CSP-586

MAIN PROJECT

PHASE 3, 29 April 2017

PROJECT TITLE- SOCIAL SERVICES

PROJECT TEAM MEMBERS-

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Tiwari, Saurabh (A20356308)

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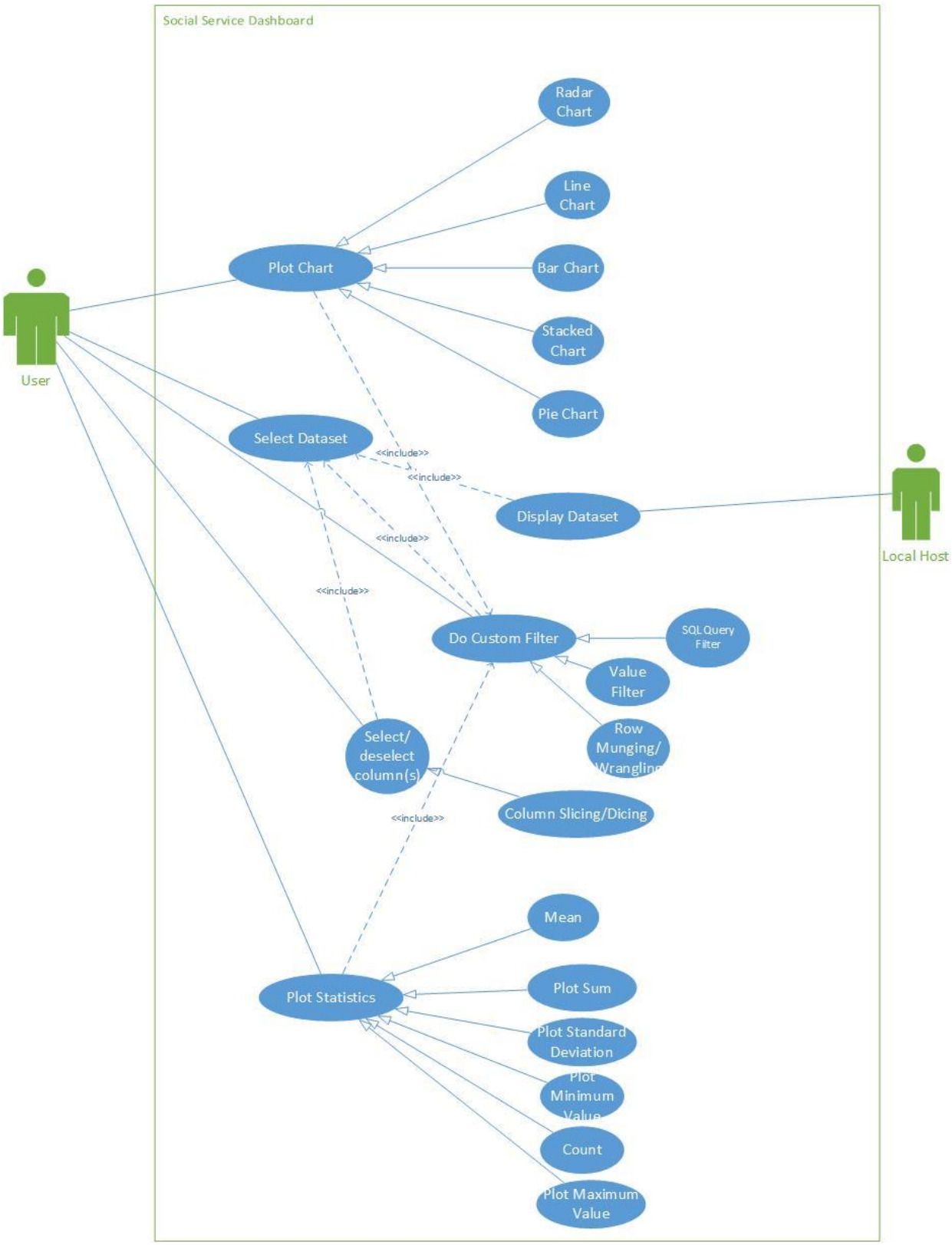
USE CASE DIAGRAM


Social Service Dashboard
Radar Chart
Line Chart
Plot Chart
Bar Chart
Stacked Chart
Pie Chart
User
Select Dataset
<<include>>
<<include>>
Display Dataset
Local Host
<<include>>
<<include>>
Do Custom Filter
SQL Query Filter
Value Filter
Row Munging/ Wrangling
Select/ deselect column(s)
Column Slicing/Dicing
<<include>>
Mean
Plot Statistics
Plot Sum
Plot Standard Deviation
Plot Minimum Value
Count
Plot Maximum Value

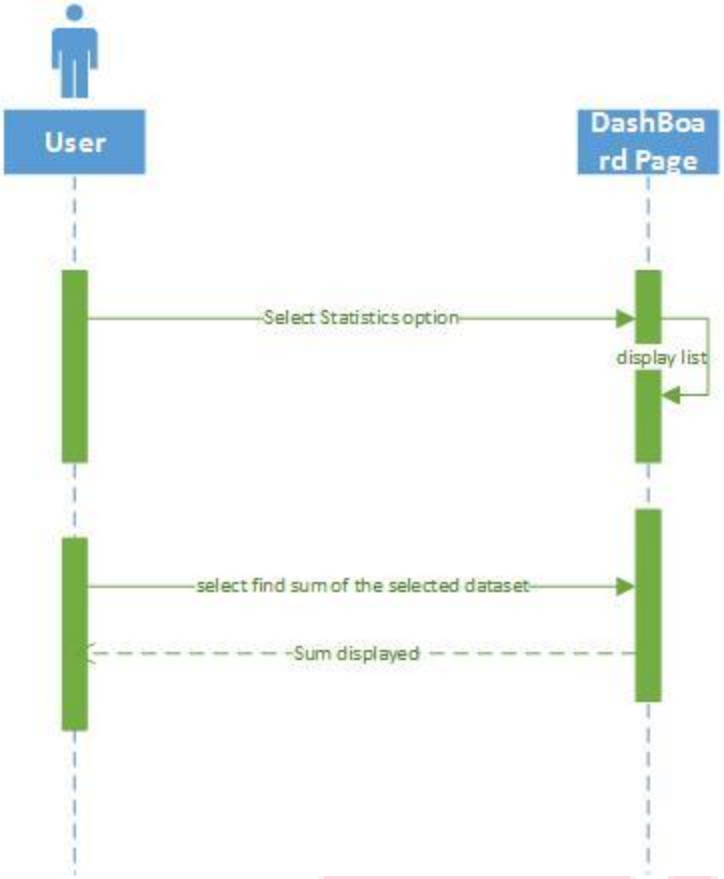
USE CASES

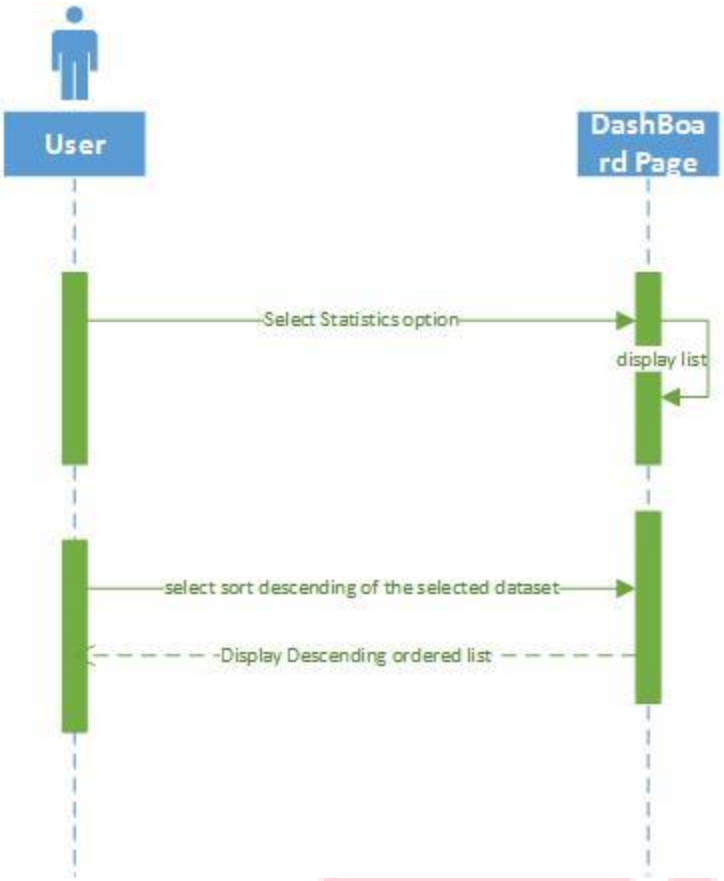
1. Select Dataset
2. Plot Graph
3. Plot Statistics
4. Do Custom Filter
5. Select/deselect column(s)
6. Column Slicing/Dicing
7. Select/deselect row(s)
8. Row Munging/Wrangling
9. SQL Query filter
10. Value filter
11. Mean
12. Plot Sum
13. Count
14. Plot Minimum
15. Plot Maximum
16. Plot Standard deviation
17. Bar Chart
18. Pie Chart
19. Stack Chart
20. Radar Chart
21. Line Chart

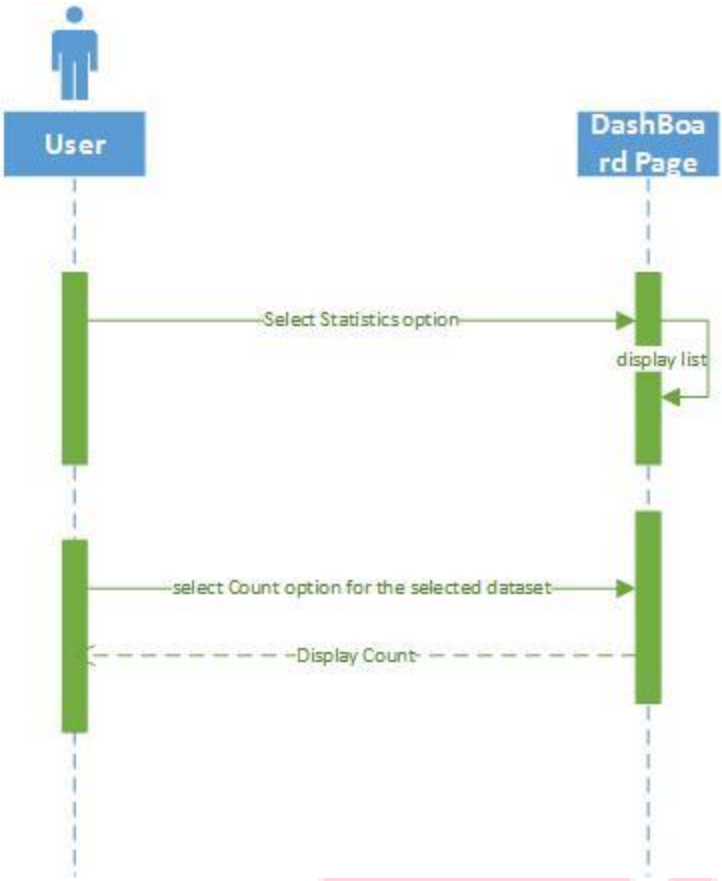
LIST OF ACTORS

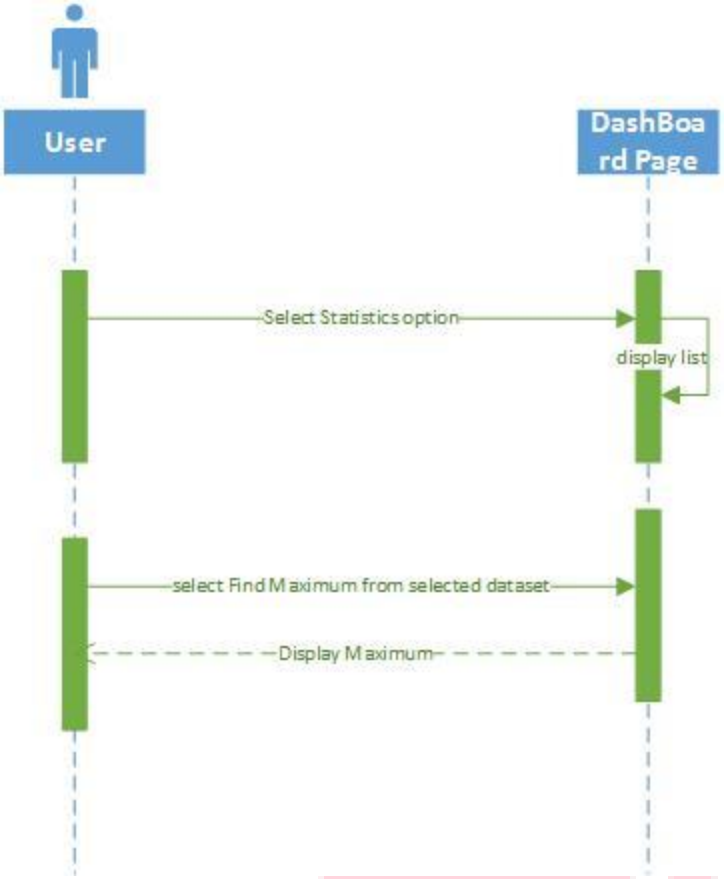
- User
- Local Host

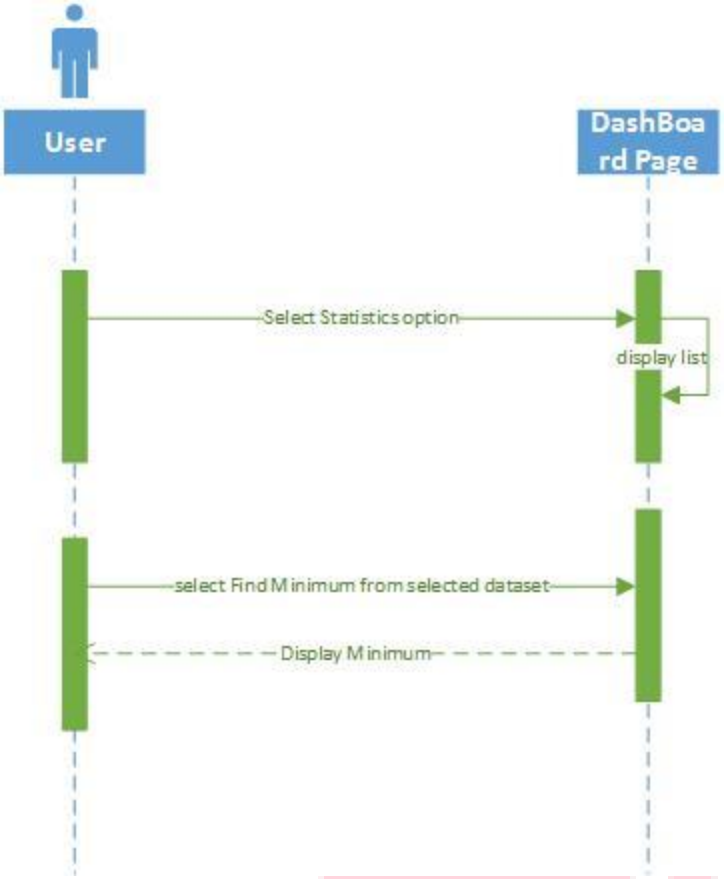
SYSTEM SEQUENCE DIAGRAMS

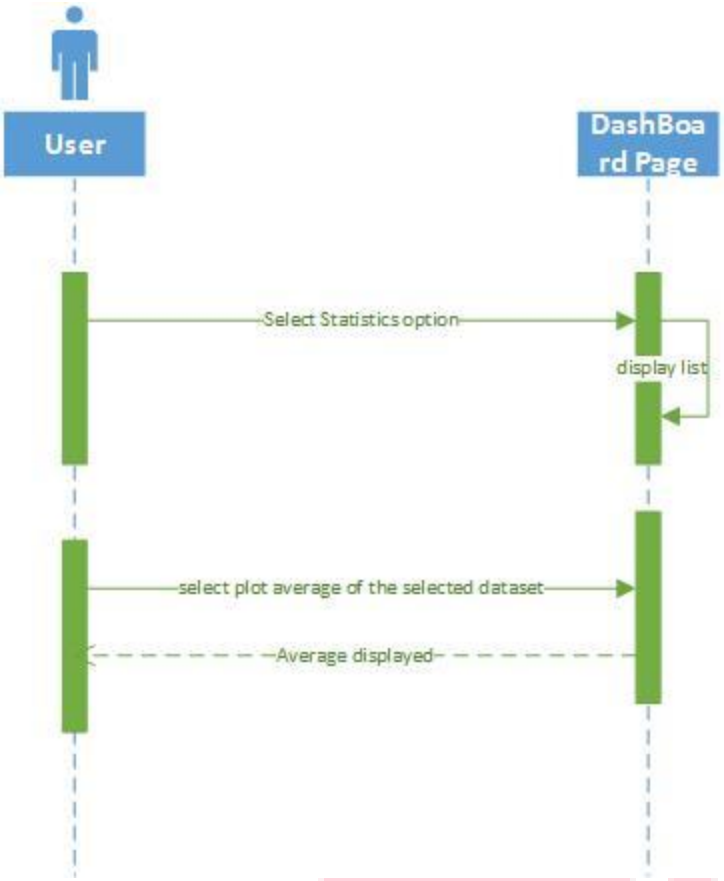

User
DashBoa
rd Page
Select Statistics option
display list
select find sum of the selected dataset
Sum displayed

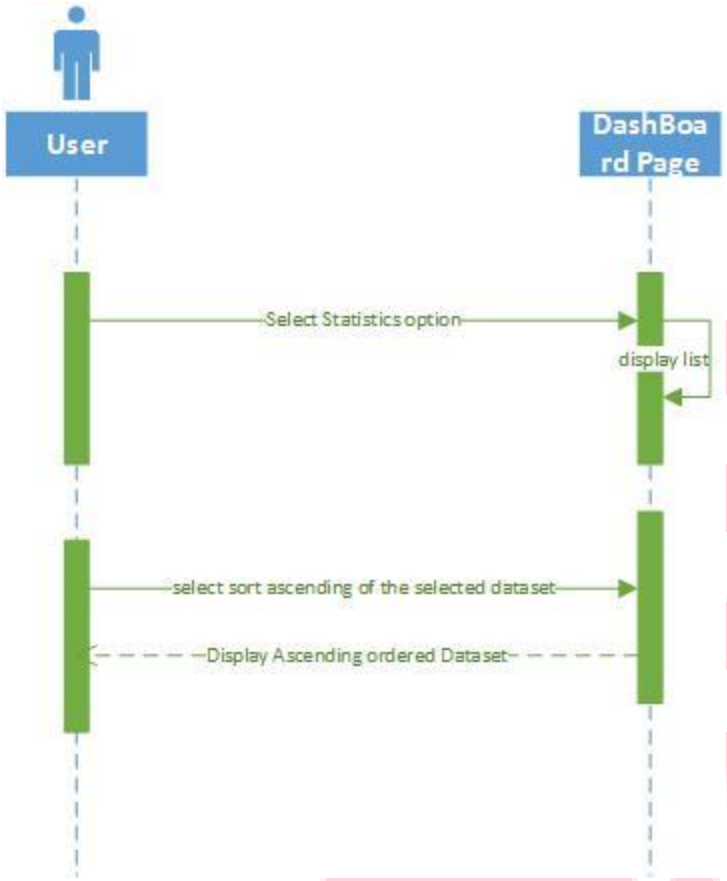

User
DashBoa
rd Page
Select Statistics option
display list
select sort descending of the selected dataset
Display Descending ordered list

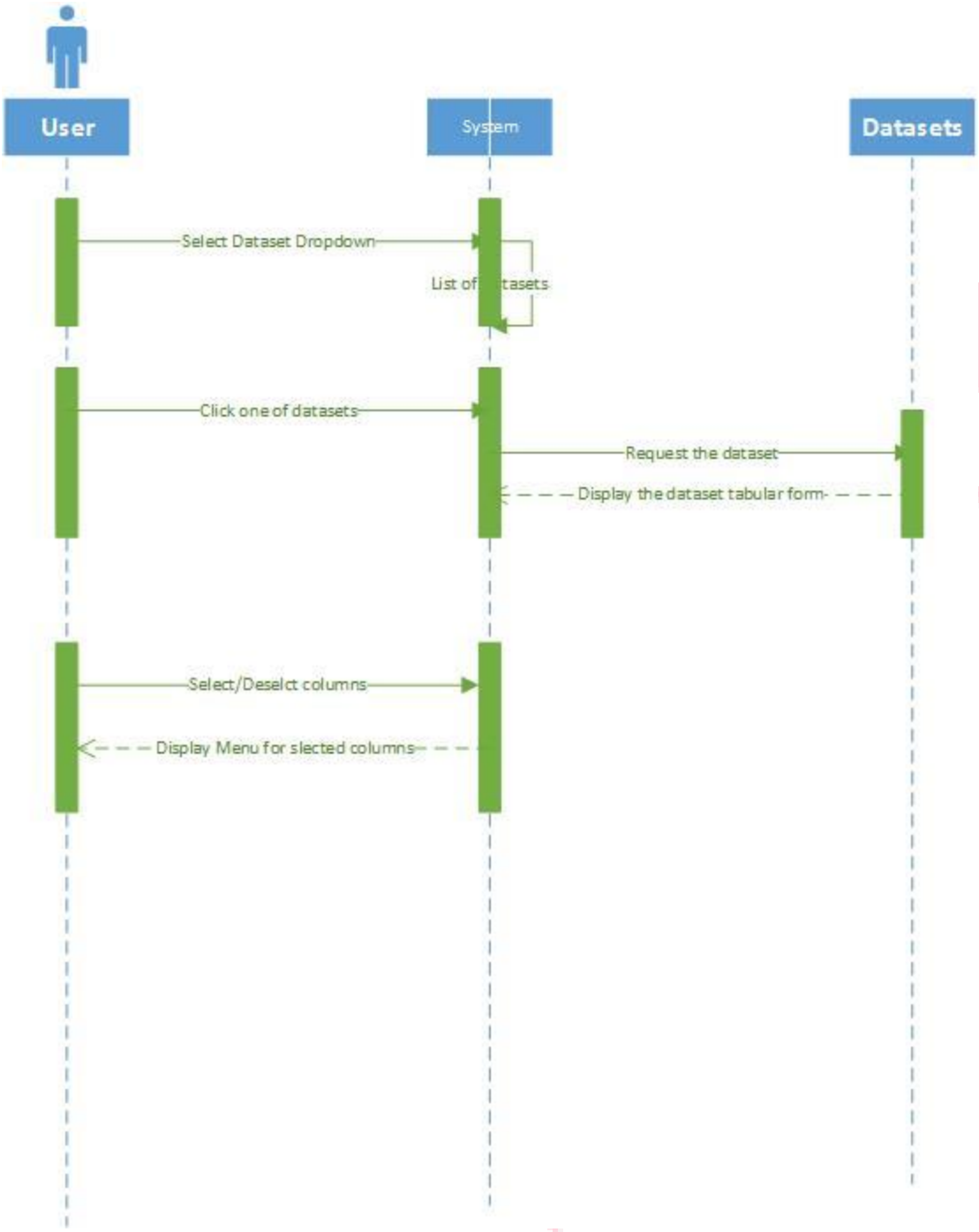

User
DashBoa
rd Page
Select Statistics option
display list
select Count option for the selected dataset
Display Count

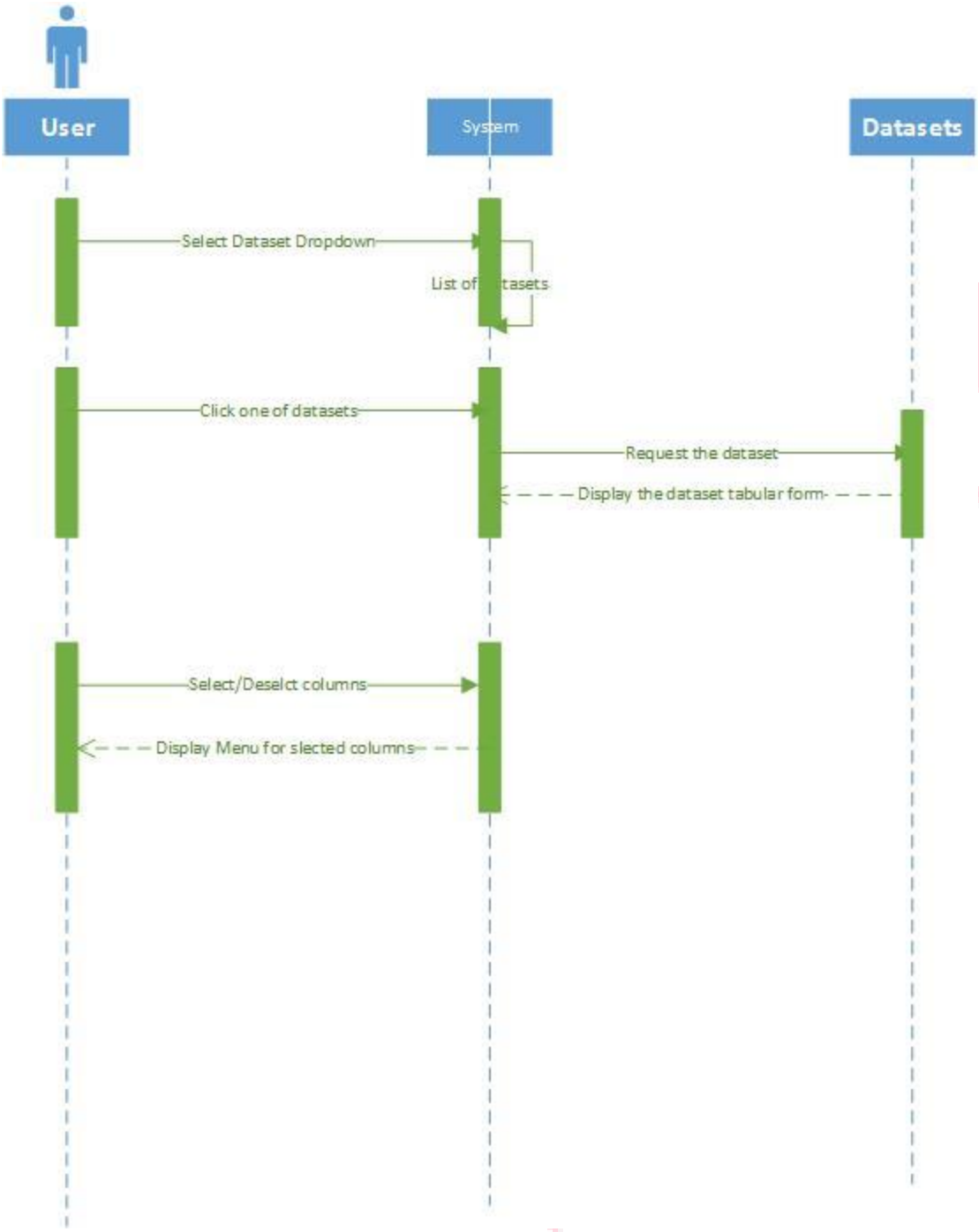

User
DashBoa
rd Page
Select Statistics option
display list
select Find Maximum from selected dataset
Display Maximum

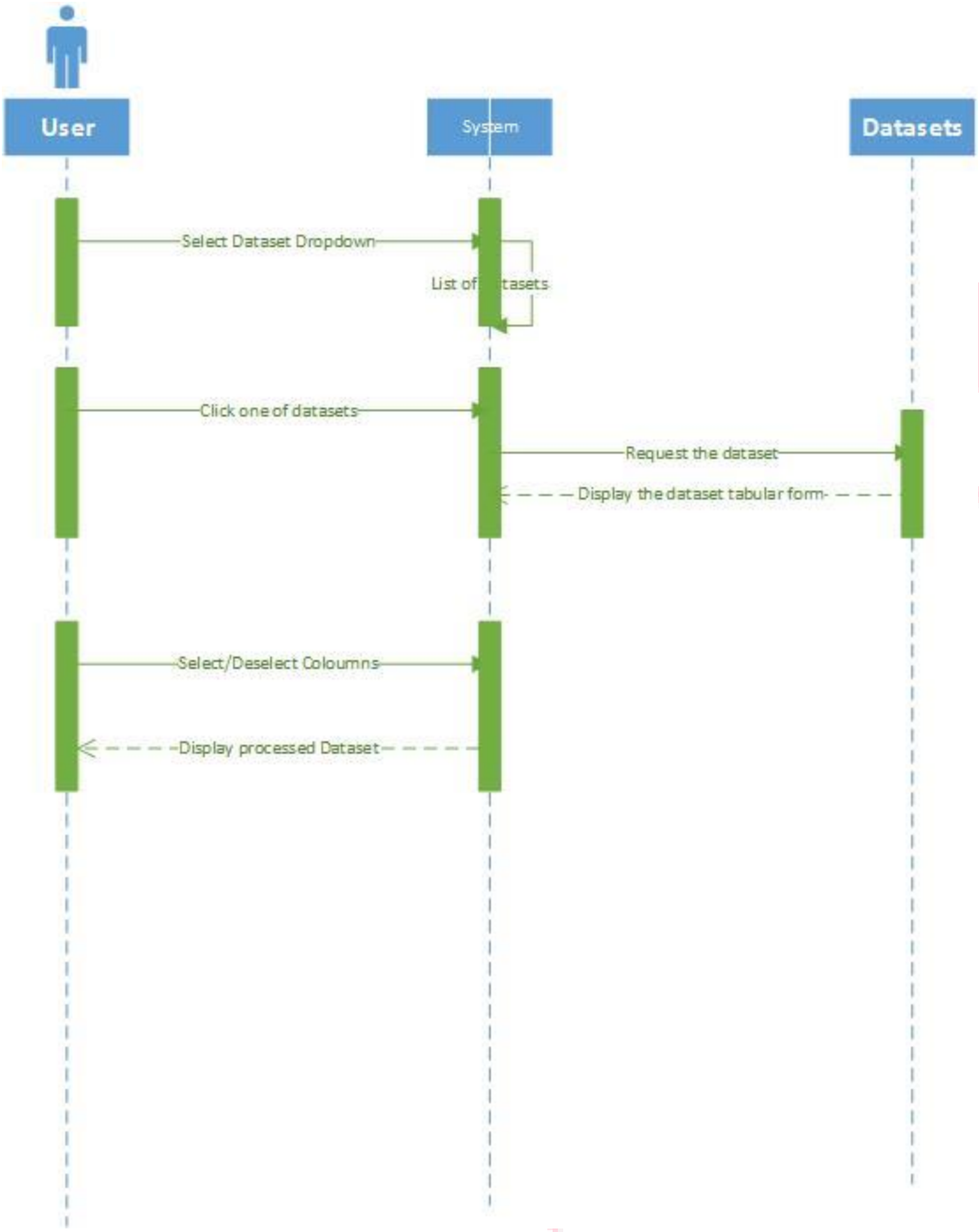

User
DashBoa
rd Page
Select Statistics option
display list
select Find Minimum from selected dataset
Display Minimum

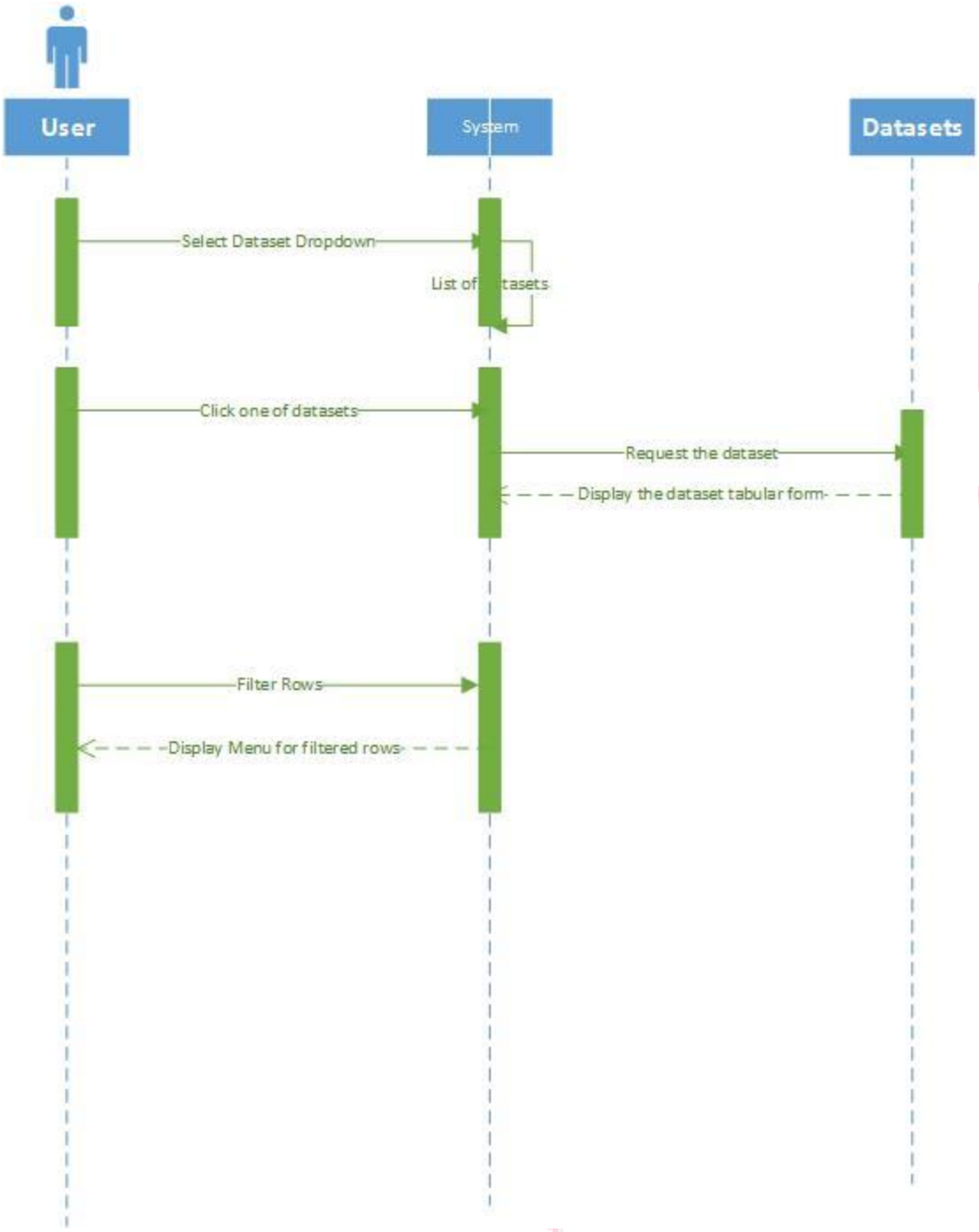

User
DashBoa
rd Page
Select Statistics option
display list
select plot average of the selected dataset
Average displayed

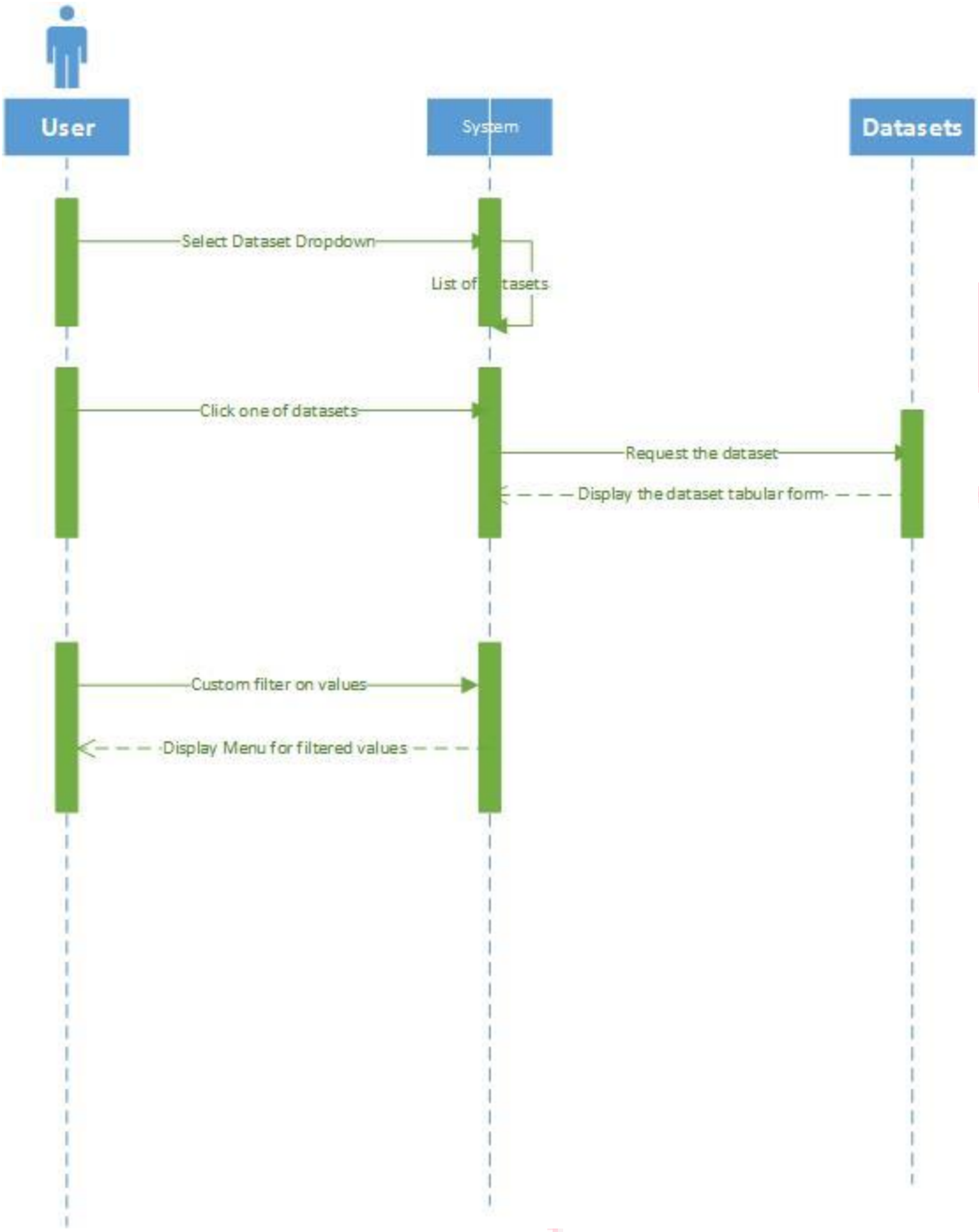

User
DashBoa
rd Page
Select Statistics option
display list
select sort ascending of the selected dataset
Display Ascending ordered Dataset

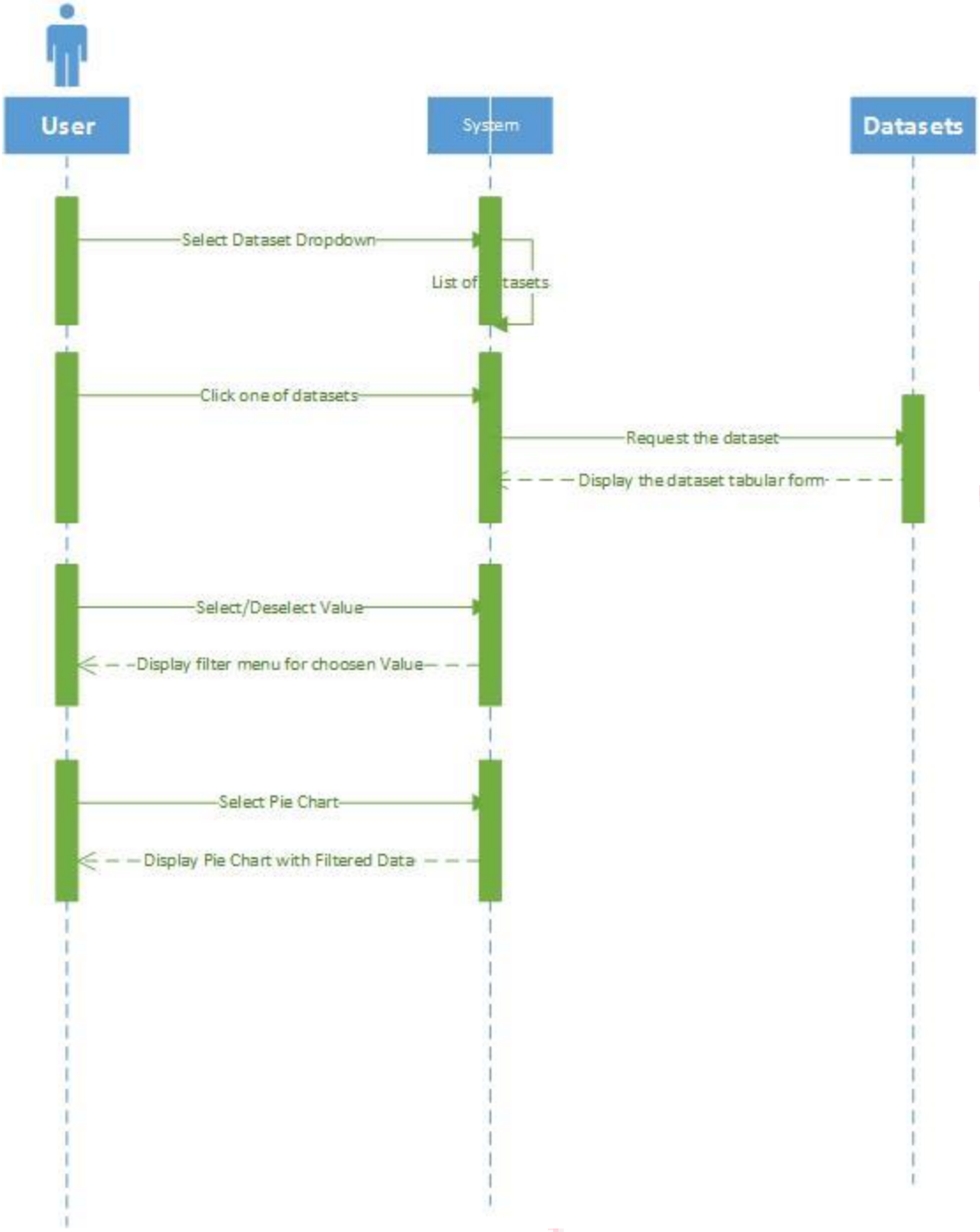

User
System
Datasets
Select Dataset Dropdown
List of tasets
Click one of datasets
Request the dataset
Display the dataset tabular form
Select/Deselct columns
Display Menu for slected columns


User
System
Datasets
Select Dataset Dropdown
List of tasets
Click one of datasets
Request the dataset
Display the dataset tabular form
Select/Deselct columns
Display Menu for slected columns

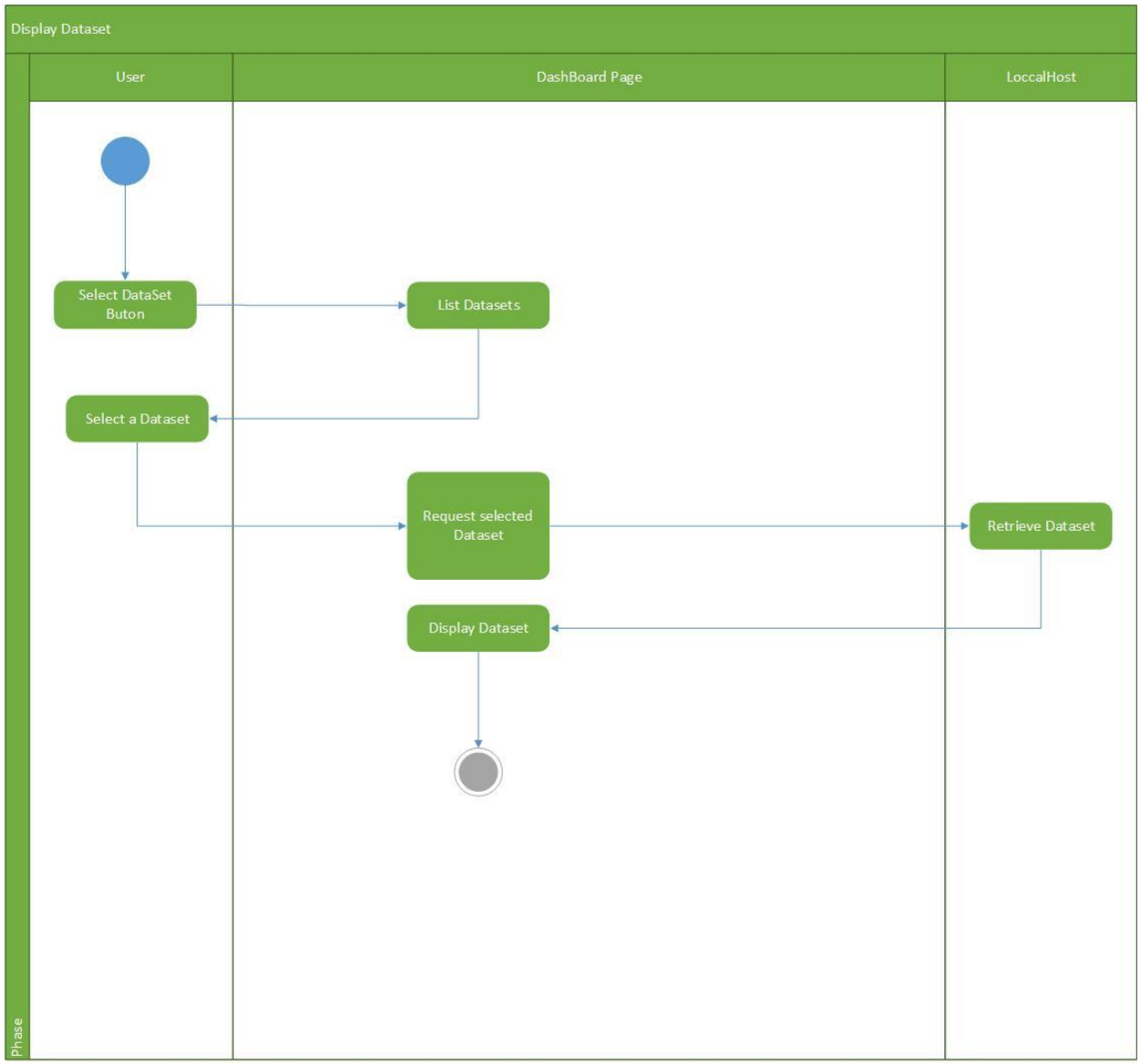

User
System
Datasets
Select Dataset Dropdown
List of tasets
Click one of datasets
Request the dataset
Display the dataset tabular form
Select/Deselect Coloumns
Display processed Dataset

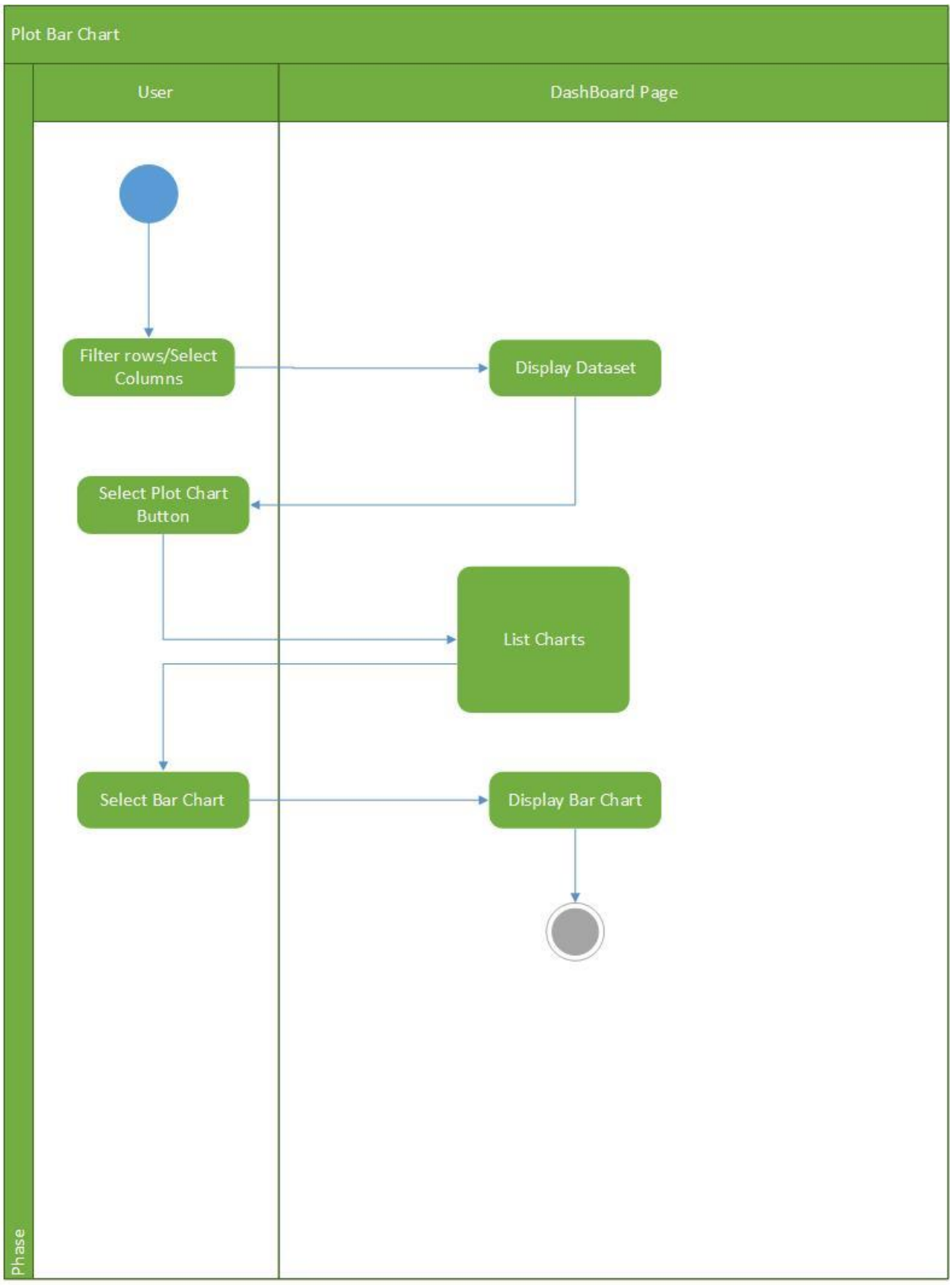

User
System
Datasets
Select Dataset Dropdown
List of tasets
Click one of datasets
Request the dataset
Display the dataset tabular form
Filter Rows
Display Menu for filtered rows

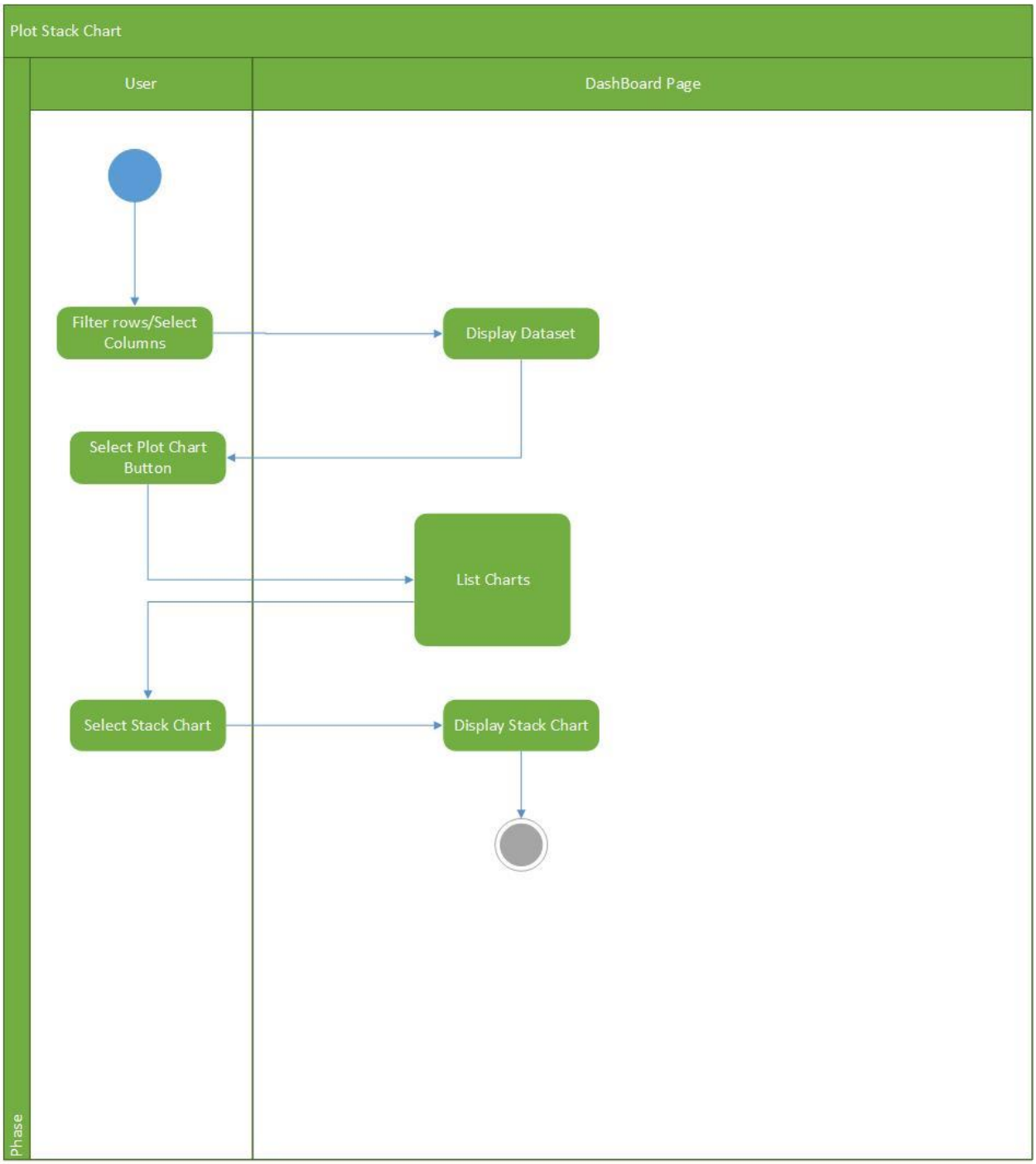

User
System
Datasets
Select Dataset Dropdown
List of tasets
Click one of datasets
Request the dataset
Display the dataset tabular form
Custom filter on values
Display Menu for filtered values

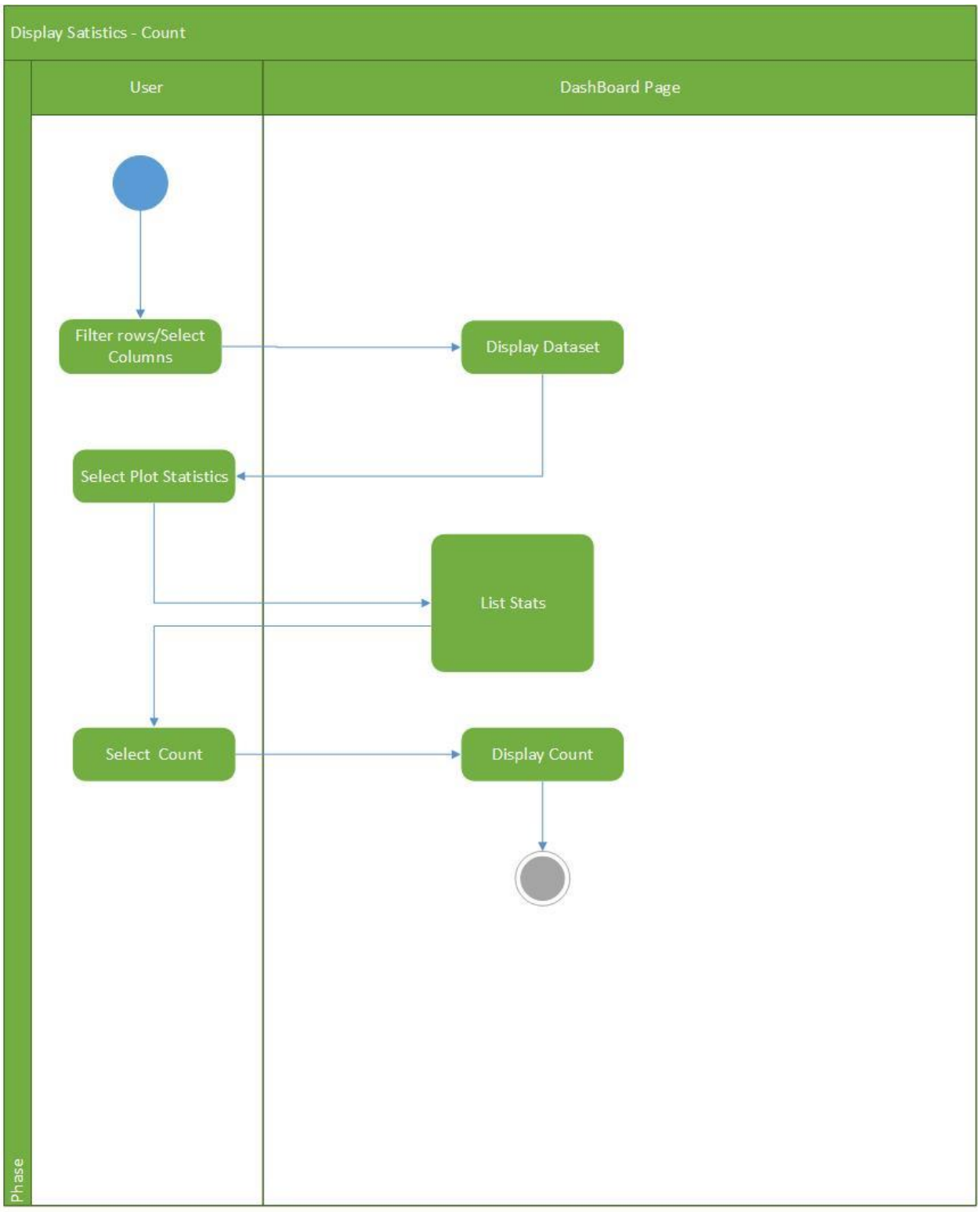

User
System
Datasets
Select Dataset Dropdown
List of tasets
Click one of datasets
Request the dataset
Display the dataset tabular form
Select/Deselect Value
Display filter menu for choosen Value
Select Pie Chart
Display Pie Chart with Filtered Data

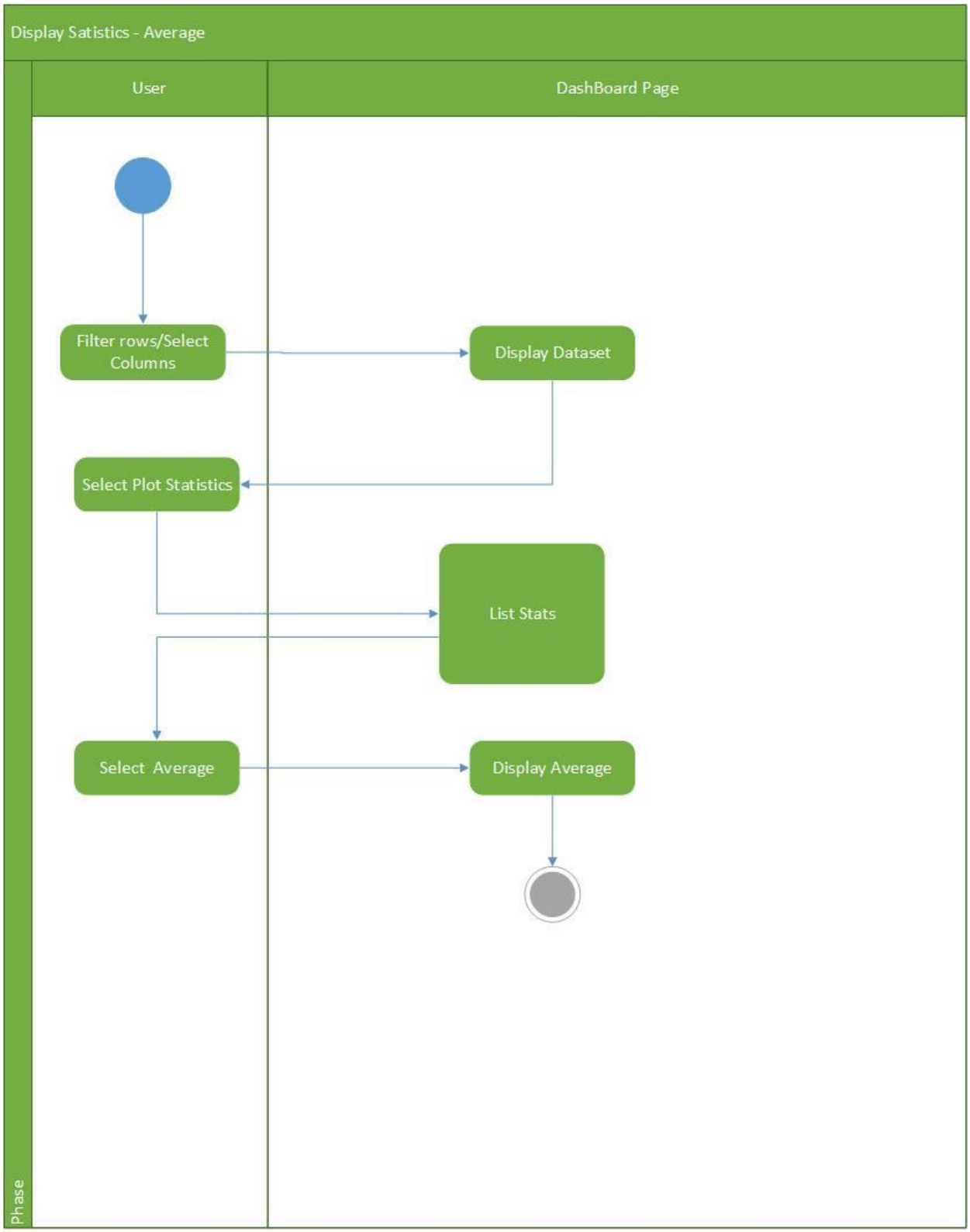
ACTIVITY DIAGRAM

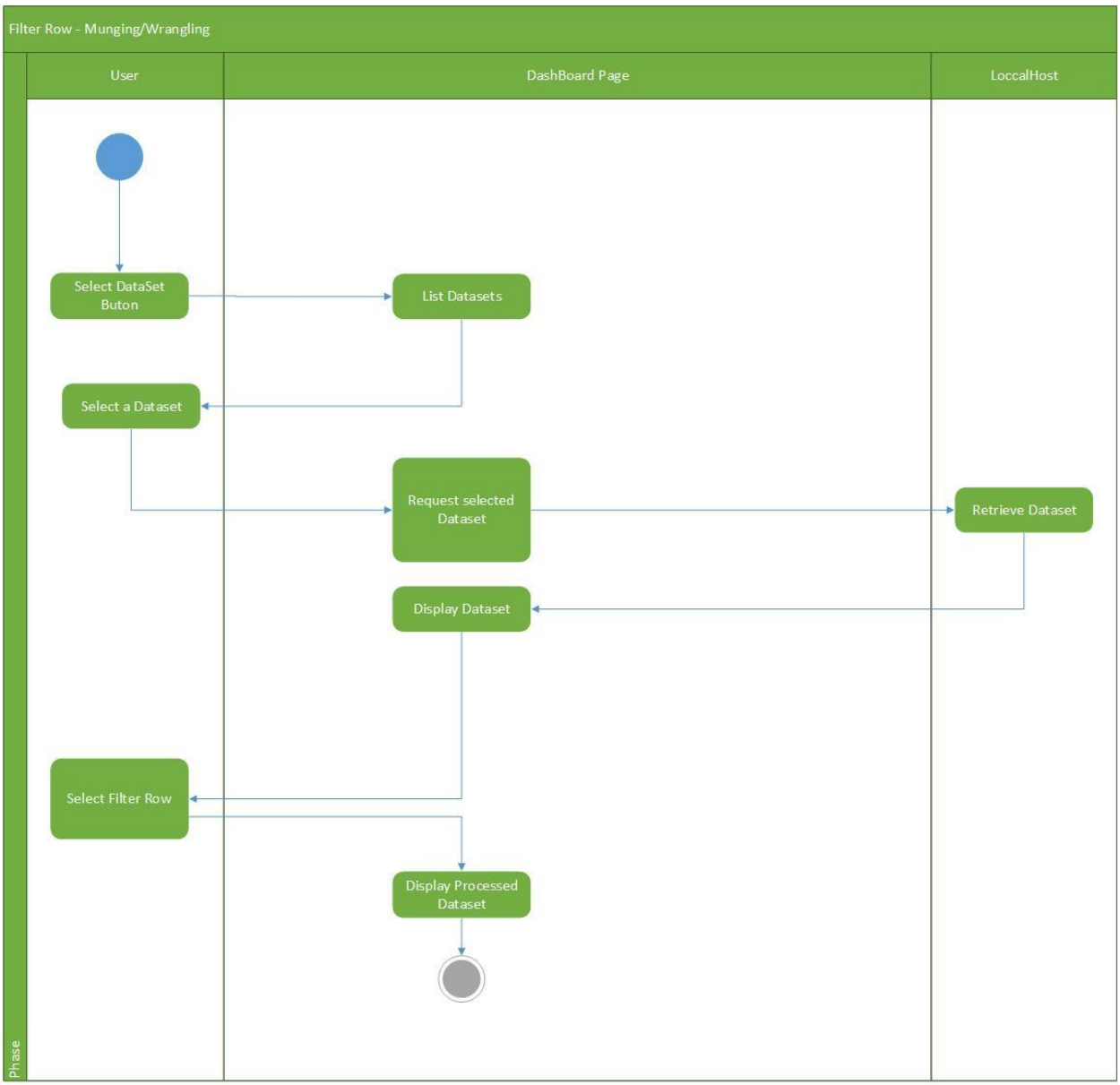

Display Dataset
User
DashBoard Page
LoccalHost
Select DataSet Buton
List Datasets
Select a Dataset
Request selected Dataset
Retrieve Dataset
Display Dataset
Phase

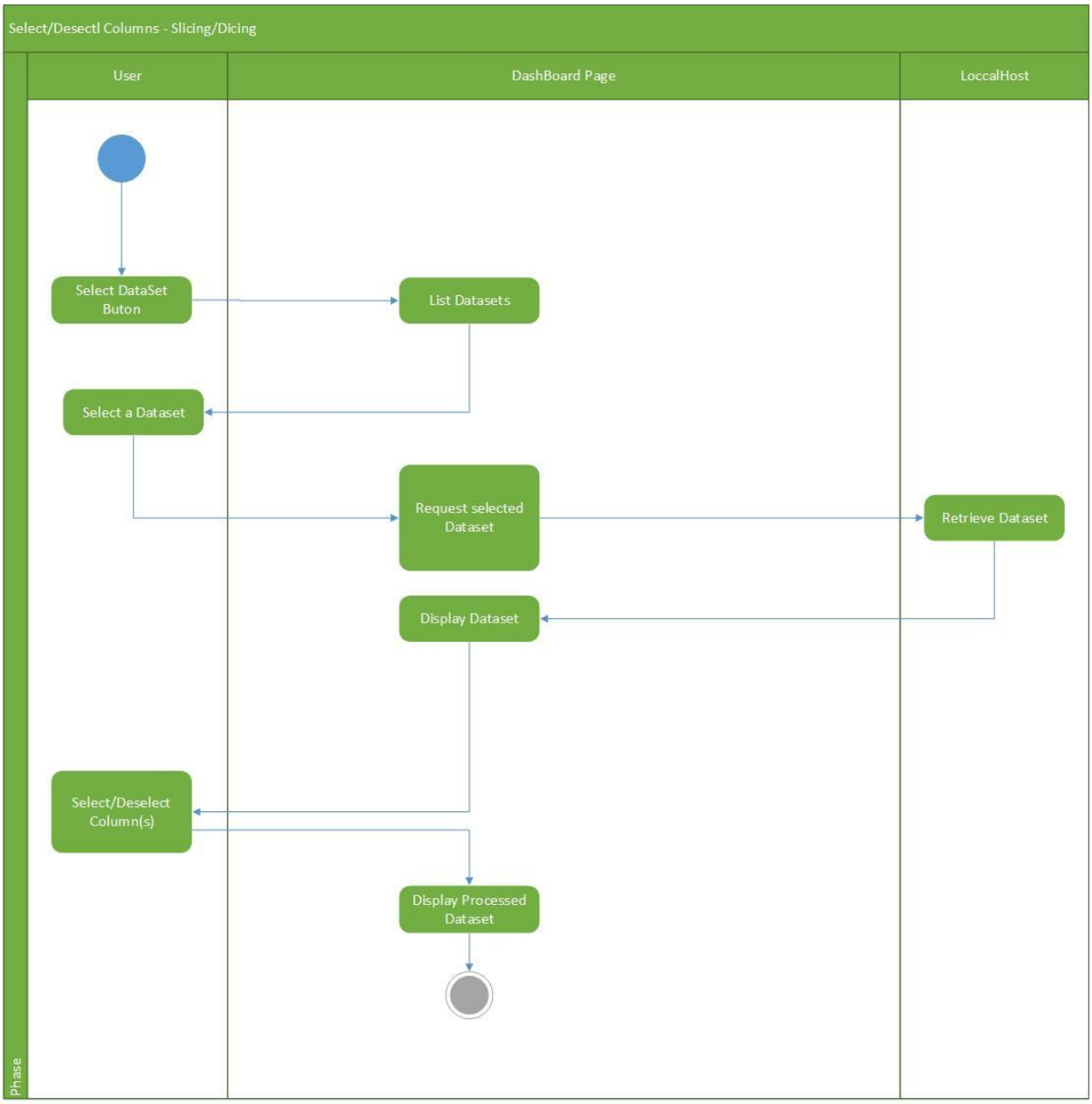

Plot Bar Chart
User
DashBoard Page
Filter rows/Select Columns
Display Dataset
Select Plot Chart Button
List Charts
Select Bar Chart
Display Bar Chart
Phase


Plot Stack Chart
User
DashBoard Page
Filter rows/Select Columns
Display Dataset
Select Plot Chart Button
List Charts
Select Stack Chart
Display Stack Chart
Phase

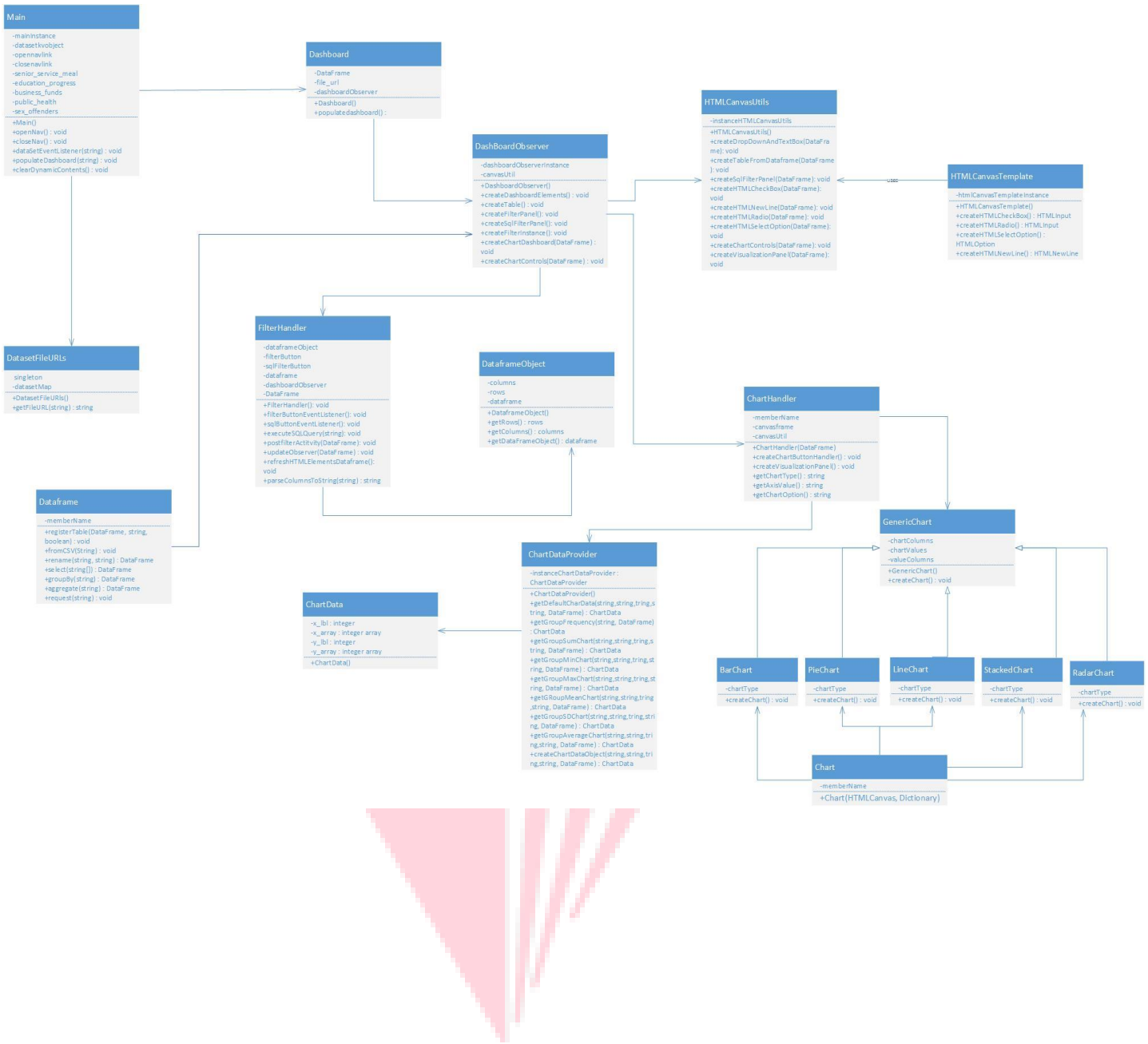

Display Satistics - Count
User
DashBoard Page
Filter rows/Select Columns
Display Dataset
Select Plot Statistics
List Stats
Select Count
Display Count
Phase


Display Satistics - Average
User
DashBoard Page
Filter rows/Select Columns
Display Dataset
Select Plot Statistics
List Stats
Select Average
Display Average
Phase


Filter Row - Munging/Wrangling
User
DashBoard Page
LoccalHost
Select DataSet Buton
List Datasets
Select a Dataset
Request selected Dataset
Retrieve Dataset
Display Dataset
Select Filter Row
Display Processed Dataset
Phase

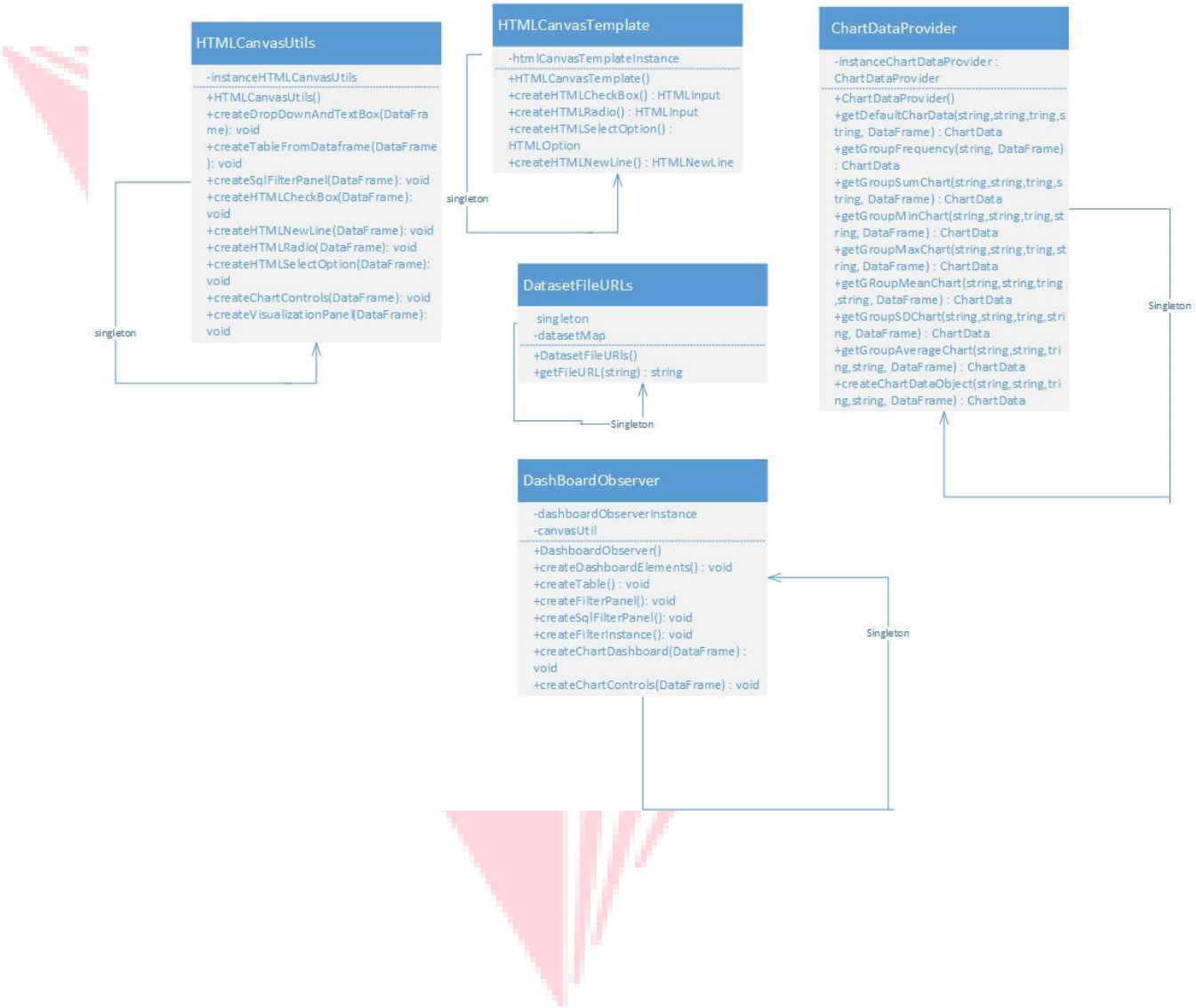

Select/Desectl Columns - Slicing/Dicing
User
DashBoard Page
LoccalHost
Select DataSet Buton
List Datasets
Select a Dataset
Request selected Dataset
Retrieve Dataset
Display Dataset
Select/Deselect Column(s)
Display Processed Dataset
Phase

CLASS DIAGRAM (DESIGN MODEL)

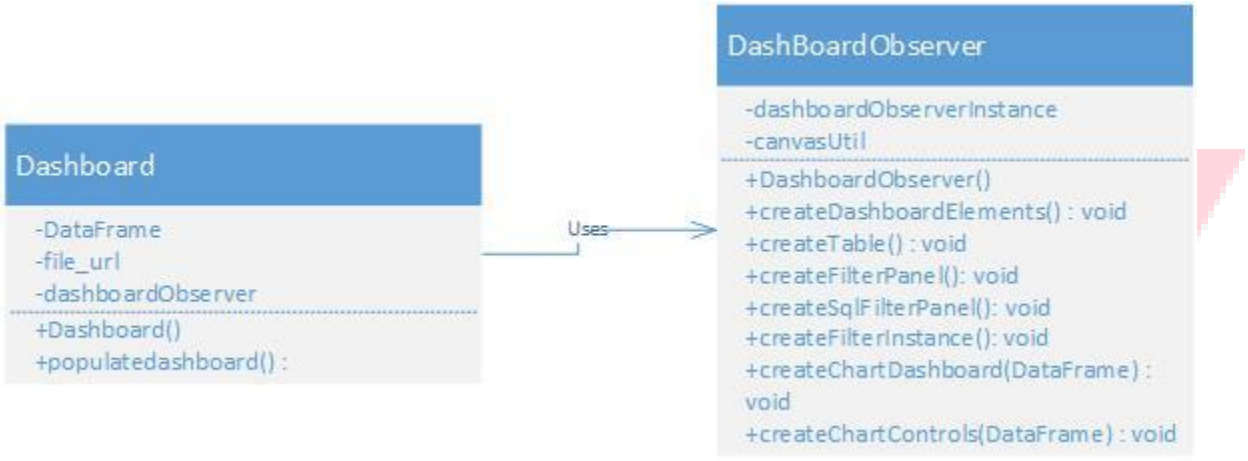


DESIGN PATTERNS

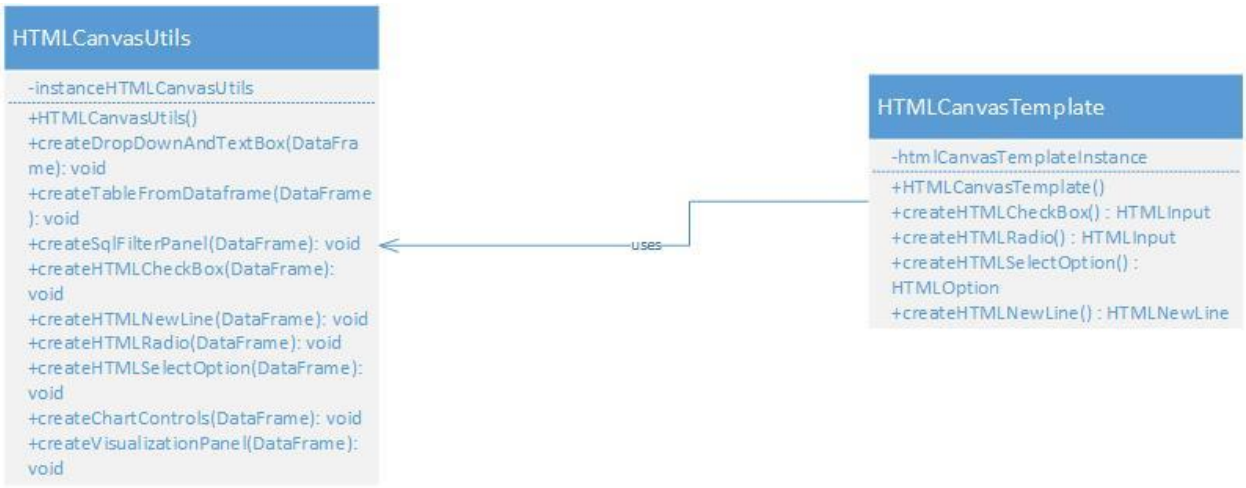
- SINGLETON



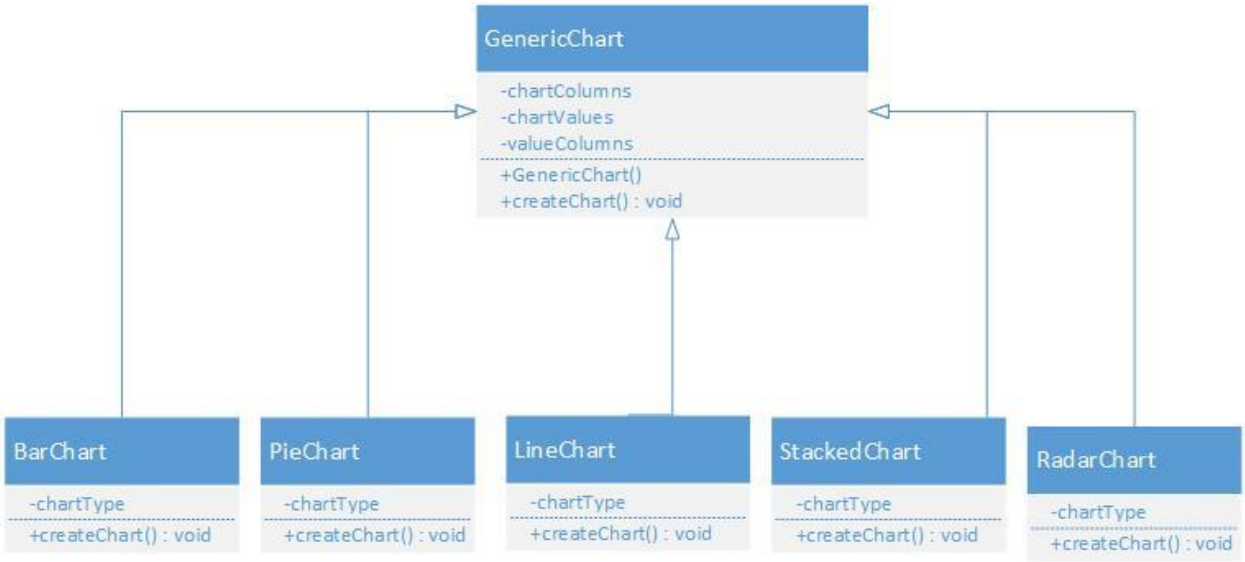
- OBSERVER


DashBoardObserver
-dashboardObserverInstance
-canvasUtil
+DashboardObserver()
+createDashboardElements() : void
+createTable() : void
+createFilterPanel(): void
+createSqlFilterPanel(): void
+createFilterInstance(): void
+createChartDashboard(DataFrame) : void
+createChartControls(DataFrame) : void
Dashboard
-DataFrame
-file_url
-dashboardObserver
+Dashboard()
+populatedashboard() :
Uses

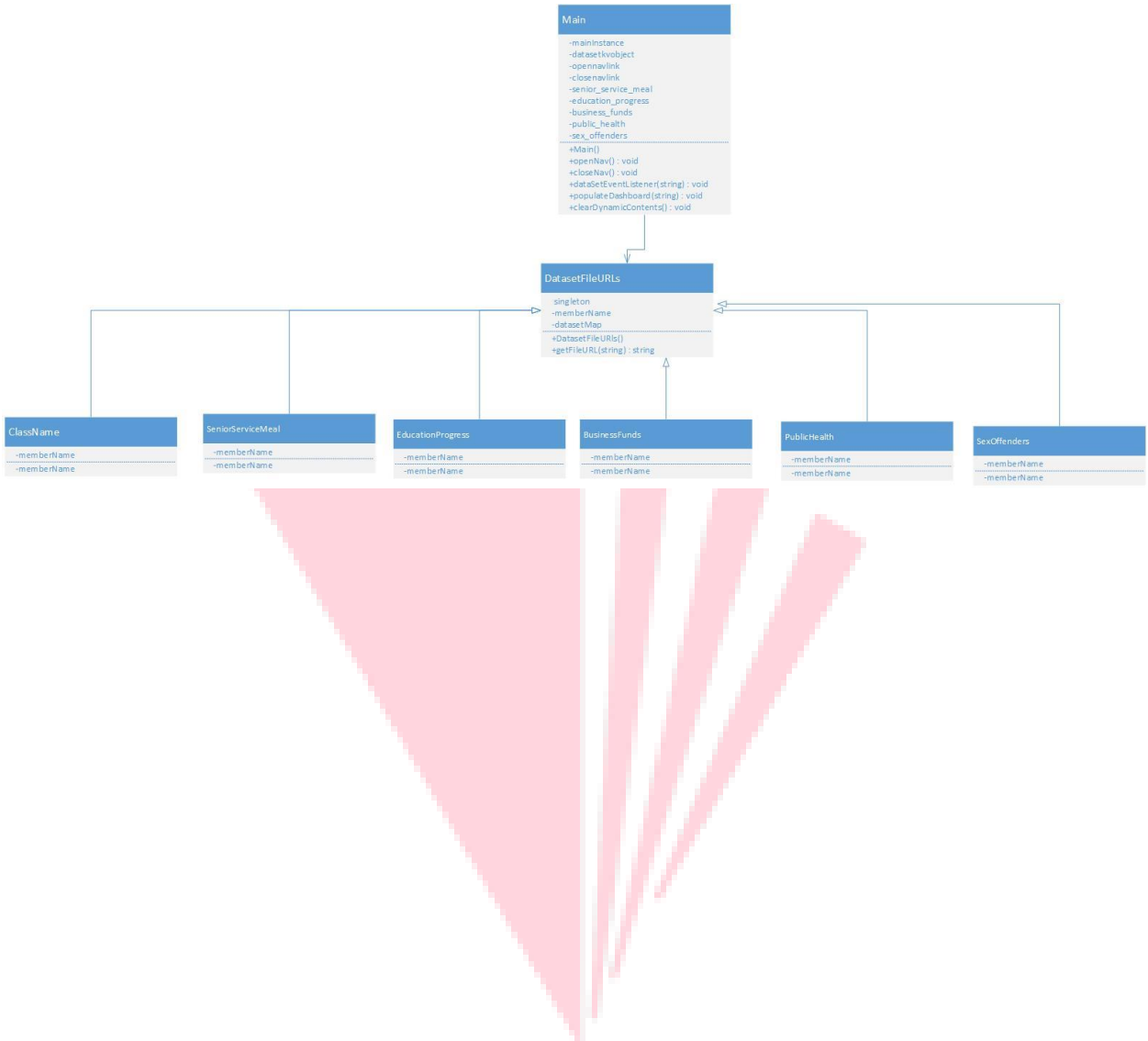
- TEMPLATE


HTMLCanvasUtils
-instanceHTMLCanvasUtils
+HTMLCanvasUtils()
+createDropDownAndTextBox(DataFrame): void
+createTableFromDataframe(DataFrame): void
+createSqlFilterPanel(DataFrame): void
+createHTMLCheckBox(DataFrame): void
+createHTMLNewLine(DataFrame): void
+createHTMLRadio(DataFrame): void
+createHTMLSelectOption(DataFrame): void
+createChartControls(DataFrame): void
+createVisualizationPanel(DataFrame): void
uses
HTMLCanvasTemplate
-htmlCanvasTemplateInstance
+HTMLCanvasTemplate()
+createHTMLCheckBox() : HTMLInput
+createHTMLRadio() : HTMLInput
+createHTMLSelectOption() : HTMLOption
+createHTMLNewLine() : HTMLNewLine

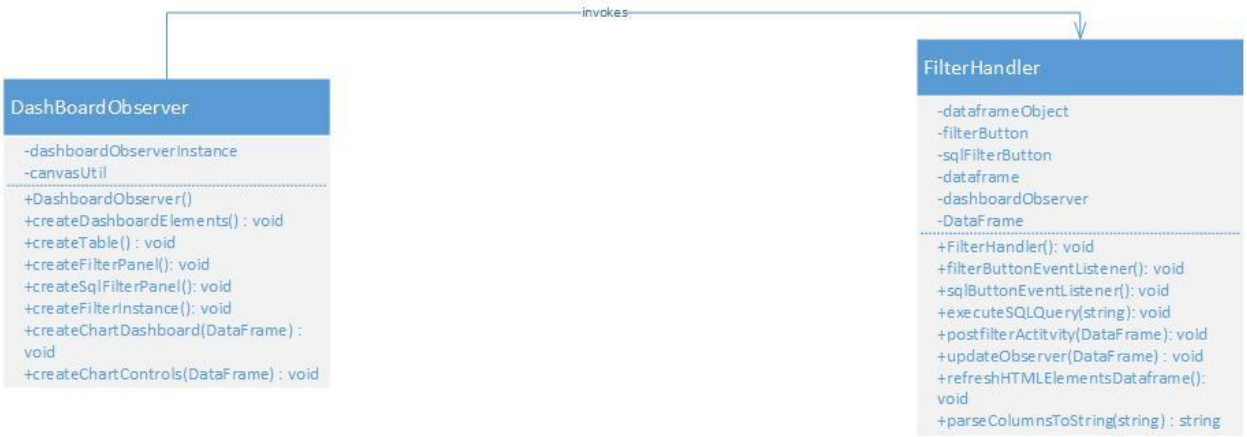
- DECORATOR


GenericChart
-chartColumns
-chartValues
-valueColumns
+GenericChart()
+createChart() : void
BarChart
-chartType
+createChart() : void
PieChart
-chartType
+createChart() : void
LineChart
-chartType
+createChart() : void
StackedChart
-chartType
+createChart() : void
RadarChart
-chartType
+createChart() : void

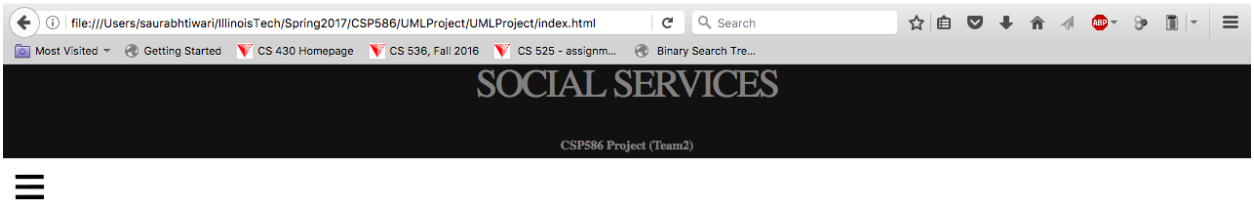
- FACTORY METHOD

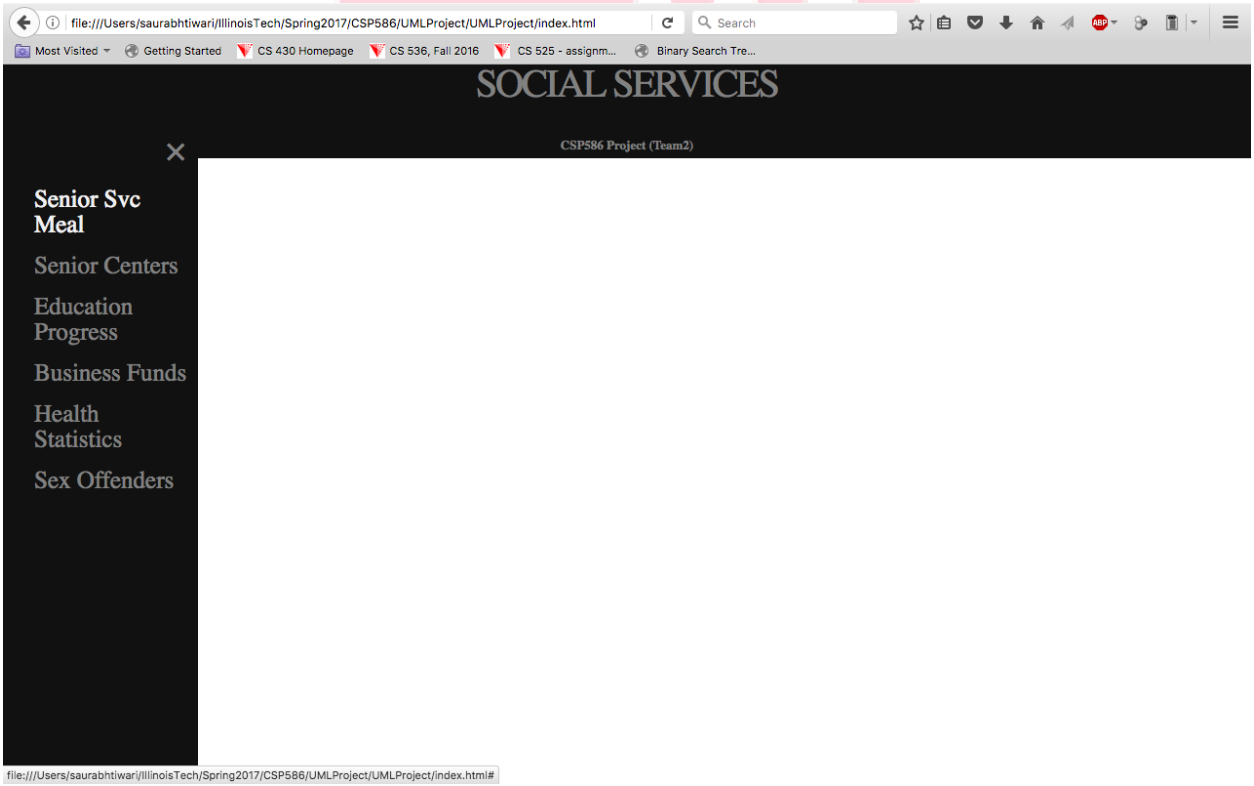


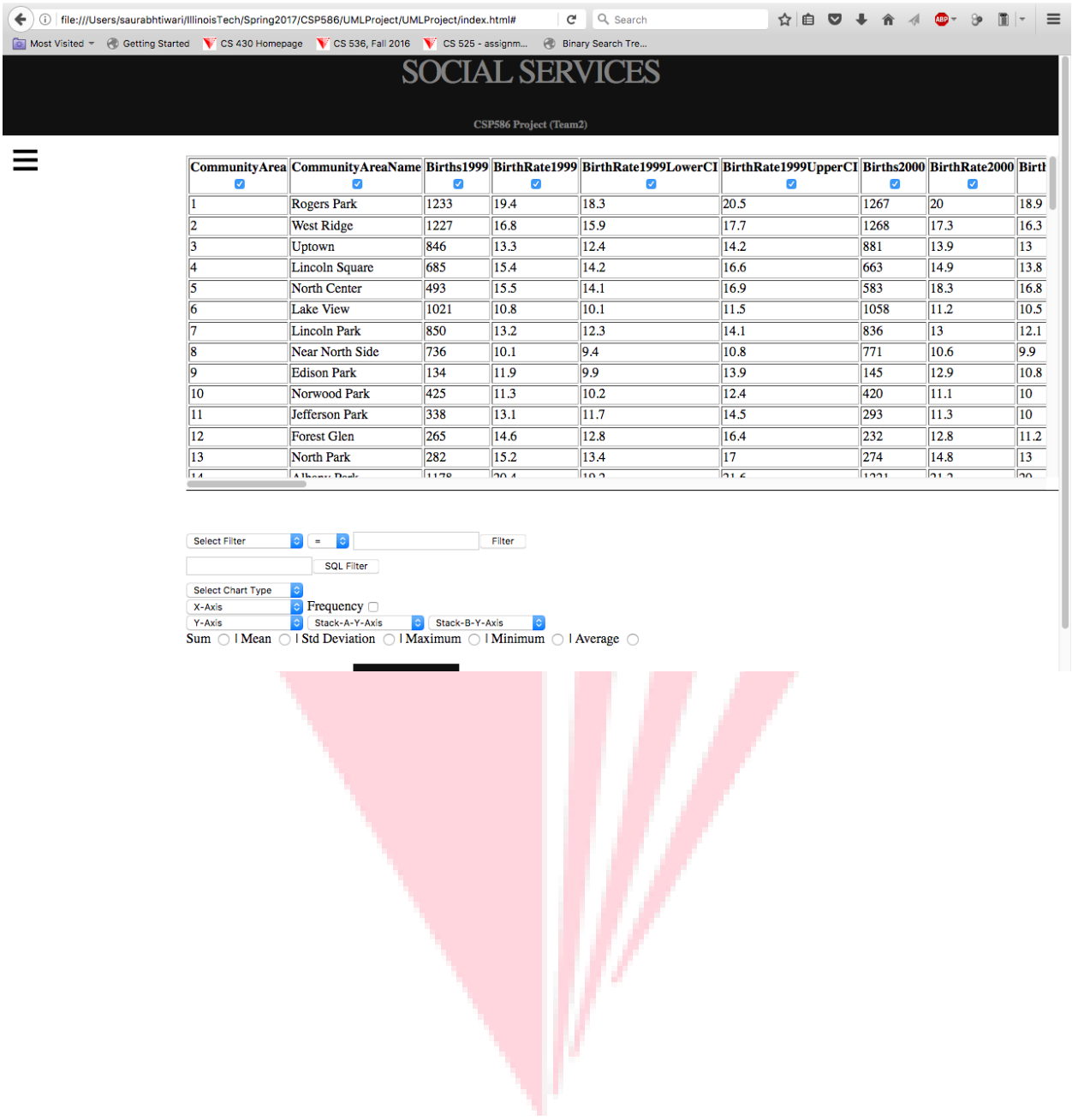
- COMMAND

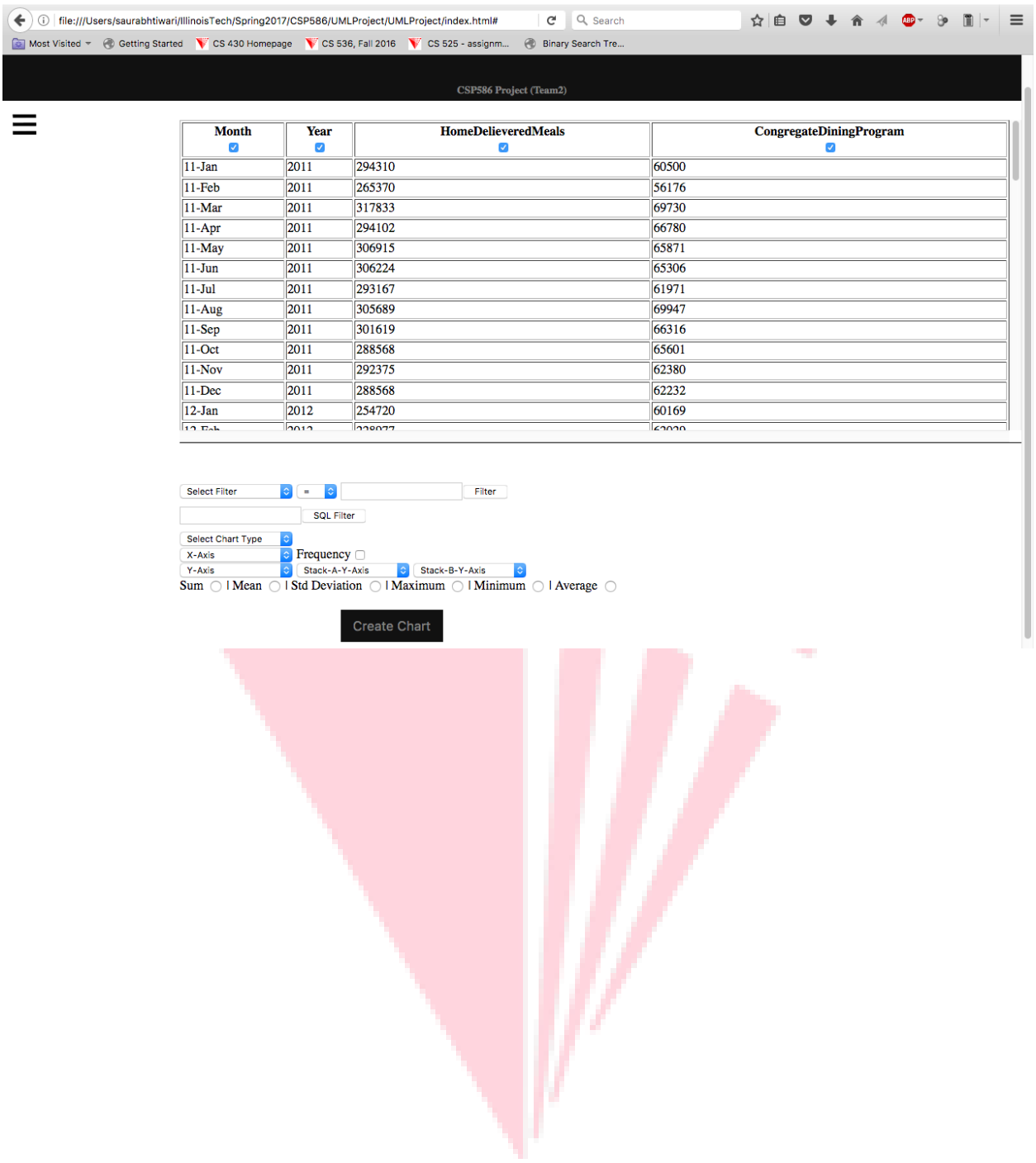

invokes
DashBoardObserver
-dashboardObserverInstance
-canvasUtil
+DashboardObserver()
+createDashboardElements() : void
+createTable() : void
+createFilterPanel(): void
+createSqlFilterPanel(): void
+createFilterInstance(): void
+createChartDashboard(DataFrame) : void
+createChartControls(DataFrame) : void
FilterHandler
-dataframeObject
-filterButton
-sqlFilterButton
-dataframe
-dashboardObserver
-DataFrame
+FilterHandler(): void
+filterButtonEventListener(): void
+sqlButtonEventListener(): void
+executeSQLQuery(string): void
+postfilterActivity(DataFrame): void
+updateObserver(DataFrame) : void
+refreshHTMLElementsDataframe(): void
+parseColumnsToString(string) : string

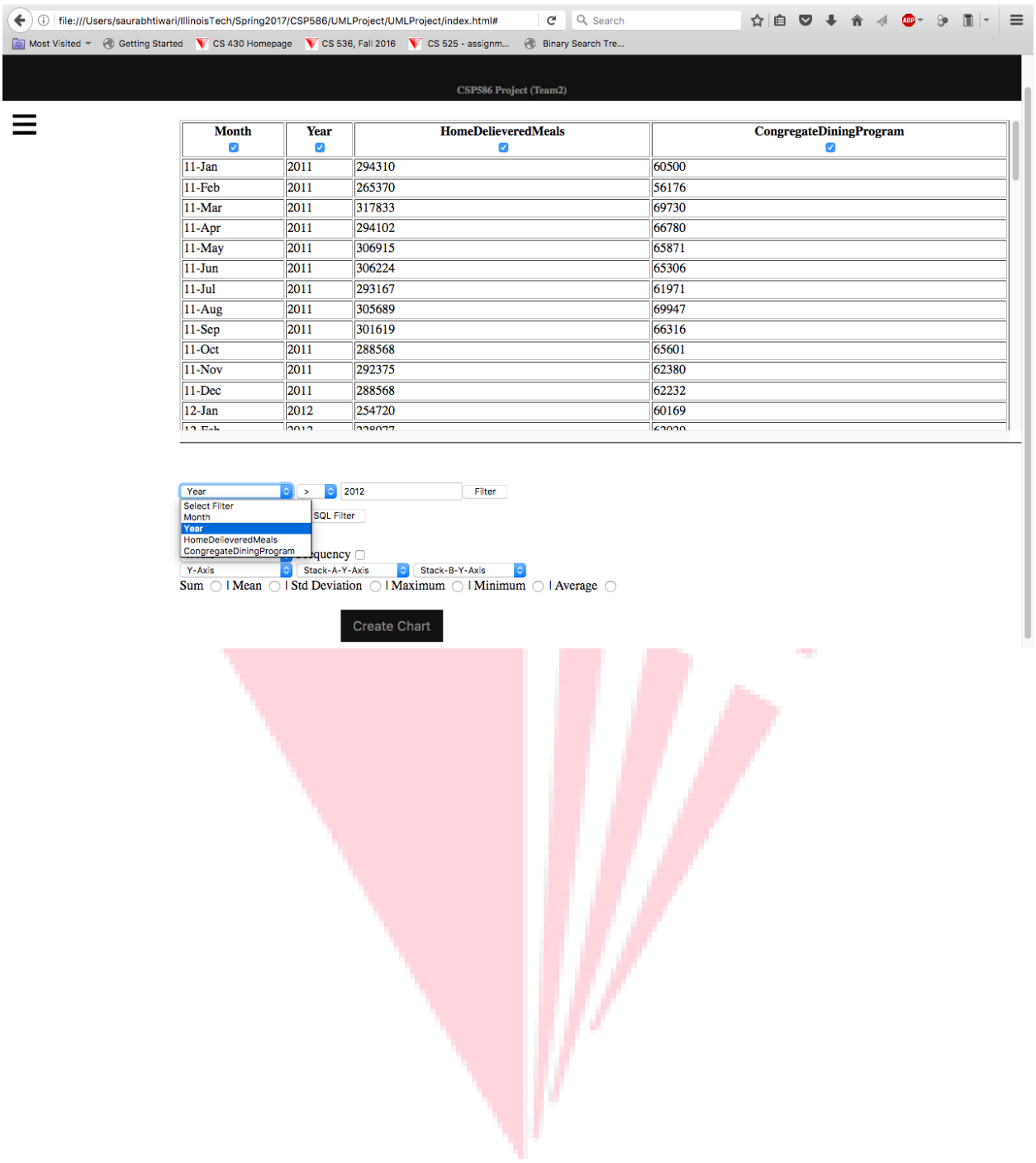
SCREENSHOTS

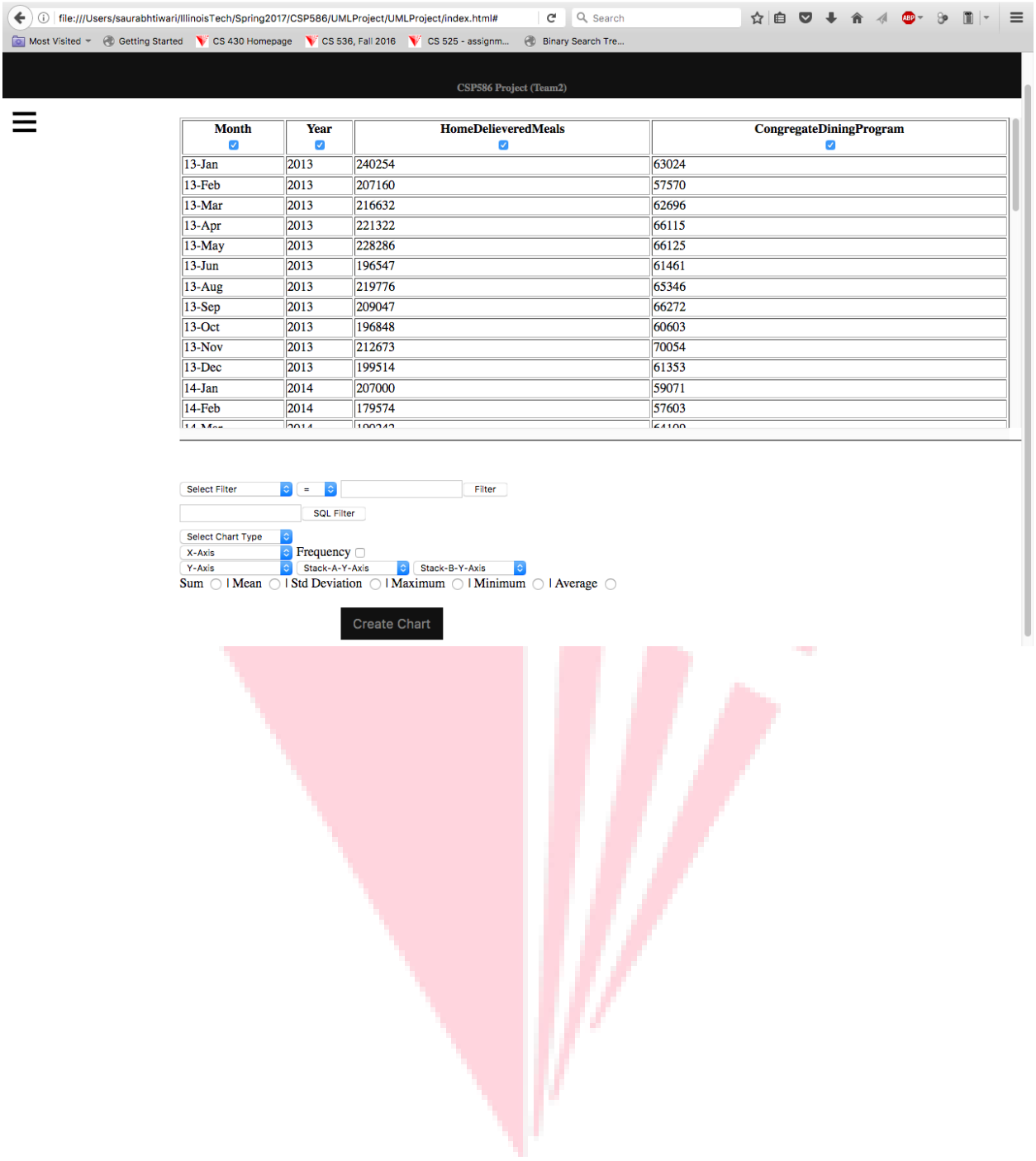





file:///Users/saurabhtiwari/IllinoisTech/Spring2017/CSP586/UMLProject/UMLProject/index.html#
Search
Most Visited
Getting Started
CS 430 Homepage
CS 536, Fall 2016
CS 525 - assignm...
Binary Search Tre...
SOCIAL SERVICES
CSP586 Project (Team2)
CommunityArea
CommunityAreaName
Births1999
BirthRate1999
BirthRate1999LowerCI
BirthRate1999UpperCI
Births2000
BirthRate2000
1 Rogers Park 1233 19.4 18.3 20.5 1267 20 18.9
2 West Ridge 1227 16.8 15.9 17.7 1268 17.3 16.3
3 Uptown 846 13.3 12.4 14.2 881 13.9 13
4 Lincoln Square 685 15.4 14.2 16.6 663 14.9 13.8
5 North Center 493 15.5 14.1 16.9 583 18.3 16.8
6 Lake View 1021 10.8 10.1 11.5 1058 11.2 10.5
7 Lincoln Park 850 13.2 12.3 14.1 836 13 12.1
8 Near North Side 736 10.1 9.4 10.8 771 10.6 9.9
9 Edison Park 134 11.9 9.9 13.9 145 12.9 10.8
10 Norwood Park 425 11.3 10.2 12.4 420 11.1 10
11 Jefferson Park 338 13.1 11.7 14.5 293 11.3 10
12 Forest Glen 265 14.6 12.8 16.4 232 12.8 11.2
13 North Park 282 15.2 13.4 17 274 14.8 13
Select Filter
=
Filter
SQL Filter
Select Chart Type
X-Axis
Frequency
Y-Axis
Stack-A-Y-Axis
Stack-B-Y-Axis
Sum | Mean | Std Deviation | Maximum | Minimum | Average


file:///Users/saurabhtiwari/IllinoisTech/Spring2017/CSP586/UMLProject/UMLProject/index.html#
Search
Most Visited
Getting Started
CS 430 Homepage
CS 536, Fall 2016
CS 525 - assignm...
Binary Search Tre...
CSP586 Project (Team2)
Month
Year
HomeDelieveredMeals
CongregateDiningProgram
11-Jan 2011 294310 60500
11-Feb 2011 265370 56176
11-Mar 2011 317833 69730
11-Apr 2011 294102 66780
11-May 2011 306915 65871
11-Jun 2011 306224 65306
11-Jul 2011 293167 61971
11-Aug 2011 305689 69947
11-Sep 2011 301619 66316
11-Oct 2011 288568 65601
11-Nov 2011 292375 62380
11-Dec 2011 288568 62232
12-Jan 2012 254720 60169
Select Filter
=
Filter
SQL Filter
Select Chart Type
X-Axis
Frequency
Y-Axis
Stack-A-Y-Axis
Stack-B-Y-Axis
Sum | Mean | Std Deviation | Maximum | Minimum | Average
Create Chart


file:///Users/saurabhtiwari/IllinoisTech/Spring2017/CSP586/UMLProject/UMLProject/index.html#
Search
Most Visited
Getting Started
CS 430 Homepage
CS 536, Fall 2016
CS 525 - assignm...
Binary Search Tre...
CSP586 Project (Team2)
Month
Year
HomeDelieveredMeals
CongregateDiningProgram
11-Jan 2011 294310 60500
11-Feb 2011 265370 56176
11-Mar 2011 317833 69730
11-Apr 2011 294102 66780
11-May 2011 306915 65871
11-Jun 2011 306224 65306
11-Jul 2011 293167 61971
11-Aug 2011 305689 69947
11-Sep 2011 301619 66316
11-Oct 2011 288568 65601
11-Nov 2011 292375 62380
11-Dec 2011 288568 62232
12-Jan 2012 254720 60169
Year
>
2012
Filter
Select Filter
Month
Year
HomeDelieveredMeals
CongregateDiningProgram
SQL Filter
Y-Axis
Stack-A-Y-Axis
Stack-B-Y-Axis
Sum
Mean
Std Deviation
Maximum
Minimum
Average
Create Chart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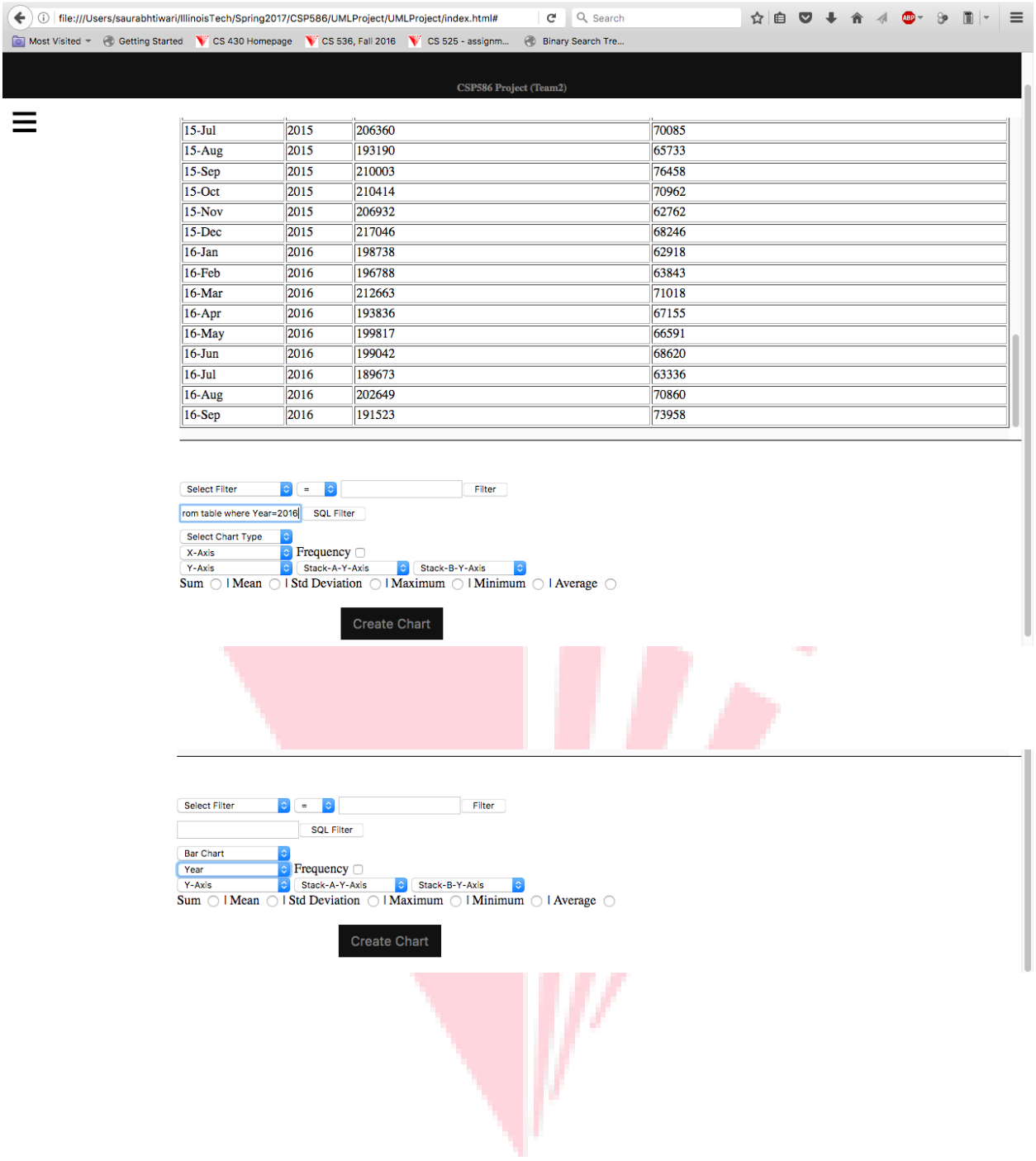
CSP586 Project (Team2)
Month
Year
HomeDelieveredMeals
CongregateDiningProgram
13-Jan 2013 240254 63024
13-Feb 2013 207160 57570
13-Mar 2013 216632 62696
13-Apr 2013 221322 66115
13-May 2013 228286 66125
13-Jun 2013 196547 61461
13-Aug 2013 219776 65346
13-Sep 2013 209047 66272
13-Oct 2013 196848 60603
13-Nov 2013 212673 70054
13-Dec 2013 199514 61353
14-Jan 2014 207000 59071
14-Feb 2014 179574 57603
Select Filter
=
Filter
SQL Filter
Select Chart Type
X-Axis
Frequency
Y-Axis
Stack-A-Y-Axis
Stack-B-Y-Axis
Sum | Mean | Std Deviation | Maximum | Minimum | Average
Create Chart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CSP586 Project (Team2)
15-Jul 2015 206360 70085
15-Aug 2015 193190 65733
15-Sep 2015 210003 76458
15-Oct 2015 210414 70962
15-Nov 2015 2015 206932 62762
15-Dec 2015 217046 68246
16-Jan 2016 198738 62918
16-Feb 2016 196788 63843
16-Mar 2016 212663 71018
16-Apr 2016 193836 67155
16-May 2016 199817 66591
16-Jun 2016 199042 68620
16-Jul 2016 189673 63336
16-Aug 2016 202649 70860
16-Sep 2016 191523 73958
Select Filter
=
Filter
rom table where Year=2016
SQL Filter
Select Chart Type
X-Axis
Frequency
Y-Axis
Stack-A-Y-Axis
Stack-B-Y-Axis
Sum | Mean | Std Deviation | Maximum | Minimum | Average
Create Chart
Select Filter
=
Filter
SQL Filter
Bar Chart
Year
Frequency
Y-Axis
Stack-A-Y-Axis
Stack-B-Y-Axis
Sum | Mean | Std Deviation | Maximum | Minimum | Average
Create Chart

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CSP586 Project (Team2)

Month	Year	HomeDelieveredMeals	CongregateDiningProgram
11-Jan	2011	294310	60500
11-Feb	2011	265370	56176
11-Mar	2011	317833	69730
11-Apr	2011	294102	66780
11-May	2011	306915	65871
11-Jun	2011	306224	65306
11-Jul	2011	293167	61971
11-Aug	2011	305689	69947
11-Sep	2011	301619	66316
11-Oct	2011	288568	65601
11-Nov	2011	292375	62380
11-Dec	2011	288568	62232
12-Jan	2012	254720	60169

Select Filter = Filter

SQL Filter

Bar Chart

Year Frequency

Y-Axis Stack-A-Y-Axis Stack-B-Y-Axis

Sum | Mean | Std Deviation | Maximum | Minimum | Average

Create Chart

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11-Aug	2011	305689	69947
11-Sep	2011	301619	66316
11-Oct	2011	288568	65601
11-Nov	2011	292375	62380
11-Dec	2011	288568	62232
12-Jan	2012	254720	60169

Select Filter = Filter

SQL Filter

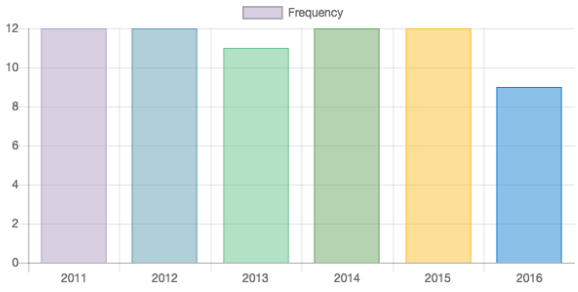
Bar Chart

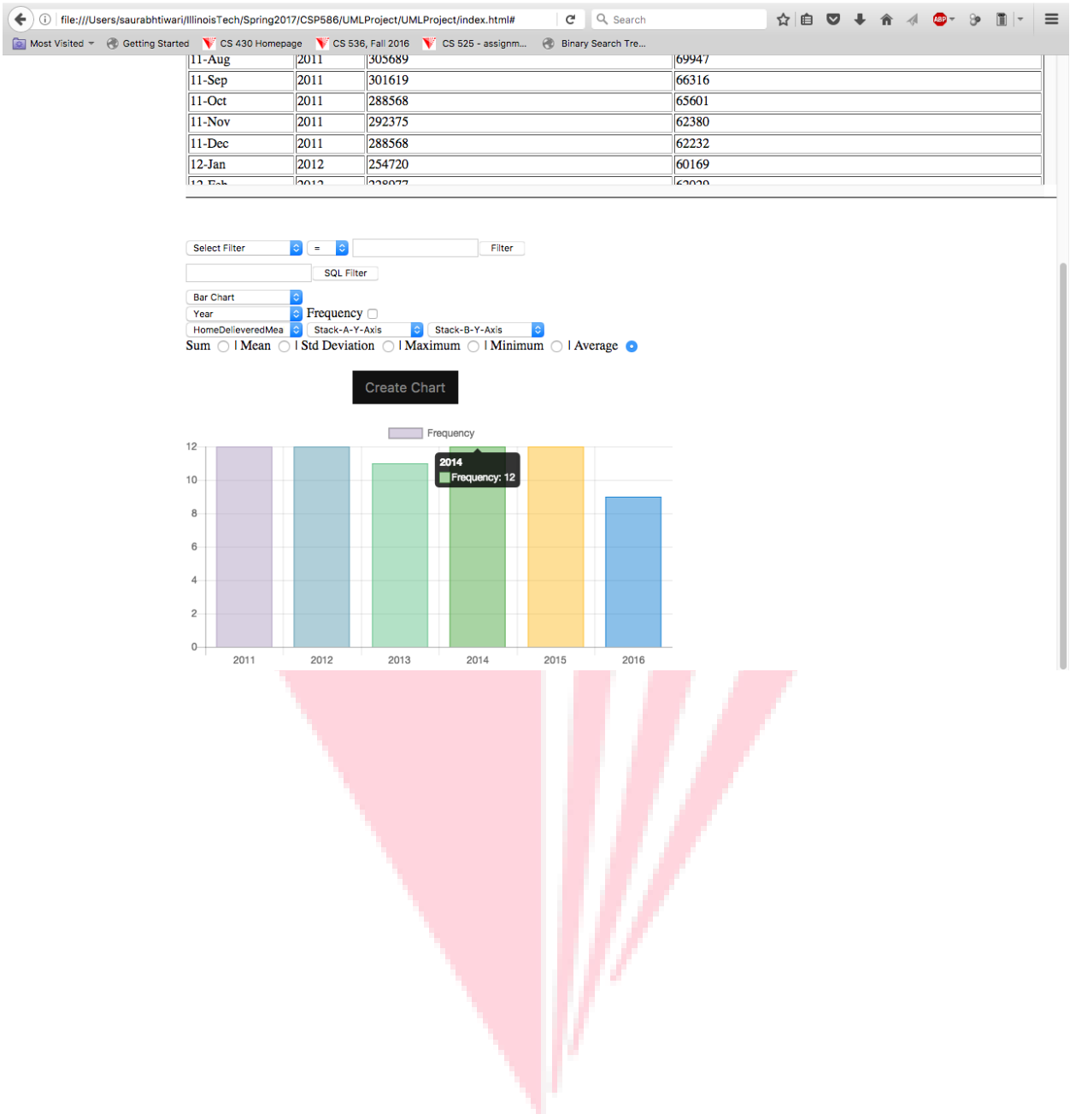
Year Frequency

Y-Axis Stack-A-Y-Axis Stack-B-Y-Axis

Sum | Mean | Std Deviation | Maximum | Minimum | Average

Create Chart

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Binary Search Tre...
11-Aug 2011 305689 69947
11-Sep 2011 301619 66316
11-Oct 2011 288568 65601
11-Nov 2011 292375 62380
11-Dec 2011 288568 62232
12-Jan 2012 254720 60169
Select Filter
=
Filter
SQL Filter
Bar Chart
Year
Frequency
HomeDelieveredMea
Stack-A-Y-Axis
Stack-B-Y-Axis
Sum | Mean | Std Deviation | Maximum | Minimum | Average
Create Chart
Frequency
2014
Frequency: 12
12
10
8
6
4
2
0
2011
2012
2013
2014
2015
2016

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11-Aug	2011	305689	69947
11-Sep	2011	301619	66316
11-Oct	2011	288568	65601
11-Nov	2011	292375	62380
11-Dec	2011	288568	62232
12-Jan	2012	254720	60169

Select Filter = Filter

SQL Filter

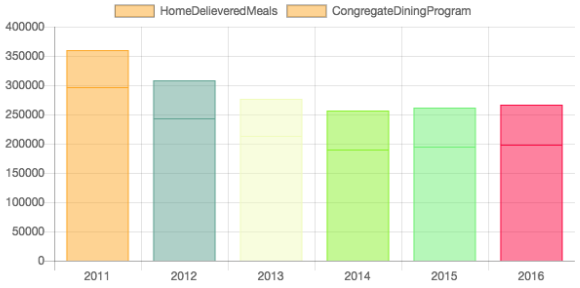
Bar Chart

Year Frequency

HomeDelieveredMea CongregateDiningPrc Stack-B-Y-Axis

Sum | Mean | Std Deviation | Maximum | Minimum | Average

Create Chart



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11-Aug	2011	305689	69947
11-Sep	2011	301619	66316
11-Oct	2011	288568	65601
11-Nov	2011	292375	62380
11-Dec	2011	288568	62232
12-Jan	2012	254720	60169

Select Filter = Filter

SQL Filter

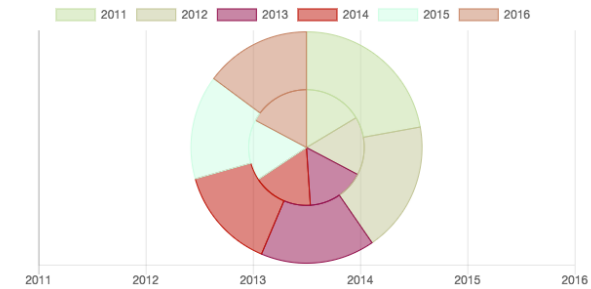
Pie Chart

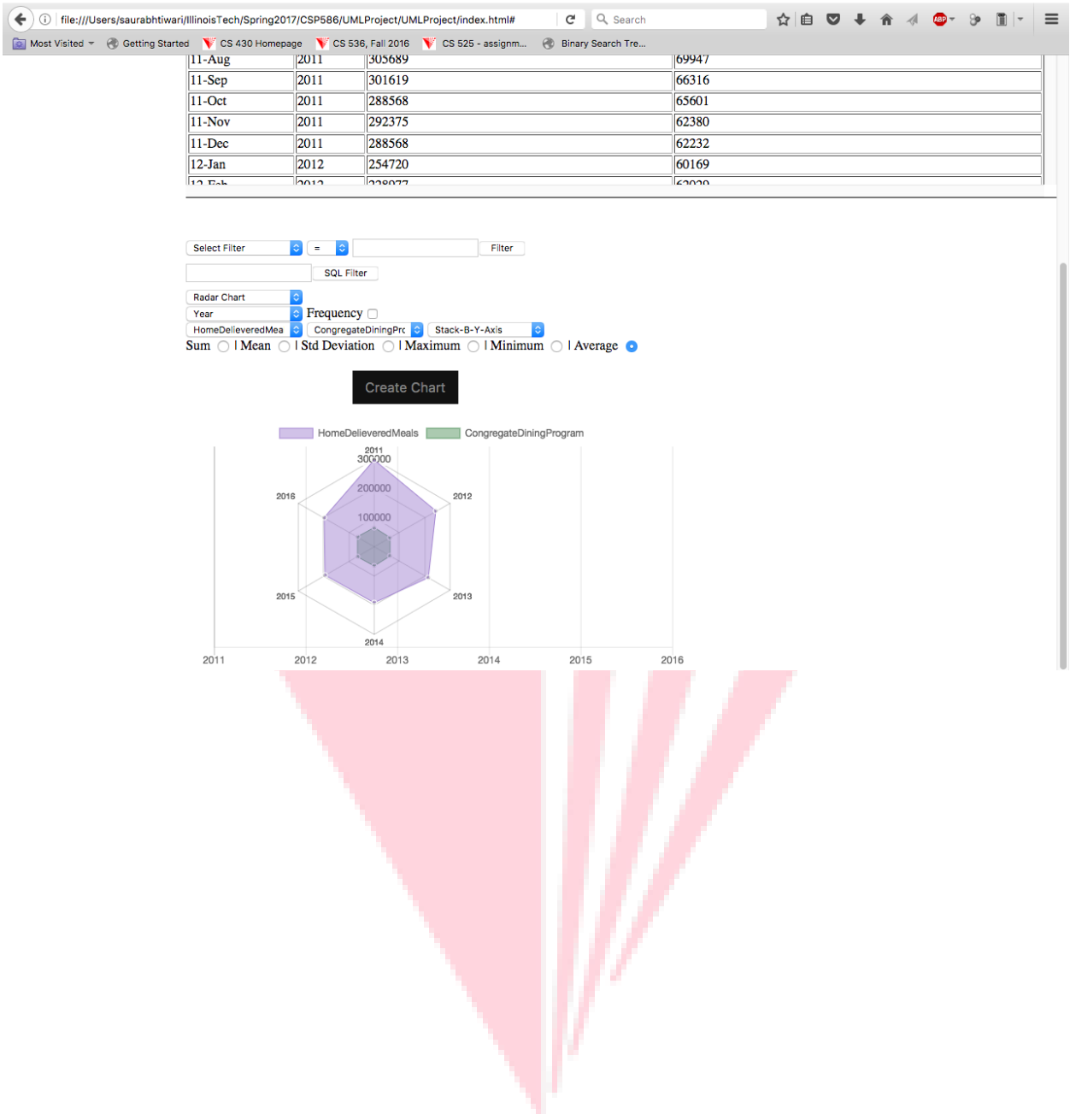
Year Frequency

HomeDelieveredMea CongregateDiningPrc Stack-B-Y-Axis

Sum | Mean | Std Deviation | Maximum | Minimum | Average

Create Chart

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Search
Most Visited
Getting Started
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Binary Search Tre...
11-Aug 2011 305689 69947
11-Sep 2011 301619 66316
11-Oct 2011 288568 65601
11-Nov 2011 292375 62380
11-Dec 2011 288568 62232
12-Jan 2012 254720 60169
Select Filter
=
Filter
SQL Filter
Radar Chart
Year
Frequency
HomeDelieveredMea
CongregateDiningPrc
Stack-B-Y-Axis
Sum | Mean | Std Deviation | Maximum | Minimum | Average
Create Chart
HomeDelieveredMeals
CongregateDiningProgram
2011
300000
200000
100000
2012
2013
2014
2015
2016
2011
2012
2013
2014
2015
2016