

Monopoly Test Plan

Version 2.0
August 22, 2005

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I. Introduction

This document serves as the plan for testing all software artifacts as well as the reporting of test results for the Monopoly application.

II. Test Plan

In order to test the Monopoly application, the tester must run Monopoly using the Main class under the edu.ncsu.monopoly.gui package. The user must specify 2 command line arguments:

```
test <a game board class name>
```

where the game board class name takes the form of package.className. There are several game boards stored under the testCommon/ directory of the Monopoly project, and all of these game boards would take the form: edu.ncsu.monopoly.GameBoardName.

In the test environment all game play proceeds as normal except the player dice roll. When the user selects the "Roll Dice" button, a dialog will be displayed that allows a user to input a number between 1 and 12. This models game play except for the ability to have a dice roll of 1 (which is needed for some of the following test cases.)

Pictures of the game boards with cell information are given in Section III.

Acceptance tests are marked with *s.

Test ID	Description	Expected Results	Actual Results
Enter Player Info User Story			
enterPlayerInfo1*	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 5 Player 1 Name: 1 Player 2 Name: 2 Player 3 Name: 3 Player 4 Name: 4 Player 5 Name: 5	Game board is created with 5 players, each with the given name	
enterPlayerInfo2	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 1	Player Information dialog reappears, prompting user for number of players again.	
enterPlayerInfo3	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2	Game board is created with 2 players, each with the given name	
enterPlayerInfo4	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 9	Player Information dialog reappears, prompting user for number of players again.	
enterPlayerInfo5	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins Number of Players: 2 Player 1 Name:	Player Information dialog reappears, prompting user for Player 1's name again.	
enterPlayerInfo6	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins Number of Players: 2 Player presses Cancel	Game exits with no errors.	
View Information User Story			
viewInformation*	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2	Game board loads. Player 1 has the name 1 and \$1500, the Roll Dice button is enabled, all other buttons are disabled. Player 2 has the name 2, \$1500, and all buttons are disabled. The Go button is the bottom right cell. The Blue 1 property is in the bottom	

		<p>middle cell, costs \$100, has no owner or houses The Blue 2 property is in the bottom left cell, costs \$100, has no owner or houses The Blue 3 property is in the top left cell, costs \$120, has no owner or houses The Green 1 property is in the top middle cell, costs \$200, has no owner or houses The Green 2 property is in the top right cell, costs \$2400, has no owner or houses</p>
Move Player User Story		
<p>playerMovement1*</p>	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 3 Player 1 End Turn</p>	<p>Player 1 is located at Blue 3 Player 2 is located at Go</p>
<p>playerMovement1.1</p>	<p>Precondition: playerMovement1 has passed Player 2 Dice Roll: 2 Player 2 End Turn Player 1 Dice Roll: 2 Player 1 End Turn</p>	<p>Player 1 is located at Green 2 Player 2 is located at Blue 2</p>
<p>playerMovement1.2</p>	<p>Precondition: playerMovement1.1 has passed Player 2 Dice Roll: 2 Player 2 End Turn Player 1 Dice Roll: 2 Player 1 End Turn</p>	<p>Player 1 is located at Blue 1 Player 2 is located at Green 1</p>
Move Player in Turns User Story		
<p>playerMovement2*</p>	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 5 Player 1 End Turn Player 2 Dice Roll: 3 Player 2 End Turn</p>	<p>Player 1 is located at Green 2 Player 2 is located at Blue 3</p>

playerMovement2.1	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 5 Player 1 End Turn Player 1 Dice Roll: 3</p>	The Roll Dice button for Player 1 is not enabled.	
playerMovement2.2	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 2 Dice Roll: 3</p>	The Roll Dice button for Player 2 is not enabled.	
Pass Go User Story			
passGo1	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 5 Player 1 End Turn</p>	Player 1 is located at Green 2 and has \$1500.	
passGo2*	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 6 Player 1 End Turn</p>	Player 1 is located at Go and has \$1700	
passGo3	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 7 Player 1 End Turn</p>	Player 1 is located at Blue 1 and has \$1700.	
Free Parking User Story			
freeParking*	<p>Precondition: Game is in test mode, GameBoardFreeParking is loaded, and game begins. Number of Players: 2 Player 1 Name: 1</p>	Player 1 is located at Free Parking and has \$1500	

	Player 2 Name: 2 Player 1 Dice Roll: 2 Player 1 End Turn		
Go To Jail User Story			
goToJail1*	Precondition: Game is in test mode, GameBoardJail is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 6 Player 1 End Turn	Player 1 is located in Jail, and In Jail label is visible next to Trade button, and player has \$1500	
goToJail2	Precondition: Game is in test mode, GameBoardJail is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 2 Player 1 End Turn	Player 1 is located in Jail cell, In Jail label is not visible next to Trade button, and player has \$1500.	
Get Out of Jail User Story			
getOutOfJail1*	Precondition: goToJail1 test case has passed Player 2 Dice Roll: 2 Player 2 End Turn Player 1 Get Out of Jail	Player 1 is located at Jail cell, In Jail label is not visible next to Trade button, and player has \$1450	
getOutOfJail2	Precondition: getOutOfJail 1 test case has passed Player 1 Dice Roll: 2 Player 1 Purchase Property Player 1 End Turn Player 2 Dice Roll: 3 Player 2 End Turn Player 1 Dice Roll: 2 Player 1 End Turn Player 2 Dice Roll: 2 Player 2 End Turn Player 1 Get Out of Jail	Player 1 is bankrupt and has no property. Game is over. Player 2 wins.	
Purchase Property User Story			
purchaseProperty1*	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 2	Player 1 is located at Blue 2, has \$1400, and owns Blue 2	

	Player 1 Purchase Blue 2 Player 1 End Turn		
purchaseProperty2	Precondition: purchaseProperty1 test case has passed Player 2 Dice Roll: 3 Player 2 End Turn Player 1 Dice Roll: 6 Player 1 Purchase Property	Player 1 cannot purchase Blue 2 – Purchase Property button is disabled	
purchaseProperty3	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 3 Player 1 Purchase Blue 3 Player 2 Dice Roll: 3 Player 2 Purchase Blue 3	Player 2 cannot purchase Blue 3 – Purchase Property button is disabled	
purchaseProperty4	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 5 Player 1 Purchase Green 2	Player 1 cannot purchase Green 2 – Purchase Property button is disabled.	
Pay Rent User Story			
payRent1*	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 2 Player 1 Purchase Blue 2 Player 1 End Turn Player 2 Dice Roll: 2 Player 2 End Turn	Player 1 has \$1410 Player 2 has \$1490	
Pay Rent on Monopoly User Story			
payRent2*	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 2	Player 1 has \$1400 Player 2 has \$1680	

	<p>Player 1 Purchase Blue 2 Player 1 End Turn Player 2 Dice Roll: 4 Player 2 End Turn Player 1 Dice Roll: 5 Player 1 Purchase Blue 1 Player 1 End Turn Player 2 Dice Roll: 2 Player 2 End Turn Player 1 Dice Roll: 2 Player 1 Purchase Blue 3 Player 1 End Turn Player 2 Dice Roll: 2 Player 2 End Turn</p>		
Pay Rent and Bankruptcy User Story			
payRent3*	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 4 Player 1 Purchase Green 1 Player 1 End Turn Player 2 Dice Roll: 4 Player 2 End Turn</p>	<p>Player 1 has \$2800 Player 2 is bankrupt Player 1 is the Winner!</p>	
payRent3.1	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 4 Player 1 Purchase Green 1 Player 1 End Turn Player 2 Dice Roll: 2 Player 2 Purchase Blue 2 Player 2 End Turn Player 1 Dice Roll: 2 Player 1 End Turn Player 2 Dice Roll: 2 Player 2 End Turn</p>	<p>Player 1 has \$2900, is on Go, and owns Green 1 and Blue 2. Player 2 is bankrupt Player 1 is the Winner!</p>	
Trade Properties User Story			

tradeAccept*	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 1 Player 1 Purchase Blue 1 Player 1 End Turn Player 2 Trade Property Player: 1 Property: Blue 1 Amount: 200 Player 1 Accepts</p>	<p>Player 1 has \$1600, is located at Blue 1, and does not own any property Player 2 has \$1300, is located on Go, and owns Blue 1</p>	
tradeDecline*	<p>Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 1 Player 1 Purchase Blue 1 Player 2 Trade Property Player: 1 Property: Blue 1 Amount: 200 Player 1 Declines</p>	<p>Player 1 has \$1400, is located at Blue 1, and owns Blue 1 Player 2 has \$1500, is located on Go, and does not own any property</p>	
Buy Railroad User Story			
railroad1*	<p>Precondition: Game is in test mode, GameBoardFull is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 5 Player 1 Purchase Reading Railroad Player 1 End Turn Player 2 Dice Roll: 3 Player 2 End Turn Player 1 Dice Roll: 10 Player 1 Purchase Pennsylvania Railroad Player 1 End Turn Player 2 Dice Roll: 3 Player 2 End Turn</p>	<p>Player 1 has \$700, is located at Short Line Railroad, and owns Reading, Pennsylvania, B&O, and Short Line Railroads Player 2 is located at Vermont Avenue and has \$1500</p>	

	<p>Player 1 Dice Roll: 10 Player 1 Purchase B & O Railroad Player 1 End Turn Player 2 Dice Roll: 2 Player 2 End Turn Player 1 Dice Roll: 10 Player 1 Purchase Short Line Railroad Player 1 End Turn</p>		
Pay Rent to Railroad User Story			
railroad2*	<p>Precondition: railroad1 test case has passed Player 2 Dice Roll: 7 Player 2 End Turn</p>	<p>Player 1 has \$1100 Player 2 has \$1100</p>	
railroad2.1	<p>Precondition: Game is in test mode, GameBoardFull is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 5 Player 1 Purchase Reading Railroad Player 1 End Turn Player 2 Dice Roll: 5 Player 2 End Turn</p>	<p>Player 1 has \$1350 and owns Reading Railroad Player 2 has \$1450</p>	
railroad2.2	<p>Precondition: Game is in test mode, GameBoardFull is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 5 Player 1 Purchase Reading Railroad Player 1 End Turn Player 2 Dice Roll: 3 Player 2 End Turn Player 1 Dice Roll: 10 Player 1 Purchase Pennsylvania Railroad Player 1 End Turn Player 2 Dice Roll: 2 Player 2 End Turn</p>	<p>Player 1 has \$1200 and owns Reading Railroad and Pennsylvania Railroad Player 2 has \$1400</p>	
railroad2.3	<p>Precondition: Game is in test mode, GameBoardFull is loaded, and game begins. Number of Players: 2 Player 1 Name: 1</p>	<p>Player 1 has \$1100 and owns Reading Railroad, Pennsylvania Railroad, and B&O Railroad</p>	

	<p>Player 2 Name: 2 Player 1 Dice Roll: 5 Player 1 Purchase Reading Railroad Player 1 End Turn Player 2 Dice Roll: 3 Player 2 End Turn Player 1 Dice Roll: 10 Player 1 Purchase Pennsylvania Railroad Player 1 End Turn Player 2 Dice Roll: 3 Player 2 End Turn Player 1 Dice Roll: 10 Player 1 Purchase B&O Railroad Player 1 End Turn Player 2 Dice Roll: 9 Player 2 End Turn</p>	<p>Player 2 has \$1300</p>
<p>Buy Utility User Story utility1*</p>	<p>Precondition: Game is in test mode, GameBoardFull is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 12 Player 1 Purchases Electric Company Player 1 End Turn Player 2 Dice Roll: 5 Player 2 End Turn Player 1 Dice Roll: 16 Player 1 Purchases Water Works Player 1 End Turn</p>	<p>Player 1 has \$1200, is located at Water Works, and owns Electric Company and Water Works Player 2 is located at Reading Railroad and has \$1500</p>
<p>Pay Rent to Utility User Story utility2*</p>	<p>Precondition: utility1 test case has passed Player 2 Dice Roll: 7 Player 2 Utility Dice Roll: 10 Player 2 End Turn</p>	<p>Player 1 has \$1300 Player 2 has \$1400</p>
<p>utility2.1</p>	<p>Precondition: Game is in test mode, GameBoardFull is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 12</p>	<p>Player 1 has \$1390 Player 2 has \$1460</p>

	Player 1 Purchase Electric Company Player 1 End Turn Player 2 Dice Roll: 12 Player 2 Utility Dice Roll: 10 Player 2 End Turn		
Buy Houses User Story			
buyHouse1*	Precondition: Game is in test mode, SimpleGameBoard is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 2 Player 1 Purchase Blue 2 Player 1 End Turn Player 2 Dice Roll: 4 Player 2 End Turn Player 1 Dice Roll: 5 Player 1 Purchase Blue 1 Player 1 End Turn Player 2 Dice Roll: 2 Player 2 End Turn Player 1 Dice Roll: 2 Player 1 Purchase Blue 3 Player 1 End Turn Player 2 Dice Roll: 4 Player 2 End Turn Player 1 Buy Houses: 4 Player 1 Roll Dice: 2 Player 1 End Turn	Player 1 has \$780 and owns Blue 1, Blue 2, and Blue 3 Player 2 has \$1700 Blue 1, Blue2, and Blue 3 all have 4 houses.	
buyHouse2	Precondition: buyHouse1 test case has passed Player 2 Dice Roll: 2 Player 2 End Turn Player 1 Purchase Houses: 2	Player 1 cannot purchase 2 houses. There are still 4 houses on each of the Blue properties and Player 1 has \$780	
buyHouse3	Precondition: buyHouse2 test case has passed Player 1 Purchase Houses: 1 Player 1 Dice Roll: 2 Player 1 End Turn	Player 1 owns the blue monopoly, each with 5 houses and has \$830 Player 2 has \$1900	
Pay Rent on Property with Houses User Story			
payRentHouse1*	Precondition: buyHouse3 test case has passed Player 2 Dice Roll: 2 Player 2 End Turn	Player 1 has \$890 Player 2 has 1840	

<p>Draw jail Card User Story communityChest1*</p>	<p>Precondition: Game is in test mode, GameBoardCC.Jail is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 2 Player 1 Draw Card Player 1 End Turn</p>	<p>Player 1 is located in Jail</p>
<p>Draw Lose Money Card User Story communityChest2*</p>	<p>Precondition: Game is in test mode, GameBoardCC.LoseMoney is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 2 Player 1 Draw Card Player 1 End Turn</p>	<p>Player 1 has \$1480</p>
<p>Draw Gain Money Card User Story communityChest3*</p>	<p>Precondition: Game is in test mode, GameBoardCC.GainMoney is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 2 Player 1 Draw Card Player 1 End Turn</p>	<p>Player 1 has \$1550</p>
<p>Draw Move Player Card User Story communityChest4*</p>	<p>Precondition: Game is in test mode, GameBoardCC.MovePlayer is loaded, and game begins. Number of Players: 2 Player 1 Name: 1 Player 2 Name: 2 Player 1 Dice Roll: 2 Player 1 Draw Card Player 1 End Turn</p>	<p>Player 1 is located at Blue 1 and has \$1700</p>

III. Game Boards

Free Parking	Kentucky Avenue \$220 Owner: * 0	Chance 2	Indiana Avenue \$220 Owner: * 0	Illinois Avenue \$240 Owner: * 0	B. & O. Railroad \$200 Owner: * 0	Market Avenue \$280 Owner: * 0	Market Avenue \$280 Owner: * 0	Water Works \$150 Owner: * 0	Market Bonifolis \$280 Owner: * 0	Go to Jail										
New York Avenue \$200 Owner: * 0	Tennessee Avenue \$180 Owner: * 0	Community Chest 2	St. James Avenue \$180 Owner: * 0	Pennsylvania Railroad \$200 Owner: * 0	Virginia Avenue \$160 Owner: * 0	States Avenue \$140 Owner: * 0	Electric Company \$150 Owner: * 0	St. Charles Place \$140 Owner: * 0	Pacific Avenue \$300 Owner: * 0	North Carolina Avenue \$300 Owner: * 0	Community Chest 3	Pennsylvania Avenue \$320 Owner: * 0	Short Line \$200 Owner: * 0	Chance 3	Park Place \$350 Owner: * 0	Delight Place \$350 Owner: * 0	Boardwalk \$400 Owner: * 0			
Jail	Connecticut Avenue \$120 Owner: * 0	Connecticut Avenue \$100 Owner: * 0	Chance 1	Reading Railroad \$200 Owner: * 0	Sarah Avenue \$60 Owner: * 0	Delic Avenue \$60 Owner: * 0	Community Chest 1	Mediterranean Avenue \$60 Owner: * 0	1 2											
1 \$ 1500											Roll Dice End Turn					2 \$ 1500				
Buy House Get Out of Jail Trade											Purchase Property Draw Card					Purchase Property Draw Card				
Buy House Get Out of Jail Trade											Roll Dice End Turn					Purchase Property Draw Card				

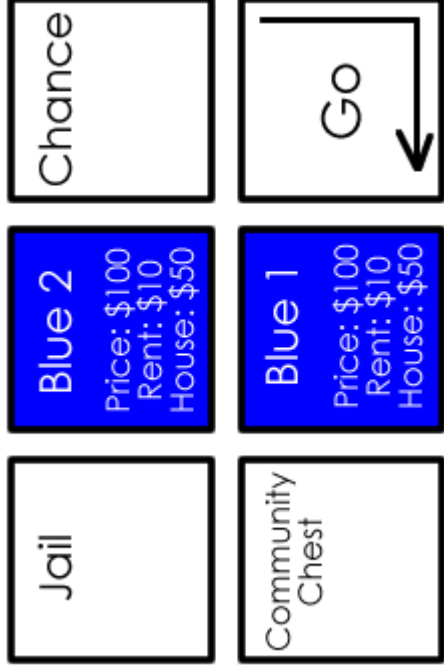
GameBoardFull

Blue 3 Price: \$1450 Rent: \$10 House: \$50	Green 1 Price: \$200 Rent: \$20 House: \$70	Go To Jail
Blue 2 Price: \$100 Rent: \$10 House: \$50	Green 2 Price: \$240 Rent: \$20 House: \$70	Go
Jail	Blue 1 Price: \$100 Rent: \$10 House: \$50	Go

GameBoardJail

Blue 3 Price: \$120 Rent: \$10 House: \$50	Green 1 Price: \$200 Rent: \$1600 House: \$70	Green 2 Price: \$2400 Rent: \$20 House: \$70
Blue 2 Price: \$100 Rent: \$10 House: \$50	Blue 1 Price: \$100 Rent: \$10 House: \$50	Go

SimpleGameBoard



GameboardCCMovePlayer, GameboardCCJail, GameboardCCloseMoney, GameboardCCGainMoney (the Chance and Community Chest cards are different for each game board, but the layout is the same)

IV. Document Revision History:

Version	2.0
Name(s)	Sarah Smith
Date	August 22, 2005
Change Description	Updated test cases and layouts

Version	1.0
Name(s)	Sarah Smith
Date	July 21, 2004
Change Description	Initial Document