# *Two Sigma Internal Use Only*

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|  | Name | Designation | Signature & Date |
| Prepared By | Pallavi Mane | Intern | 4/29/2014 |
| Approved By |  |  |  |

Revision History

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| --- | --- | --- |
| Version Number | Revision Date | Description of Changes |
| 1.0 | 4/29/2014 | Initial Release |
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| Functionality Name | *Bubble Chart Module* |

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| Tested By | Pallavi Mane |
| Tested On | 4/29/2014 |

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| **Test case Id** | **Test case Description** | **Expected Result** | **Actual Result** | **Remarks** |
| 1 | Enter input as iPython table with three numerical columns | Table and Bubble Chart should be generated without any error | PASS | Bubble Chart configuration would be displayed only after selecting it in cell output display type |
| 2 | Check the options in dropdown during initialization | Dropdown should only show names of numeric columns | PASS |  |
| 3 | Check if the Automatic Bounds option is enabled by default during initialization | Automatic option is checked by default | PASS |  |
| 4 | Uncheck the Automatic Bounds option without selecting option in any of the dropdowns | An error messaging saying "Please select values for X-Y Bounds and Bubble size to proceed" is displayed | PASS |  |
| 5 | Enter Title without selecting X-axis, Y-axis and Bubble size | No chart is displayed in the output | PASS |  |
| 6 | Enter input as iPython table with two numerical columns | Error message saying "Bubble Chart requires Minimum 3 numerical columns!!" is displayed | PASS |  |
| 7 | Select value for X-axis, Y-axis and Bubble Size | Bubble Chart is displayed with default configuration options | PASS |  |
| 8 | Select value for X-axis, Y-axis and Bubble Size and uncheck Automatic Bounds | The fields to enter user-defined X-Y Bounds and Intervals is enabled and Bubble Chart is displayed with default values. | PASS |  |
| 9 | Once Bubble Chart is displayed, edit the Title | The new title is updated immediately and shows on top of the Bubble Chart | PASS |  |
| 10 | Click on Hide/Show Configuration button | It should toggle between hide/show for the configuration settings | PASS |  |
| 11 | Select value for X-axis, Y-axis and Bubble Size and uncheck Automatic Bounds. Enter non-numeric values in Min, Max or Interval fields | Error message saying "Only numbers allowed" is displayed next to the field | PASS |  |
| 12 | Select value for X-axis, Y-axis and Bubble Size and uncheck Automatic Bounds. Enter negative value in the Interval field | Error message saying "Interval cannot be negative or zero" is displayed | PASS |  |
| 13 | Select value for X-axis, Y-axis and Bubble Size and uncheck Automatic Bounds. Enter numeric values in Min, Max, Interval. | Bubble Chart is updated with new values | PASS |  |
| 14 | Select value for X-axis, Y-axis and Bubble Size and uncheck Automatic Bounds. Enter numeric values in Min, Max, Interval. Check Automatic Bounds option | Bubble Chart is updated with default values | PASS |  |

##### Test Data

Below are the sample test data used to validate most of the above mentioned test cases.

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| Test Data Id | Test Data |
| 1 | import pandas as pd  df = pd.DataFrame([[1, 30], [2, 0], [3, 90],[4,60],[5,45]], columns=['City', 'Employees'])  df |
| 2 | import pandas as pd  df = pd.DataFrame([[12, 30000, 10, 15, 200, 'A'], [35, 45000, 13, 34,150, 'B'], [20, 28000, 26, 11,289,'C'],[6,6300, 64,25, 180,'D'],[11,45250, 80, 21, 164,'E']], columns=['Products', 'Sales', 'MarketShare', 'TypeOfProducts','DamagedPerMonth','Type of Product'])  df |
| 3 | people = data.frame (  age = c(32,34,12,41,18,23,43,22,19,24),  height = c(177,166,165,174,156,184,191,179,182,180),  sex = c('M','F','M','M','F','M','F','F','M','F')) |
| 4 | people = data.frame (  age = c(32,34,12,41,18,23,43,22,19,24),  height = c(177,166,165,174,156,184,191,179,182,180),  weight= c(135,150,180,103,156,175,191,200,182,102),  sex = c('M','F','M','M','F','M','F','F','M','F')) |