# Testing of the SiedlerGame.java class

## **Equivalence Partitionings**

### Negative

- 1 Illegal placement position
- 3 Build with not enough resources
- 6 Trade where player does not have enough resources
- 7 Trade where bank does not have enough resources
- 8 No player has won game
- 11 Robbery no player has more than 7 resources
- 14 Thief placement at field with no settlements around
- 16 Resources are payed out
- 17 No Resources are payed out
- 19 player has no structures left to build

#### **Positive**

- 2 Legal placement position
- 4 Build with enough resources
- 5 Trade where player and bank have enough resources
- 9 One player has won game
- 10 More than one player has won game
- 12 Robbery one player has more than 7 resources
- 13 Robbery more than one player has 7 resources
- 15 Thief placement at field with one settlement around
- 18 Player strucutres left to build
- 20 initialize board
- 21 player switch to next player
- 22 player switch to previous player

## Test log

default testcases	Egivalence Partititoning
requirementPlayerSwitching	Equalities Fartitioning
requirementSetupTestBoardUsedWithTheTests	20
requirement Resource Payout And Return Value For Dice Throw	
requirementPlaceInitialSettlementInCountrySideNoPayout	2, 21
requirementPlaceInitialSettlementInWaterNoPayout	1, 21
requirementPlaceInitialSettlementNextToWaterNoPayout	1, 21
requirement Place Initial Settlement Valid Position With Payout	2, 20
requirementPlaceInitialRoadCorrectPlacement	2
requirementPlaceInitialRoadCorrectPlacementStartWithEndPoint	2
requirementPlaceInitialRoadNoHouseAdjacent	1
requirementPlaceInitialRoadNoOwnHouseAdjacent	1
requirementPlaceInitialRoadPlaceAlreadyUsed	1

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requirementPlaceInitialRoadPositionInWater		1
requirement Place Initial Road Invalid Start And End		1
requirementBuildSettlementValidPosition	2,4, 22, 20	
requirementBuildSettlementNoResources	2, 1, 22, 23	3
requirementBuildSettlementNoSettlementsLeftToBuild		23
requirementBuildSettlementNoAdjacentRoad		1
requirement Build Settlement Adjacent Road From Other Players		1
requirementBuildSettlementInWater		1
requirementBuildSettlementOponentSettlementAdjacent		1
requirementBuildSettlementOwnSettlementAdjacent		
requirementBuildSettlementPositionAllreadyUsed		1
requirementBuildSettlementPositionAlireadyOsed		1
requirement Build City Valid Position	2,4, 22	
requirementBuildCityAlreadyBuildCityAtPosition	2,7,22	1
requirementBuildCityNotEnoughResources		3
requirementBuildCityInvalidPosition		1
requirementBuildCityNoCitiesLeftToBuild		23
TequirementbullacityNocitiesLertToBulla		25
requirement Build Road Valid Position Adjacent Settlement	2,4, 22	
requirement Build Road No Roads Left To Build		23
requirement Build Road Valid Position Adjacent Road		1
requirement Build Road Valid Position Adjacent Road Only From Other Player		1
requirementBuildRoadValidPositionNoAdjacentSettlementOrRoad		1
requirementBuildRoadValidPositionAdjacentRoadNoResources		3
requirement Build Road Valid Position Adjacent Settlement No Resources		3
requirementBuildRoadInWaterHasAdjacentSettlement		1
requirement Build Road In Water Has Adjacent Road		1
requirementBuildRoadOtherRoadAlreadyBuild		1
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requirement Trade With Bank Four To One Player And Bank Have Resources		7
requirement Trade With Bank Four To One Player And Bank Have Resources Same Resources		7
requirement Trade With Bank Four To One Bank Has Not Resource		8
requirement Trade With Bank Four To One Player Has Not Enough Resource		9
, ,		
requirementGetWinnerWithNoWinner		10
requirementGetWinnerWithOneWinnerWithCities		11
requirementGetWinnerWithOneWinner		11
requirementGetWinnerWithMultipleWinner		12
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requirement Place Thief And Steal Card No Player Has More Than Seven Resources		13
requirementPlaceThiefAndStealCurrentPlayerHasMoreThanSevenResources		14
requirementPlaceThiefAndStealCurrentPlayerHasEightResources		14
requirementPlaceThiefAndStealCurrentPlayerHasSevenResources		13
requirementPlaceThiefAndStealTwoHasMoreThanSevenResources		15
requirement Place Thief And Steal Invalid Thief Position		1
requirement Place Thief And Steal Position On Water		1
requirement Place Thief And Steal One Settlement From Current Player		18
requirement Place Thief And Steal One Settlement From Other Player		18
requirement Place Thief And Steal One Settlement From Other Player With No Resources		18

$  \ requirement Place Thief And Steal One Settlement From Other Player With No More Resources \\$	18
requirementPlaceThiefAndStealNoSettlementsAroundThiefField	17
requirementPlaceThiefAndStealSetThiefOnSameField	1
requirement Throw Dice Thiefls Set No Resources Payed Out	20
requirement Throw Dice Thiefls On Other Field Set Resources Payed Out	21

# Screenshots

,	SiedlerGameTest [Runner: JUnit 5] (0.250 s)
	requirementTradeWithBankFourToOneBankHasNotResource() (0.053 s)
	☐ requirementPlaceThiefAndStealPositionOnWater() (0.005 s)
	requirementTradeWithBankFourToOnePlayerAndBankHaveResources() (0.005 s)
	□ requirementBuildSettlementOponentSettlementAdjacent() (0.003 s)
	requirementBuildRoadValidPositionAdjacentRoadOnlyFromOtherPlayer() (0.004 s)
	requirementPlaceThiefAndStealTwoHasMoreThanSevenResources() (0.006 s)
	☐ requirementPlaceThiefAndStealInvalidThiefPosition() (0.003 s)
	requirementPlaceThiefAndStealCurrentPlayerHasMoreThanSevenResources() (0.004 s)
	requirementPlaceThiefAndStealOneSettlementFromOtherPlayerWithNoMoreResources() (0.004 s)
	requirementThrowDiceThieflsOnOtherFieldSetResourcesPayedOut() (0.003 s)
	☐ requirementBuildRoadValidPositionAdjacentRoadNoResources() (0.003 s)
	requirementThrowDiceThieflsSetNoResourcesPayedOut() (0.003 s)
	☐ requirementBuildSettlementValidPosition() (0.008 s)
	☐ requirementBuildCityInvalidPosition() (0.004 s)
	requirementPlaceThiefAndStealCurrentPlayerHasEightResources() (0.003 s)
	requirementBuildRoadValidPositionAdjacentSettlementNoResources() (0.002 s)
	☐ requirementBuildSettlementPositionAllreadyUsed() (0.002 s)
	requirementPlaceThiefAndStealNoSettlementsAroundThiefField() (0.003 s)
	☐ requirementBuildSettlementNoSettlementsLeftToBuild() (0.001 s)
	☐ requirementBuildRoadValidPositionAdjacentSettlement() (0.002 s)
	requirementTradeWithBankFourToOnePlayerHasNotEnoughResource() (0.002 s)
	requirementPlaceThiefAndStealOneSettlementFromOtherPlayerWithNoResources() (0.001 s)
	requirementPlaceThiefAndStealCardNoPlayerHasMoreThanSevenResources() (0.002 s)
	☐ requirementPlaceThiefAndStealSetThiefOnSameField() (0.002 s)
	☐ requirementBuildSettlementNoResources() (0.002 s)

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requirementBuildRoadOtherRoadAlreadyBuild() (0.002 s)
requirementBuildSettlementNoAdjacentRoad() (0.002 s)
requirementPlaceInitialRoadCorrectPlacement() (0.002 s)
requirementPlaceInitialSettlementInWaterNoPayout() (0.002 s)
requirementPlaceInitialRoadPositionInWater() (0.002 s)
E requirementPlaceInitialRoadNoOwnHouseAdjacent() (0.001 s)
requirementPlayerSwitching() (0.002 s)
Figure 1. In the content of the property of
requirementSetupTestBoardUsedWithTheTests() (0.004 s)
requirementPlaceInitialRoadNoHouseAdjacent() (0.004 s)
requirementBuildCityAlreadyBuildCityAtPosition() (0.002 s)
requirementBuildSettlementAdjacentRoadFromOtherPlayers() (0.003 s)
requirementGetWinnerWithOneWinner() (0.002 s)
requirementBuildRoadValidPositionAdjacentRoad() (0.002 s)
requirementPlaceInitialSettlementNextToWaterNoPayout() (0.002 s)
requirementBuildSettlementOwnSettlementAdjacent() (0.004 s)
requirementPlaceThiefAndStealOneSettlementFromCurrentPlayer() (0.002 s)
requirementBuildSettlementInWater() (0.002 s)
requirementBuildCityValidPosition() (0.003 s)
requirementBuildRoadNoRoadsLeftToBuild() (0.004 s)
FrequirementBuildRoadValidPositionNoAdjacentSettlementOrRoad() (0.003 s)
requirementGetWinnerWithNoWinner() (0.002 s)
# requirementPlaceInitialRoadCorrectPlacementStartWithEndPoint() (0.001 s)
requirementBuildCityNoCitiesLeftToBuild() (0.002 s)
requirementBuildRoadInWaterHasAdjacentRoad() (0.001 s)
requirementBuildRoadInWaterHasAdjacentSettlement() (0.003 s)
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requirementBuildCityNotEnoughResources() (0.002 s)

# requirementPlaceThiefAndStealCurrentPlayerHasSevenResources() (0.001 s)

🖟 requirementTradeWithBankFourToOnePlayerAndBankHaveResourcesSameResources() (0.018 s)