# DUY TÂN UNIVERSITY

International School

# CAPSTONE PROJECT 2
## CMU-SE-451 / CMU-IS-451 / CMU-CS-451

# TEST CASE DOCUMENT

Version 2.0

Date: 1 - Mar - 2021

# EXPERT-DRIVEN SMART DASHBOARD APPLICATION

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| Name | Signature | Date |
|------|-----------|------|

Binh, Thanh Nguyen _____                      _____ 26 - May - 2020

| PROJECT INFORMATION | | | |
|---|---|---|---|
| **Project Acronym** | EDSDA | | |
| **Project Title** | Expert-Driven Smart Dashboard Application | | |
| **Project Web URL** | https://sda-research.ml/ | | |
| **Start Date** | 01 - Mar - 2021 | | |
| **End Date:** | 02 - Jun - 2021 | | |
| **Lead Institution** | International School, Duy Tan University | | |
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| DOCUMENT INFORMATION | | | |
|---|---|---|---|
| **Document Title** | Test Case | | |
| **Author(s)** | Team C2SE.06 | | |
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| **Access** | Project and CMU Program | | |

## REVISION HISTORY

| Version | Person(s) | Date | Description | Approval |
|---------|-----------|------|-------------|----------|
| Draft | Hoa, Vo | 01 - Mar - 2021 | Initiate document | Draft |
| 2.0 | All members | 14 - Mar- 2021 | Finish content of the document | 2.0 |
| 2.1 | All members | 25 - May - 2021 | Update content, fix typo | 2.1 |
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**Test Cases: NavBar**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| Front-end | | | | | | IE | FF 86 | Chrome 89 | |
| TC-Nav_01 | Navbar | | 1. Open Datablocks<br>2. Go to "Navbar" section<br>3. Check this section to make sure it match the design. | 3. This section matched the design | | Pass | Pass | Pass | |
| TC-Nav_02 | Navbar | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Check backgroundColor | 3. The background color is #1a192b | | Pass | Pass | Pass | |
| TC-Nav_03 | Navbar | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Check borderbottom | 3.the border is solid has height is 1px and color is #333154 | | Pass | Pass | Pass | |
| TC-Nav_04 | Navbar | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Check the align items | 3. The align items is center | | Pass | Pass | Pass | |
| TC-Nav_05 | Logo | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3.  Check the Logo | 3. This section matched the design | | Pass | Pass | Pass | |
| TC-Nav_06 | Button | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3.  Check the button background color | 3. The background color is #1a192b | | Pass | Pass | Pass | |
| TC-Nav_07 | Button | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3.  Check the button font family | 3. The font family is IBM Plex Sans | | Pass | Pass | Pass | |
| TC-Nav_08 | Button | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3.  Check the button font size | 3. The font size is 11px | | Pass | Pass | Pass | |

**Test Cases: NavBar**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Nav_09 | Button | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Check the text color | 3. The color is white | | Pass | Pass | Pass | |
| TC-Nav_10 | Button | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Check the text | 3. The text is uppercase | | Pass | Pass | Pass | |
| TC-Nav_11 | Button | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Hover in button<br>4. Check the text color | 4. The color is #ff0072 | | Pass | Pass | Pass | |
| TC-Nav_12 | Button | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Hover in button<br>4. Check the curson | 4. The curson is point | | Pass | Pass | Pass | |
| TC-Nav_13 | Button | Menu | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File, View and Help" button<br>4. Check the list menu of file | 4. Show the 3 buttons are Save, Clear and Open Recent | | Pass | Pass | Pass | |
| TC-Nav_14 | Button | Menu | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File, View and Help" button<br>4. Check the background color of list menu | 4. The background color is #222138 | | Pass | Pass | Pass | |
| TC-Nav_15 | Button | Menu | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File, View and Help" button<br>4. Check the border of list menu | 4. The border is solid has height is 1px and color is #333154 | | Pass | Pass | Pass | |
| | | | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File, View and Help" button | 4. 20px from the top | | | | | |

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**Test Cases: NavBar**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Nav_16 | Button | Menu | 4. Check the position of list menu | | | Pass | Pass | Pass | |
| TC-Nav_17 | Button | Items | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File, View and Help" button<br>4. Check items | 4. Padding the top, bottom is 4px and the left, right is 16px | | Pass | Pass | Pass | |
| TC-Nav_18 | Button | Items | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File, View and Help" button<br>4. Check text items | 4. the text transform is capitalize | | Pass | Pass | Pass | |
| TC-Nav_19 | Button | Items | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File, View and Help" button<br>4. Hover in items<br>5. Check background color items | 5. The background color is #757575 | | Pass | Pass | Pass | |
| TC-Nav_20 | Button | Items | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File, View and Help" button<br>4. Hover in items<br>5. Check the curson | 5. The curson is point | | Pass | Pass | Pass | |
| TC-Nav_21 | Button | Save Item | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File" button<br>4. Click on "Save" items | 4. Show the message on the Logs of Info section . The message is: 'Successfully saved project locally. ' | | Pass | Pass | Pass | |
| | | | 1. Open Dashboard<br>2. Go to "Navbar" section | 4. Show the alert in | | | | | |

**Test Cases: NavBar**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Nav_22 | Button | Clear Item | 3. Click "File" button<br><br>4. Click on "Clear" items | display. The message is: 'Are you sure?. And Menu still show, Clear items appear the background color when hover | | Pass | Pass | Pass | |
| TC-Nav_23 | Button | Clear Item | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File" button<br>4. Click on "Clear" items<br>5. Click "OK" | 5. Clear all widgets | | Pass | Pass | Pass | |
| TC-Nav_24 | Button | Clear Item | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "File" button<br>4. Click on "Clear" items<br>5. Click "Cancel" | 5. Close the Alert and close the Menu | | Pass | Pass | Pass | |
| TC-Nav_25 | Button | Zoom 100% Item | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "View" button<br>4. Click on "Zoom 100%" items | 4. Zoom Main section to 100% | | Pass | Pass | Pass | |
| TC-Nav_26 | Button | Zoom In Item | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "View" button<br>4. Click on "Zoom In" items | 4. Zoom In Main section to 12.5% | | Pass | Pass | Pass | |
| TC-Nav_27 | Button | Zoom Out Item | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "View" button<br>4. Click on "Zoom Out" items | 4. Zoom out Main section 12.5% | | Pass | Pass | Pass | |
| | | | 1. Open Dashboard<br>2. Go to "Navbar" section | 4. Show Introduction | | | | | |

**Test Cases: NavBar**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Nav_28 | Button | Items | 3. Click "Help" button<br>4. Click on "Help" items | 4. Show introduction Flow, About, Feedback Item on display | | Pass | Pass | Pass | |
| TC-Nav_29 | Button | About Item | 1. Open Dashboard<br>2. Go to "Navbar" section<br>3. Click "Help" button<br>4. Click on "About" items | 4. Show the infomation | | Pass | Pass | Pass | |

## Test Cases: Output&Logs

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | IE | FF 86 | Chrome 89 | |
| **Front-end** | | | | | | | | | |
| TC-OAL_01 | Output and logs | | 1. Open Datablocks<br>2. Go to "Output and Logs" section<br>3. Check this section to make sure it match the design. | 3. This section matched the design | | Pass | Pass | Pass | |
| TC-OAL_02 | Output and logs | | 1. Open Datablocks<br>2. Go to "Output and Logs" section<br>3. Check the background color | 3. The background color is #1a192b | | Pass | Pass | Pass | |
| TC-OAL_03 | Output and logs | | 1. Open Dashboard<br>2. Go to "Output and Logs" section<br>3.Check border bottom | 3. The border is solid has height is 1px and color is #333154 | | Pass | Pass | Pass | |
| TC-OAL_04 | Output | | 1. Open Dashboard<br>2. Go to "Output" section<br>3.Check Output section | 3. Width is 75% | | Pass | Pass | Pass | |
| TC-OAL_05 | Output | Header | 1. Open Dashboard<br>2. Go to "Output" section<br>3.Check Header | 3. Height is 30px | | Pass | Pass | Pass | |
| TC-OAL_06 | Output | Header | 1. Open Dashboard<br>2. Go to "Output" section<br>3.Check the title | 3. Align is center | | Pass | Pass | Pass | |
| TC-OAL_07 | Output | Header | 1. Open Dashboard<br>2. Go to "Output" section<br>3.Check the text | 3. Font size is 11px and bold, text is uppercase | | Pass | Pass | Pass | |
| TC-OAL_08 | Logs | | 1. Open Dashboard<br>2. Go to "Logs" section<br>3.Check Logs section | 3. Width is 25% | | Pass | Pass | Pass | |
| | | | 1. Open Dashboard<br>2. Go to "Logs" section | | | | | | |

**Test Cases: Output&Logs**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-OAL_09 | Logs | Header | 3.Check Header | 3. Height is 30px | | Pass | Pass | Pass | |
| TC-OAL_10 | Logs | Header | 1. Open Dashboard<br>2. Go to "Logs" section<br>3.Check the title | 3. Align is center | | Pass | Pass | Pass | |
| TC-OAL_11 | Logs | Header | 1. Open Dashboard<br>2. Go to "Logs" section<br>3.Check the text | 3. Font size is 11px and bold, text is uppercase | | Pass | Pass | Pass | |
| TC-OAL_12 | Logs | Input form | 1. Open Dashboard<br>2. Go to "Logs" section<br>3. Check Input form | 'help' to see the commands" | | Pass | Pass | Pass | |
| TC-OAL_13 | Logs | Input form | 1. Open Dashboard<br>2. Go to "Logs" section<br>3. Check text | 3. Font size is 12px, color is inherit | | Pass | Pass | Pass | |
| TC-OAL_14 | Logs | Input form | 1. Open Dashboard<br>2. Go to "Logs" section<br>3. Input to form | 3. Display console.log on Logs main | | Pass | Pass | Pass | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | IE | FF 86 | Chro me 89 | |
| **Front-end** | | | | | | | | | |
| TC-Main_01 | Main | Message | 1. Open Datablocks<br><br>2. Go to "Main" section<br><br>3. Check message | 3. Message should be displayed with logo, description about project, closed icon and 2 buttons , and background color made dim ,boder radius is 20px . | | Pass | Pass | Pass | |
| TC-Main_02 | Main | Message | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Check message background color | 3. Background color is #1A192B | | Pass | Pass | Pass | |
| TC-Main_03 | Main | Message | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Check Logo | 3. Logo on top and center | | Pass | Pass | Pass | |
| TC-Main_04 | Main | Message | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Check text | 3. Font size is 16px , text align is center and the color is #C5CBD2 | | Pass | Pass | Pass | |
| TC-Main_05 | Main | Message | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Check Add Block button | 3. The background color is #FF0072, boder radius : 20px , color of Text #FFFFFF | | Pass | Pass | Pass | |
| TC-Main_06 | Main | Message | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Add Block<br>4. Check button | 4 . Show toolbox | | Pass | Pass | Pass | |
| TC-Main_07 | Main | Message | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Check Show Example | 3. Border radius 20px , border color and text color is #FFFFFF, background color is #1A192B | | Pass | Pass | Pass | |
| | | | 1. Open Datablocks | | | | | | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Main_08 | Main | Message | 2. Go to "Main" section<br>3. Click Show Example<br>4. Check button | 4 . Show example on main | | Pass | Pass | Pass | |
| TC-Main_09 | Main | | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Check Main section | 4. Background color is #1A192B, Mini map , group zoom button , block button | | Pass | Pass | Pass | |
| TC-Main_10 | Main | Block button | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Check Block button | 3. Background color is #1A192B, border radius 20px , border color is #524F88 | | Pass | Pass | Pass | |
| TC-Main_11 | Main | Block button | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Hover over on Block button | 3. Background color #524F88 , cursor is pointer | | Pass | Pass | Pass | |
| TC-Main_12 | Main | Block button | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button | 3. Show toolbox | | Pass | Pass | Pass | |
| TC-Main_13 | Main | Toolbox | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Check Toolbox | 4. Background color #1A192B, box shadow , border radius 20px | | Pass | Pass | Pass | |
| TC-Main_14 | Main | Toolbox | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Check Toolbox | 4. Search bar, menu list , board, scroll,close icons ,Background color #1A192B, box shadow , border radius 20px , | | Pass | Pass | Pass | |
| TC-Main_15 | Main | Toolbox | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Check Menu list | 4. Show search, Input , data cubes, operator , visualization in the left message | | Pass | Pass | Pass | |
| TC-Main_16 | Main | Toolbox | 1. Open Datablocks<br>2. Go to "Main" section | 4. The text and icon has color is | | Pass | Pass | Pass | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Main_16 | Main | Toolbox | 3. Click Block button | #FF0072 | | Pass | Pass | Pass | |
| | | | 4. Click items in menu list | | | | | | |
| TC-Main_17 | Main | Toolbox | 1. Open Datablocks | 4. The background color is #524F88; | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Hover items in menu list | | | | | | |
| TC-Main_18 | Main | Toolbox | 1. Open Datablocks | 4. Show item on board | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Input item in Search bar | | | | | | |
| TC-Main_19 | Main | Toolbox | 1. Open Datablocks | 4. input section , Availables data cube section , operaotors section , visualizations section | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Check the board | | | | | | |
| TC-Main_20 | Main | Toolbox | 1. Open Datablocks | 4. Show File cell to handle file, input: csv, json, xml and output is dataset | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Check the input section | | | | | | |
| TC-Main_21 | Main | Toolbox | 1. Open Datablocks | 4. About Climate, Atmosphere, Population, Industry, Forest and descript values from 2012 to 2019 | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Check the the available data cubes section | | | | | | |
| TC-Main_22 | Main | Toolbox | 1. Open Datablocks | 4. About Statistic merge, Sort, Filter and descript function | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Check the the operators section | | | | | | |
| TC-Main_23 | Main | Toolbox | 1. Open Datablocks | 4. About Table, Column chart, Line Chart, Multi Y-Axis Chart, Pie chart, Maps and descript | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| | | | 4. Check the the visualizations section | Pie chart, Maps and descript function | | | | | |
| TC-Main_24 | Main | Toolbox | 1. Open Datablocks | 4. The cursor is pointer | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Hover over on items in board | | | | | | |
| TC-Main_25 | Main | Toolbox | 1. Open Datablocks | 4. Close Toolbox | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click Close icon | | | | | | |
| TC-Main_26 | Main | Toolbox | 1. Open Datablocks | 4. Close Toolbox | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click outside Toolbox | | | | | | |
| TC-Main_27 | Main | Widgets | 1. Open Datablocks | 4. Show widget in main: widget name, close icon, dimension and years , areas | Widgets: Climate, Atmosphere, Population, Industry,Forest | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | | |
| TC-Main_28 | Main | Widgets | 1. Open Datablocks | 5. Close widget | Widget | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the board | | | | | | |
| | | | 5. Click close icon | | | | | | |
| TC-Main_29 | Main | Widgets | 1. Open Datablocks | 5. Background color is #222138, the text font size is 12px , color is #FFFFFF | Widget | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the board | | | | | | |
| | | | 5. Check the widget head | | | | | | |
| | | | 1. Open Datablocks | Background color is #222138, | | | | | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Main_30 | Main | Widgets | 2. Go to "Main" section<br>3. Click Block button<br>4. Click widget in the board<br>5. Check the widget body | the text font size is 12px , color is #FFFFFF | Widget | Pass | Pass | Pass | |
| TC-Main_31 | Main | Widgets | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Click widget in the board<br>5. Hover over the dimension in widget body | 5. Background color is #524F88 | Widget | Pass | Pass | Pass | |
| TC-Main_32 | Main | Operators | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Click Statistic visualization in the board | 4. Show Statistic visualization : name , close icon, run button | Statistic visualization | Pass | Pass | Pass | |
| TC-Main_33 | Main | Operators | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Click Statistic visualization in the board<br>5. Click close icon | 5. Close Statistic visualization | Statistic visualization | Pass | Pass | Pass | |
| TC-Main_34 | Main | Operators | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Click Statistic visualization in the board<br>5. Check the head | 5. Background color is #222138, the text font size is 12px , color is #FFFFFF | Statistic visualization | Pass | Pass | Pass | |
| TC-Main_35 | Main | Operators | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button | 5. Background color is #222138 | Statistic visualization | Pass | Pass | Pass | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Main_35 | Main | Operators | 4. Click Statistic visualization in the board | | | Pass | Pass | Pass | |
| | | | 5. Check the body | | | | | | |
| TC-Main_36 | Main | Operators | 1. Open Datablocks | 5. Background color is #FF0072; border-radius is 20px , the text : font size 14px, color is #FFFFFF | Statistic visualization | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click Statistic visualization in the board | | | | | | |
| | | | 5. Check the Run button | | | | | | |
| TC-Main_37 | Main | Operators | 1. Open Datablocks | 5. Background color is #FF0072; border-radius is 20px , the text : font size 14px, color is #FFFFFF | Statistic visualization | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click Statistic visualization in the board | | | | | | |
| | | | 5. Check the Run button | | | | | | |
| TC-Main_38 | Main | Visualizations - Charts | 1. Open Datablocks | 4. Show colum chart :  name , close icon, run button, chart | Colum chart, Line chart | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click chart in the board | | | | | | |
| TC-Main_39 | Main | Visualizations - Charts | 1. Open Datablocks | 5. Close chart | Colum chart, Line chart | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click chart in the board | | | | | | |
| | | | 5. Click close icon | | | | | | |
| TC-Main_40 | Main | Visualizations - Charts | 1. Open Datablocks | 5. Background color is #222138, the text font size is 12px , color is #FFFFFF | Colum chart, Line chart | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click chart in the board | | | | | | |
| | | | 5. Check the head | | | | | | |
| | | | 1. Open Datablocks | 5. Background color is #222138 | | | | | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Main_41 | Main | Visualizations - Charts | 2. Go to "Main" section<br>3. Click Block button<br>4. Click chart in the board<br>5. Check the body | 3. Background color is #222138 | Colum chart, Line chart | Pass | Pass | Pass | |
| TC-Main_42 | Main | Visualizations - Charts | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Click chart in the board<br>5. Check Run button | 5. Background color is #FF0072, border-radius is 20px , the text : font size 14px, color is #FFFFFF | Colum chart, Line chart | Pass | Pass | Pass | |
| TC-Main_43 | Main | Visualizations - Charts | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Click chart in the board<br>5. Check the Column chart | 5. About name , year, gloss, percent unit | Colum chart, Line chart | Pass | Pass | Pass | |
| TC-Main_44 | Main | Visualizations - Maps | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Click Maps in the board | 4. Show :  name , close icon, run button, map | Maps | Pass | Pass | Pass | |
| TC-Main_45 | Main | Visualizations - Maps | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Click Maps in the board<br>5. Click close icon | 4. Close Maps | Maps | Pass | Pass | Pass | |
| TC-Main_46 | Main | Visualizations - Maps | 1. Open Datablocks<br>2. Go to "Main" section<br>3. Click Block button<br>4. Click Maps in the board<br>5. Click the head | 5. Background color is #222138, the text font size is 12px , color is #FFFFFF | Maps | Pass | Pass | Pass | |
| | | Visualizations - | 1. Open Datablocks<br>2. Go to "Main" section | 5. Background color is #222138 | | | | | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Main_47 | Main | Visualizations - Maps | 3. Click Block button | | Maps | Pass | Pass | Pass | |
| | | | 4. Click Maps in the board | | | | | | |
| | | | 5. Click the body | | | | | | |
| TC-Main_48 | Main | Visualizations - Maps | 1. Open Datablocks | 5. Background color is #FF0072, border-radius is 20px , the text : font size 14px, color is #FFFFFF | Maps | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click Maps in the board | | | | | | |
| | | | 5. Click Run button | | | | | | |
| TC-Main_49 | Main | Visualizations - Maps | 1. Open Datablocks | 5. About name , year, gloss, vietnam map | Maps | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click Maps in the board | | | | | | |
| | | | 5. Click map | | | | | | |
| TC-Main_50 | Main | Widgets | 1. Open Datablocks | 5. Show name , value , close icon | Widgets: Climate, Atmosphere, Population, Industry,Forest | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | | |
| | | | 5. Check Year in main | | | | | | |
| TC-Main_51 | Main | Widgets | 1. Open Datablocks | 6. Close Year | Widgets: Climate, Atmosphere, Population, Industry,Forest | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | | |
| | | | 5. Check Year in main | | | | | | |
| | | | 6. Click close icon | | | | | | |
| TC-Main_52 | Main | Widgets | 1. Open Datablocks | 5. Background color is #222138, the text font size is 12px , color | Widgets: Climate, Atmosphere, Population, | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | Bug |
|---|---|---|---|---|---|---|---|---|
| TC-Main_52 | Main | Widgets | 4. Click widget in the data cubes on board | the text font size is 12px , color is #FFFFFF | Atmosphere, Population, Industry,Forest | Pass | Pass | Pass |
| | | | 5. Check the head of Year | | | | | |
| TC-Main_53 | Main | Widgets | 1. Open Datablocks | 5. Background color is #222138, the value from 2012 to 2019 | Widgets: Climate, Atmosphere, Population, Industry,Forest | Pass | Pass | Pass |
| | | | 2. Go to "Main" section | | | | | |
| | | | 3. Click Block button | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | |
| | | | 5. Check the body of Year | | | | | |
| TC-Main_54 | Main | Widgets | 1. Open Datablocks | 5. Background color is #524F88, cursor is pointer | Widgets: Climate, Atmosphere, Population, Industry,Forest | Pass | Pass | Pass |
| | | | 2. Go to "Main" section | | | | | |
| | | | 3. Click Block button | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | |
| | | | 5. Hover over  the body of Year | | | | | |
| TC-Main_55 | Main | Widgets | 1. Open Datablocks | 5. Show name , value , close icon | Widgets: Climate, Atmosphere, Population, Industry,Forest | Pass | Pass | Pass |
| | | | 2. Go to "Main" section | | | | | |
| | | | 3. Click Block button | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | |
| | | | 5. Check the Area in Main | | | | | |
| TC-Main_56 | Main | Widgets | 1. Open Datablocks | 6. Close Area | Widgets: Climate, Atmosphere, Population, Industry,Forest | Pass | Pass | Pass |
| | | | 2. Go to "Main" section | | | | | |
| | | | 3. Click Block button | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | |
| | | | 5. Check Area in main | | | | | |
| | | | 6. Click close icon | | | | | |
| TC-Main_57 | Main | Widgets | 1. Open Datablocks | 5. Background color is #222138, the text font size is 12px , color | Widgets: Climate, Atmosphere, Population, | Pass | Pass | Pass |
| | | | 2. Go to "Main" section | | | | | |
| | | | 3. Click Block button | | | | | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| TC-Main_57 | Main | Widgets | 4. Click widget in the data cubes on board | the text font size is 12px ; color is #FFFFFF | Atmosphere, Population, Industry,Forest | Pass | Pass | Pass | |
| | | | 5. Check the head of Area | | | | | | |
| TC-Main_58 | Main | Widgets | 1. Open Datablocks | 5. Background color is #222138 | Widgets: Climate, Atmosphere, Population, Industry,Forest | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | | |
| | | | 5. Check the body of Area | | | | | | |
| TC-Main_59 | Main | Widgets | 1. Open Datablocks | 5. The value | Widgets: Climate, Atmosphere, Population, Industry,Forest | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | | |
| | | | 5. Check the value in Area | | | | | | |
| TC-Main_60 | Main | Process | 1. Open Datablocks | 12. The results are displayed in the map, the chart in the main and the table in the output | Widgets: Climate, Atmosphere, Population, Industry,Forest, Year, Area; Statistic visualization, Chart ,Maps | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | | |
| | | | 5. Click Statistic visualization in Operators on board | | | | | | |
| | | | 6. Click Chart in visualizations on board | | | | | | |
| | | | 7. Click Maps in visualizations on board | | | | | | |
| | | | 8. Choose dimension in widget | | | | | | |
| | | | 9. Choose year | | | | | | |
| | | | 10. Choose area | | | | | | |
| | | | 11. Drag a connection from an output of a block (right side) to an input of another block (left side). | | | | | | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| | | | 12. Click Run | | | | | | |
| TC-Main_61 | Main | Process | 1. Open Datablocks | 13. Output data on screen | Widgets: Climate, Atmosphere, Population, Industry,Forest, Year, Area; Statistic visualization, Chart ,Maps | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | | |
| | | | 5. Click Statistic visualization in Operators on board | | | | | | |
| | | | 6. Click Chart in visualizations on board | | | | | | |
| | | | 7. Click Maps in visualizations on board | | | | | | |
| | | | 8. Choose dimension in widget | | | | | | |
| | | | 9. Choose year | | | | | | |
| | | | 10. Choose area | | | | | | |
| | | | 11. Drag a connection from an output of a block (right side) to an input of another block (left side). | | | | | | |
| | | | 12. Click Run | | | | | | |
| | | | 13. Click  Export in Output | | | | | | |
| TC-Main_62 | Main | Connector | 1. Open Datablocks | 13. Connect between 2 node | Widgets: Climate, Atmosphere, Population, Industry,Forest, Year, Area; Statistic visualization, Chart ,Maps | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Click Block button | | | | | | |
| | | | 4. Click widget in the data cubes on board | | | | | | |
| | | | 5. Click Statistic visualization in Operators on board | | | | | | |
| | | | 6. Click Chart in visualizations on board | | | | | | |
| | | | 7. Click Maps in visualizations on board | | | | | | |
| | | | 8. Choose dimension in widget | | | | | | |

**Test Cases: Main**

| ID | Items | Sub-items | Steps to Excute | Expected output | Test Data / Parameters | PC | | | Bug |
|---|---|---|---|---|---|---|---|---|---|
| | | | 9. Choose year | | | | | | |
| | | | 10. Choose area | | | | | | |
| | | | 11. Drag a connection from an output of a block (right side) to an input of another block (left side). | | | | | | |
| | | | 12. Click Run | | | | | | |
| | | | 13. Check connector | | | | | | |
| TC-Main_63 | Main | Recommend | 1. Open Datablocks | 3. Show suggested steps | | Pass | Pass | Pass | |
| | | | 2. Go to "Main" section | | | | | | |
| | | | 3. Check recommned in main section | | | | | | |