**Test cases**

Consider the sprint task #1 – Develop GUI portion for drawing the size of the block(environment)

Some of the test cases for this task are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Test case #sprint 1 | Scenario | Input(s) | Expected output |
| 1 | User draws the normal(eg.10\*10) size of block by using mouse | Drawing using mouse | The block environment is visible with certain size |
| 2 | User draws the extreme size 1\*1 of block by using mouse | Drawing using mouse | The block environment can not be set up |
| 3 | User draws the size of block reach the border by using mouse | Drawing using mouse | The block side which reaches the border will stop |
| 4 | User views block view with full size window | None | The layout of block view shows correctly |
| 5 | User views block view while changing the size of window | None | The layout of block view shows correctly |

Consider the sprint task #2 – Generate corresponding block data while user drawing environment

Some of the test cases for this task are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Test case #sprint 1 | Scenario | Input(s) | Expected output |
| 1 | User draws the normal(eg.10\*10) size of block by using mouse | Dragging using mouse | The data will be generated |
| 2 | User draws the extreme size 1\*1 of block by using mouse | Drawing using mouse | The data will not be generated |
| 3 | User draws the size of block reach the border by using mouse | Drawing using mouse | The data will be generated |

Consider the sprint task #3 – Develop GUI portion for Develop GUI portion for constructing the regions

Some of the test cases for this task are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Test case # | Scenario | Input(s) | Expect Output |
| 1 | Draw the regions outside the block | Mouse click and drag | There should be a prompt message “you can’t set the region outside the block” |
| 1 | Draw the regions within the block | Mouse click and drag | The regions displayed in the block view |
| 1 | Draw the regions within the block | Mouse click and drag | The regions displayed in the block view |

Consider the sprint task #4 – Generate corresponding regions data while user drawing environment

Some of the test cases for this task are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Test case # | Scenario | Input(s) | Expect Output |
| 1 | Draw the regions within the block | Mouse click and drag | The matrix with 0 filled in the open spaces, 1 filled in the block area. |

Consider the sprint task #5 – Generate ID for agents

Some of the test cases for this task are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Test case # | Scenario | Inputs | Expect Output |
| 1 | click on the regions area | Mouse click | Ids generated for Agents |

Consider the sprint task #6 – Develop GUI to set agents position

Some of the test cases for this task are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Test case # | Scenario | Inputs | Expect Output |
| 1 | click on the regions area | Mouse click | success |
| 2 | Click on the area out of the regions area | Mouse click | Fail |

Consider the sprint task #7 – Develop data structure to store agents and their positions

Some of the test cases for this task are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Test case # | Scenario | Inputs | Expect Output |
| 1 | Invoke addAgent method | AgentID and agent’s initial position | success |