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Screenshot

GameTest [Runner: JUnit 5] (0.268 s)
getWinner_CarCrossesFinishLineBackwardsAndForwardAfterwardsFinishLineRight_ReturnsNoWinner() (0.053 s)
willCarCrash_CarCrashesWithOtherCar_ReturnTrue() (0.009 s)
calculatePath_TopLeftToBottomRightPath() (0.008 s)
getWinner_CarCrossesFinishLineCorrectlyAndCrashes_ReturnsWinner() (0.006 s)
doCarTurn_CrashWithOtherPlayer() (0.010 s)
getWinner_CarCrossesFinishLineCorrectlyFinishLineRight_ReturnsWinner() (0.013 s)
calculatePath_HorizontalLineLeftToRightPath() (0.007 s)
doCarTurn_ValidPathMultipleStep() (0.007 s)
getCarPosition_AskForExistingCarIndex_ReturnsNull() (0.010 s)
getWinner_CarCrossesFinishLineBackwardsAndForwardAfterwardsFinishLineUp_ReturnsNoWinner() (0.007 s)
getWinner_CarCrossesFinishLineCorrectlyFinishLineLeft_ReturnsWinner() (0.005 s)
willCarCrash_CarDoesNotCrash_ReturnFalse() (0.006 s)
calculatePath_VerticalLineDownPath() (0.005 s)
getWinner_AllCarsAreAliveFinishLineLeft_ReturnsNoWinner() (0.007 s)
doCarTurn_WinnerFoundReturnMethod() (0.006 s)
getWinner_CarCrossesFinishLineBackwardsFinishLineUp_ReturnsNoWinner() (0.005 s)
getCarPosition_AskForExistingCarIndex_ReturnsCarPosition() (0.004 s)
calculatePath_TopRightToBottomLeftPath() (0.004 s)
getWinner_AllCarsCrashesExceptOne_ReturnsWinner() (0.004 s)
doCarTurn_CrashWithWall() (0.004 s)
willCarCrash_CarCrashesWithWall_ReturnTrue() (0.004 s)
getWinner_GamelsInProgressFinishLineUp_ReturnsNoWinner() (0.004 s)
getWinner_AllCarsAreAliveFinishLineUp_ReturnsNoWinner() (0.005 s)
getCarId_AskForExistingCarIndex_ReturnsCarId() (0.005 s)
calculatePath_BottomRightToTopLeftPath() (0.004 s)
getCarId_AskForNonExistingCarIndex_ReturnsMinValueFromCharacter() (0.005 s)
getWinner_GamelsInProgressFinishLineRight_ReturnsNoWinner() (0.005 s)
calculatePath_BottomLeftToTopRightPath() (0.003 s)
switchToNextActiveCar_AskForExistingCarIndex_SwitchesCorrectly() (0.005 s)
calculatePath_HorizontalLineRightToLeftPath() (0.003 s)
getWinner_AllCarsAreAliveFinishLineRight_ReturnsNoWinner() (0.005 s)
getWinner_CarCrossesFinishLineBackwardsFinishLineRight_ReturnsNoWinner() (0.005 s)
calculatePath_VerticalLineUpPath() (0.002 s)
getWinner_GamelsInProgressFinishLineLeft_ReturnsNoWinner() (0.005 s)
doCarTurn_ValidPathOneStep() (0.011 s)
switchToNextActiveCar_AskForExistingCarIndex_StaysTheSameIndex() (0.017 s)

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	Equivalence 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

Testing of getWinner

Equivalence Partitioning

- W1** game is in progress (two or more cars are alive, no winner yet)
- W2** cross finish line correctly
- W3** cross finish line incorrectly
- W4** cross finish line and crashes
- W5** crosses finish line correctly, but has one lap to go
- W6** all car crashes except one

Test log

testcases	Expected	Eqivalence Partitoning	Result
getWinner_GamelsInProgressFinishLineRight_ReturnsNoWinner	NoWinner	W1	Passed
getWinner_GamelsInProgressFinishLineUp_ReturnsNoWinner	NoWinner	W1	Passed
getWinner_GamelsInProgressFinishLineLeft_ReturnsNoWinner	NoWinner	W1	Passed
getWinner_AllCarsAreAliveFinishLineRight_ReturnsNoWinner	NoWinner	W1	Passed
getWinner_AllCarsAreAliveFinishLineUp_ReturnsNoWinner	NoWinner	W1	Passed
getWinner_AllCarsAreAliveFinishLinLeft_ReturnsNoWinner	NoWinner	W1	Passed
getWinner_CarCrossesFinishLineCorrectlyFinishLineRight_Returns Winner	Winner	W2	Passed
getWinner_CarCrossesFinishLineCorrectlyFinishLineLeft_ReturnsW inner	Winner	W2	Passed
getWinner_CarCrossesFinishLineBackwardsFinishLineRight_Return sNoWinner	NoWinner	W3	Passed
getWinner_CarCrossesFinishLineBackwardsFinishLineUp_Returns NoWinner	NoWinner	W3	Passed
getWinner_CarCrossesFinishLineCorrectlyAndCrashes_ReturnsWin ner	Winner	W4	Passed
getWinner_CarCrossesFinishLineBackwardsAndForwardAfterward sFinishLineRight_ReturnsNoWinner	NoWinner	W5	Passed
GetWinner_CarCrossesFinishLineBackwardsAndForwardAfterward sFinishLineUp_ReturnsNoWinner	NoWinner	W5	Passed
getWinner_AllCarsCrashesExceptOne_ReturnsWinner	Winner	W6	Passed

Testing of getCarId & getCarPosition & switchToNextActiveCar & willCarCrash

Equivalence Partitioning

- I1 get existing Car Id
- I2 get non-existing Car Id

- P1 existing CarIndex
- P2 non-existing CarIndex

- A1 switch to next active player
- A2 switch to next player only one player is active

- B1 Crashes with other Car
- B2 Crashes with wall
- B3 does not crash

Test log

testcases	Expected	Equivalence Partitoning	Result
getCarId_AskForExistingCarId_ReturnsCarId	CarId	I1	Passed
getCarId_AskForNonExistingCarIndex_ReturnsCarId	CarId	I1	Passed
getCarPosition_AskForNonExistingCarIndex_ReturnsMinValueFromCharacter	Character.MinValue	P1	Passed
getCarId_AskForExistingCarIndex_ReturnsNull	Null	P2	Passed
switchToNextActiveCar_AskForExistingCarIndex_SwitchesCorrectly	Correct Switch	A1	Passed
switchToNextActiveCar_AskForExistingCarIndex_StaysTheSameIndex	No Switch	A2	Passed
willCarCrash_CarCrashesWithOtherCar_ReturnTrue	True	B1	Passed
willCarCrash_CarCrashesWithWall_ReturnTrue	True	B2	Passed
willCarCrash_CarDoesNotCrash_ReturnFalse	False	B3	Passed