**Testing of doCarTurn & calculatePath**

**Equivalence Partitioning**

|  |  |
| --- | --- |
| c1 | Regular Bresenham's line algorithm |
| c2 | X-Axis inverted Bresenham's line algorithm |
| c3 | Y-Axis inverted Bresenham's line algorithm |
| c4 | X- and Y-Axis inverted Bresenham's line algorith |
| c5 | Horizontal line Bresenham's line algorithm |  |  |  |
| c6 | Vertical line Bresenham's line algorithm |  |  |  |
| d1 | Valid Movement on track |  |  |  |
| d2 | Crash into another player |  |  |  |
| d3 | Crash into wall |  |  |  |
| d4 | Valid Movement over finishline |  |  |  |

**Test log**

|  |  |  |  |
| --- | --- | --- | --- |
| **testcases** | **Expected** | **Eqivalence Partititoning** | **Result** |
| calculatePath\_BottomLeftToTopRightPath() | ExpectedList of PositionVectors | c2 | Passed |
| calculatePath\_VerticalLineUpPath() | ExpectedList of PositionVectors | c2, c6 | Passed |
| calculatePath\_VerticalLineDownPath() | ExpectedList of PositionVectors | c1, c6 | Passed |
| calculatePath\_BottomRightToTopLeftPath() | ExpectedList of PositionVectors | c3 | Passed |
| calculatePath\_HorizontalLineLeftToRightPath() | ExpectedList of PositionVectors | c1, c5 | Passed |
| calculatePath\_HorizontalLineRightToLeftPath() | ExpectedList of PositionVectors | c3, c5 | Passed |
| calculatePath\_TopRightToBottomLeftPath() | ExpectedList of PositionVectors | c4 | Passed |
| calculatePath\_TopLeftToBottomRightPath() | ExpectedList of PositionVectors | c1 | Passed |
| doCarTurn\_ValidPathOneStep() | ExpectedEndPosition, carCrashed=false | d1 | Passed |
| doCarTurn\_ValidPathMultipleStep() | ExpectedEndPosition, carCrashed=false | d1 | Passed |
| doCarTurn\_CrashWithOtherPlayer() | ExpectedEndPosition, carCrashed=true | d1, d2 | Passed |
| doCarTurn\_CrashWithWall() | ExpectedEndPosition, carCrashed=true | d3 | Passed |
| doCarTurn\_WinnerFoundReturnMethod() | ExpectedEndPosition, winner=player | d4 | Passed |

**Screenshots**

