

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 algorithm
 - c5 Horizontal line Bresenham's line algorithm
 - c6 Vertical line Bresenham's line algorithm
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- 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

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GameTest [Runner: JUnit 5] (0.101 s)
  ✓ GetWinner_AllCarsAreAliveFinishLineUp_ReturnsNoWinner() (0.032 s)
  ✓ GetWinner_CarCrossesFinishLineBackwardsFinishLineUp_ReturnsNoWinner() (0.004 s)
  ✓ GetWinner_CarCrossesFinishLineBackwardsAndForwardAfterwardsFinishLineRight_ReturnsNoWinner() (0.004 s)
  ✓ GetWinner_GameIsInProgressFinishLineRight_ReturnsNoWinner() (0.004 s)
  ✓ calculatePath_TopLeftToBottomRightPath() (0.003 s)
  ✓ GetWinner_AllCarsAreAliveFinishLineLeft_ReturnsNoWinner() (0.002 s)
  ✓ doCarTurn_CrashWithOtherPlayer() (0.005 s)
  ✓ calculatePath_HorizontalLineLeftToRightPath() (0.003 s)
  ✓ doCarTurn_ValidPathMultipleStep() (0.003 s)
  ✓ calculatePath_VerticalLineDownPath() (0.002 s)
  ✓ GetWinner_GameIsInProgressFinishLineUp_ReturnsNoWinner() (0.002 s)
  ✓ doCarTurn_WinnerFoundReturnMethod() (0.002 s)
  ✓ GetWinner_CarCrossesFinishLineBackwardsAndForwardAfterwardsFinishLineUp_ReturnsNoWinner() (0.003 s)
  ✓ calculatePath_TopRightToBottomLeftPath() (0.001 s)
  ✓ GetWinner_CarCrossesFinishLineCorrectlyFinishLineRight_ReturnsWinner() (0.006 s)
  ✓ doCarTurn_CrashWithWall() (0.003 s)
  ✓ GetWinner_AllCarsAreAliveFinishLineRight_ReturnsNoWinner() (0.001 s)
  ✓ calculatePath_BottomRightToTopLeftPath() (0.001 s)
  ✓ GetWinner_CarCrossesFinishLineBackwardsFinishLineRight_ReturnsNoWinner() (0.004 s)
  ✓ GetWinner_GameIsInProgressFinishLineLeft_ReturnsNoWinner() (0.002 s)
  ✓ calculatePath_BottomLeftToTopRightPath() (0.001 s)
  ✓ calculatePath_HorizontalLineRightToLeftPath() (0.002 s)
  ✓ calculatePath_VerticalLineUpPath() (0.002 s)
  ✓ GetWinner_CarCrossesFinishLineCorrectlyFinishLineLeft_ReturnsWinner() (0.002 s)
  ✓ doCarTurn_ValidPathOneStep() (0.005 s)
```