



## Test plan for Milestone 2

### Additional Tests for the Model

Players In the game –

Player1 – Space1

Player2 – Space2

Player3 – Space3

Player4 – Space4

Player5 – Space5

Player6 – Space6

Player7 – Space7

Test addingPlayer()	Input	Expected
Adding player with valid name and space name	addPlayer("Player1", "Space1")	playerCount = 1
Adding player with valid name and space not in the world	addPlayer("Player1", "Space1")	IllegalArgumentException
Adding player with same name	addPlayer("Player1", "Space1") addPlayer("Player1", "Space2")	IllegalArgumentException
Adding 2 players to the same space	addPlayer("Player1", "Space1") addPlayer("Player2", "Space1")	playerCount = 2

Test addingComputerPlayer()	Input	Expected
Adding a computer controller player	addComputerPlayer()	playerCount = 3

Test movePlayer()	Input	Expected
Move a player to a valid space	movePlayer("Space2")	Space2
Move a player to a space not in the world	movePlayer("SpaceX")	IllegalArgumentException
Move a player to the current space	movePlayer("Space1")	IllegalArgumentException
Moving to a non-neighbour space	movePlayer("Space10")	IllegalArgumentException

Test pickUpItem()	Input	Expected
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Pickup an item in current space	"Item1"	itemCount = 1
Pickup an item with 1 item in space	"Item3"	itemCount = 2
Pickup an item not in the space	"Item10"	IllegalArgumentException
Pickup an item not in the world	"abc"	IllegalArgumentException
Pickup an item after limit	"item6"	IllegalStateException
Pickup an item already in possession	"Item1"	IllegalArgumentException

Test lookAround()	Input	Expected
Valid look around of the player	Game("30 30 MyWorld, 50 MyTarget", 5, 5, "0 0 5 5 Space1", "0 6 5 10 Space2", "0 11 5 15 Space3", "6 0 10 5 Space4", "6 6 10 15 Space5", "11 0 15 5 Space6", "20 20 25 25 Space7", "0 10 Item1" "1 10 Item2" "2 10 Item3", "3 10 Item4", "4 10 Item5")	Player1 Current Space : Space1 Visible Spaces : Space2, Space4
Look around with 1 neighbour	Game("30 30 MyWorld, 50 MyTarget", 5, 5, "0 0 5 5 Space1", "0 6 5 10 Space2", "0 11 5 15 Space3", "6 0 10 5 Space4", "6 6 10 15 Space5", "11 0 15 5 Space6", "20 20 25 25 Space7", "0 10 Item1" "1 10 Item2" "2 10 Item3", "3 10 Item4", "4 10 Item5")	Player6 Current Space : Space6 Visible Spaces : Space4
Look around with 0 neighbour	Game("30 30 MyWorld, 50 MyTarget", 5, 5, "0 0 5 5 Space1", "0 6 5 10 Space2", "0 11 5 15 Space3", "6 0 10 5 Space4", "6 6 10 15 Space5", "11 0 15 5 Space6", "20 20 25 25 Space7", "0 10 Item1" "1 10 Item2" "2 10 Item3", "3 10 Item4", "4 10 Item5")	Player7 Current Space : Space7 Visible Spaces :

Test displayDescription()	Input	Expected
A valid player description	Player2	Player : Player2 Items : Item2, Item4
Description of a player not in the game	Player10	IllegalArgumentException
Player description with 0 items	Player4	Player : Player4 Items : None
Player description with 1 item	Player3	Player : Player3 Items : Item5
Description of the computer controlled player	Player7	Player : Player7 Items : Item5

Test getTurn()	Input	Expected
Initial turn	Game.addPlayer("Player1 Space1") Game.addPlayer("Player2 Space2") Game.addPlayer("Player3 Space3")	Player1
After some moves	Game.addPlayer("Player1 Space1") Game.addPlayer("Player2 Space2") Game.addPlayer("Player3 Space3") Game.movePlayer()	Player2
After full cycle	Game.addPlayer("Player1 Space1") Game.addPlayer("Player2 Space2") Game.addPlayer("Player3 Space3") Game.movePlayer() Game.movePlayer() Game.movePlayer()	Player1
Test turn for a computer-controlled player	Game.addPlayer("Player1 Space1") Game.addPlayer("Player2 Space2") Game.addPlayer("Player3 Space3") Game.movePlayer() Game.movePlayer()	Player3

Construction Player	Input	Expected
Valid player	"Player1 Space1"	Name : Player1 Position : Space1
Invalid name	""	IllegalArgumentException

## Test Suite for the Controller

In – new StringReader()

Out – new StringBuffer()

Test Controller Construction	Input	Expected
Test if the controller is getting a valid model	Contorller.start(null)	IllegalArgumentException
Test if controller expception for invalid appendable	Controller.start(Readable, invalid Appendable)	"Append failed"

Testing addition of players	Input	Expected
Adding player with valid name and space name	"add Player1 Space1"	"Player1 added to Space1"
Adding player with valid name and space not in the world	"add Player1 SpaceX"	"SpaceX doesn't exist"
Adding player with same name	"add Player1 Space1 add Player1 Space2"	"Player1 is already taken"
Adding 2 players to the same space	"add Player1 Space1 add Player1 Space1"	"Player1 added to Space1" "Player1 added "
Adding player with valid name and space name	"add Player1 Space1"	"Player1 added to Space1"
Game continues after invalid space name is entered	"add Player1 SpaceZ Space3"	"SpaceZ doesn't exist" "Player1 added to Space3"
Game continues after invalid player name	"add Player1 Space1 add Player1 Space4 Player2 Space4"	"Player1 added to Space1" "Player1 is already taken" "Player2 added to Space4"

Testing the move player	Input	Expected
Move a player to a neighbour	"add Player1 Space1 add Player2 Space2 add Player3 Space3 move Space2 move Space 1"	"Player1 added to Space1" "Player2 added to Space2" "Player3 added to Space3" "Moved player Player1 to Space2" "Moved player Player2 to Space1"
Move a player to a non-neighbour	"add Player1 Space1 add Player2 Space2 add Player3 Space3 add Player4 Space4 move Space4 move Space 1"	"Player1 added to Space1" "Player2 added to Space2" "Player3 added to Space3" "Cannot make a move to Space4" "Moved player Player2 to Space1"
Moving to invalid space name	"add Player1 Space1 add Player2 Space2 move Space10"	"Player1 added to Space1" "Player2 added to Space2" "Space doesn't exist! Cannot make a move."

Player moving after max turns	"add Player1 Space1 add Player2 Space2 move Space1 move Space1 move Space2 move Space1"	"Player1 added to Space1" "Player2 added to Space2" "Max turns completed. Cannot make a move."
Game continues after an invalid move	"add Player1 Space1 add Player2 Space2 move Space8 Space4"	"Player1 added to Space1" "Player2 added to Space2" "Space doesn't exist! Cannot make a move." "Player1 moved to Space4"

Testing the Pickup item	Input	Expected
Pickup a valid item	"add Player1 Space1 add Player2 Space2 pickup Item1"	"Player1 added to Space1" "Player2 added to Space2" "Player1 picked up Item1"
Pickup an invalid item	"add Player1 Space1 add Player2 Space2 pickup Item5"	"Player1 added to Space1" "Player2 added to Space2" "Item1 doesn't exist"
Game Continues after invalid pickup	"add Player1 Space1 add Player2 Space2 pickup Item5 Item1"	"Player1 added to Space1" "Player2 added to Space2" "Item1 doesn't exist" "Player1 picked up Item1"
Pickup after max limit	"add Player1 Space1 add Player2 Space2 pickup Item1 pickup Item2 pickup Item3"	"Player1 added to Space1" "Player2 added to Space2" "Player1 picked up Item1" "Player2 picked up Item2" "Maximum item limit reached. Cannot pickup an item"
Player pickup after max turns	"add Player1 Space1 add Player2 Space2 pickup Item1 pickup Item2 pickup Item3 pickup Item4 pickup Item5"	"Player1 added to Space1" "Player2 added to Space2" "Player1 picked up Item1" "Player2 picked up Item2" "Player1 picked up Item3" "Player2 picked up Item4" "Max turns completed. Cannot pickup an item"

Testing the Create Graphical Representation	Input	Expected
Test if the create graphical representation method of model is invoked correctly	"add Player1 Space1 add Player2 Space2 pickup Item1 pickup Item2 pickup Item3 pickup Item4 pickup Item5 createlayout"	"Created a graphical representation."

Test display player description	Input	Expected
Description of a valid player	“add Player1 Space1 add Player2 Space2 pickup Item1 pickup Item2 pickup Item3 pickup Item4 pickup Item5 createlayout displayinfo Player2”	“Displaying info of Player2”
Description of a player not in the game	“add Player1 Space1 add Player2 Space2 pickup Item1 pickup Item2 pickup Item3 pickup Item4 pickup Item5 createlayout displayinfo Player3”	“Player3 doesn’t exist.”

Test display information of a space	Input	Expected
A valid space	“add Player1 Space1 add Player2 Space2 pickup Item1 pickup Item2 pickup Item3 move Space2 display Space1”	“Player1 added to Space1” “Player2 added to Space2” “Player1 picked up Item1” “Player2 picked up Item2” “Player1 picked up Item3” “Player2 moved to Space2” “Displaying information of Space1”
A space not in the world	“add Player1 Space1 add Player2 Space2 pickup Item1 move Space2 display Space3”	“Player1 added to Space1” “Player2 added to Space2” “Player1 picked up Item1” “Player2 picked up Item2” “Player1 picked up Item3” “Player2 moved to Space2” “Displaying information of Space1”
Game continues after an invalid space is entered	“add Player1 Space1 add Player2 Space2 pickup Item1 move Space2 display Space7 Space3”	“Player1 added to Space1” “Player2 added to Space2” “Player1 picked up Item1” “Player2 moved to Space2” “Space doesn’t exist.” “Displaying information of Space3”