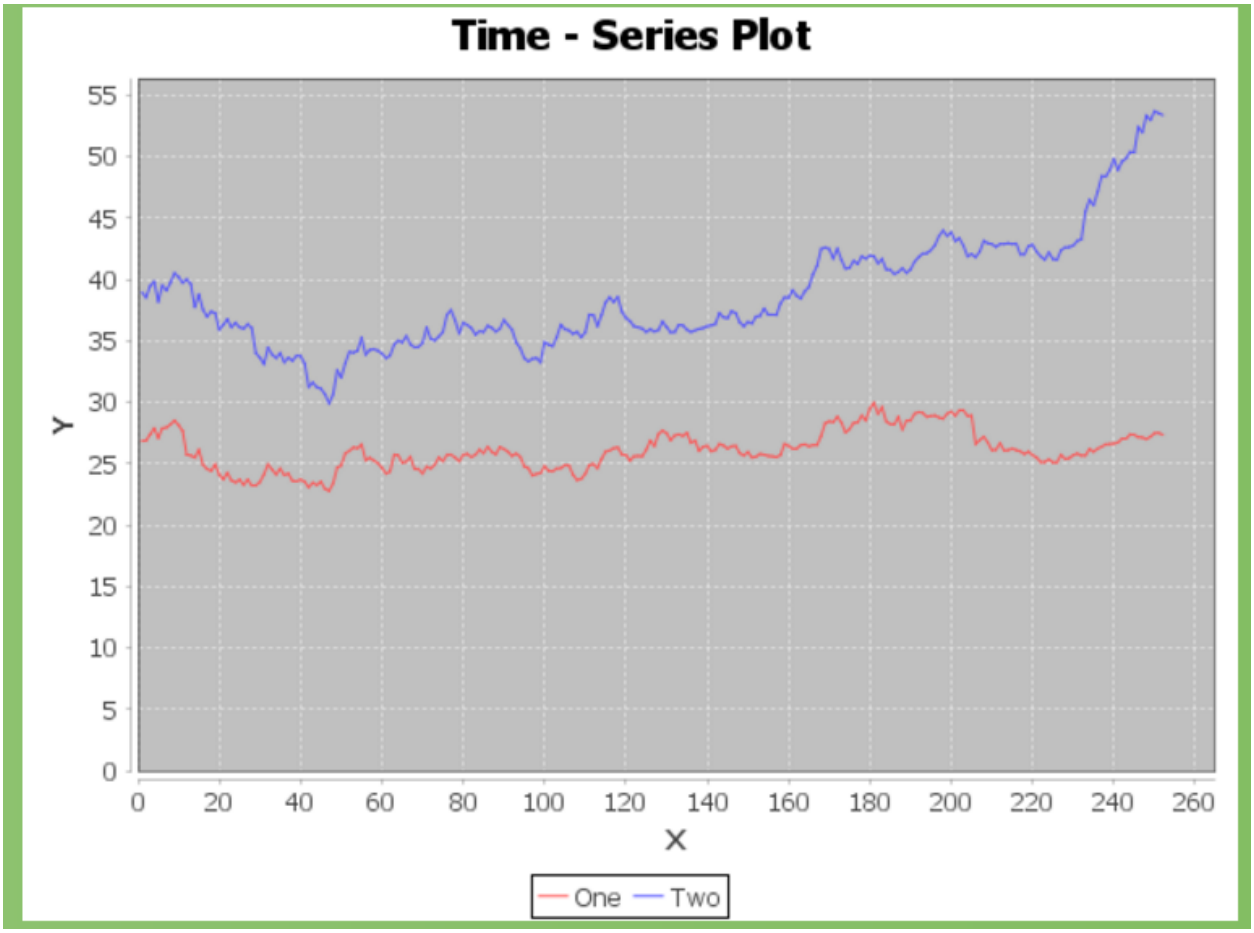
3. Scatter Plot

This requires user to select a dataset and two variables (Predictor variable and Target variable).



4. Time-Series Plot

To generate Time – Series plot, user needs to select a dataset and two column names , which forms the Predictor and the Target Variable.



THANK YOU !