**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** | **Expected** | **Eqivalence Partititoning** | **Result** |
| requirementPlayerSwitching | True |  | Passed |
| requirementSetupTestBoardUsedWithTheTests | True | 20 | Passed |
| requirementResourcePayoutAndReturnValueForDiceThrow | True |  | Passed |
|  |  |  |  |
| requirementPlaceInitialSettlementInCountrySideNoPayout | True | 2, 21 | Passed |
| requirementPlaceInitialSettlementInWaterNoPayout | False | 1, 21 | Passed |
| requirementPlaceInitialSettlementNextToWaterNoPayout | False | 1, 21 | Passed |
| requirementPlaceInitialSettlementValidPositionWithPayout | True | 2, 20 | Passed |
|  |  |  |  |
| requirementPlaceInitialRoadCorrectPlacement | True | 2 | Passed |
| requirementPlaceInitialRoadCorrectPlacementStartWithEndPoint | True | 2 | Passed |
| requirementPlaceInitialRoadNoHouseAdjacent | False | 1 | Passed |
| requirementPlaceInitialRoadNoOwnHouseAdjacent | False | 1 | Passed |
| requirementPlaceInitialRoadPlaceAlreadyUsed | False | 1 | Passed |
| requirementPlaceInitialRoadPositionInWater | False | 1 | Passed |
| requirementPlaceInitialRoadInvalidStartAndEnd | False | 1 | Passed |
|  |  |  |  |
| requirementBuildSettlementValidPosition | True | 2,4, 22, 20 | Passed |
| requirementBuildSettlementNoResources | False | 3 | Passed |
| requirementBuildSettlementNoSettlementsLeftToBuild | False | 23 | Passed |
| requirementBuildSettlementNoAdjacentRoad | False | 1 | Passed |
| requirementBuildSettlementAdjacentRoadFromOtherPlayers | False | 1 | Passed |
| requirementBuildSettlementInWater | False | 1 | Passed |
| requirementBuildSettlementOponentSettlementAdjacent | False | 1 | Passed |
| requirementBuildSettlementOwnSettlementAdjacent | False | 1 | Passed |
| requirementBuildSettlementPositionAllreadyUsed | False | 1 | Passed |
|  |  |  |  |
| requirementBuildCityValidPosition | True | 2,4, 22 | Passed |
| requirementBuildCityAlreadyBuildCityAtPosition | False | 1 | Passed |
| requirementBuildCityNotEnoughResources | False | 3 | Passed |
| requirementBuildCityInvalidPosition | False | 1 | Passed |
| requirementBuildCityNoCitiesLeftToBuild | False | 23 | Passed |
|  |  |  |  |
| requirementBuildRoadValidPositionAdjacentSettlement | True | 2,4, 22 | Passed |
| requirementBuildRoadNoRoadsLeftToBuild | False | 23 | Passed |
| requirementBuildRoadValidPositionAdjacentRoad | False | 1 | Passed |
| requirementBuildRoadValidPositionAdjacentRoadOnlyFromOtherPlayer | False | 1 | Passed |
| requirementBuildRoadValidPositionNoAdjacentSettlementOrRoad | False | 1 | Passed |
| requirementBuildRoadValidPositionAdjacentRoadNoResources | False | 3 | Passed |
| requirementBuildRoadValidPositionAdjacentSettlementNoResources | False | 3 | Passed |
| requirementBuildRoadInWaterHasAdjacentSettlement | False | 1 | Passed |
| requirementBuildRoadInWaterHasAdjacentRoad | False | 1 | Passed |
| requirementBuildRoadOtherRoadAlreadyBuild | False | 1 | Passed |
|  |  |  |  |
| requirementTradeWithBankFourToOnePlayerAndBankHaveResources | True | 7 | Passed |
| requirementTradeWithBankFourToOnePlayerAndBankHaveResourcesSameResources | True | 7 | Passed |
| requirementTradeWithBankFourToOneBankHasNotResource | False | 8 | Passed |
| requirementTradeWithBankFourToOnePlayerHasNotEnoughResource | False | 9 | Passed |
|  |  |  |  |
| requirementGetWinnerWithNoWinner | No Winner | 10 | Passed |
| requirementGetWinnerWithOneWinnerWithCities | Winner | 11 | Passed |
| requirementGetWinnerWithOneWinner | Winner | 11 | Passed |
| requirementGetWinnerWithMultipleWinner | First Winner | 12 | Passed |
|  |  |  |  |
| requirementPlaceThiefAndStealCardNoPlayerHasMoreThanSevenResources | True | 13 | Passed |
| requirementPlaceThiefAndStealCurrentPlayerHasMoreThanSevenResources | True | 14 | Passed |
| requirementPlaceThiefAndStealCurrentPlayerHasEightResources | True | 14 | Passed |
| requirementPlaceThiefAndStealCurrentPlayerHasSevenResources | True | 13 | Passed |
| requirementPlaceThiefAndStealTwoHasMoreThanSevenResources | True | 15 | Passed |
| requirementPlaceThiefAndStealInvalidThiefPosition | False | 1 | Passed |
| requirementPlaceThiefAndStealPositionOnWater | False | 1 | Passed |
| requirementPlaceThiefAndStealOneSettlementFromCurrentPlayer | True | 18 | Passed |
| requirementPlaceThiefAndStealOneSettlementFromOtherPlayer | True | 18 | Passed |
| requirementPlaceThiefAndStealOneSettlementFromOtherPlayerWithNoResources | True | 18 | Passed |
| requirementPlaceThiefAndStealOneSettlementFromOtherPlayerWithNoMoreResources | True | 18 | Passed |
| requirementPlaceThiefAndStealNoSettlementsAroundThiefField | True | 17 | Passed |
| requirementPlaceThiefAndStealSetThiefOnSameField | False | 1 | Passed |
|  |  |  |  |
| requirementThrowDiceThiefIsSetNoResourcesPayedOut | True | 20 | Passed |
| requirementThrowDiceThiefIsOnOtherFieldSetResourcesPayedOut | True | 21 | Passed |

**Screenshots**



