



Test plan for Milestone 3

Testing the Model

| Testing the Construction of the Pet | Input | Expected |
|------------------------------------------------|-------------------------------|------------------------------------------------------------------------------|
| Constructing a valid pet | PetImpl("My Pet", "Space1") | Pet added to the game. Pet Details: Name : My Pet Position : Space1 |
| Constructing a pet with invalid name | PetImpl("", "Space1") | IllegalArgumentException |
| Constructing a pet with invalid start position | PetImpl("My Pet", "No space") | IllegalArgumentException |

| Testing the move pet | Input | Expected |
|--------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Player moving a pet to a valid space | movePet("Space1") | Before: Space Info Space1: Name : Space1 Items : 2 [Item1, Item2] Players : 1 [Player1] Neighbours : 2 [Space1, Space2] Pet Present : Yes Space info Space2: Name : Space2 Items : 2 [Item1, Item2] Players : 1 [Player3] Neighbours : 2 [Space1, Space2] Pet Present : No After: Space Info Space1: Name : Space1 Items : 2 [Item1, Item2] Players : 1 [Player1] Neighbours : 2 [Space1, Space2] Pet Present : No Space info Space2: Name : Space2 Items : 2 [Item1, Item2] Players : 1 [Player3] |

| | | |
|-------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Neighbours : 2 [Space1, Space2] Pet Present : Yes |
| Player moving a pet to a space not in the world | movePet("No space") | IllegalArgumentException |
| Computer player moving a pet to a valid space | movePet("Space1") | <p>Before:</p> <p>Space Info Space1: Name : Space1 Items : 2 [Item1, Item2] Players : 1 [Player1] Neighbours : 2 [Space1, Space2] Pet Present : Yes</p> <p>Space info Space2: Name : Space2 Items : 2 [Item1, Item2] Players : 1 [Player3] Neighbours : 2 [Space1, Space2] Pet Present : No</p> <p>After:</p> <p>Space Info Space1: Name : Space1 Items : 2 [Item1, Item2] Players : 1 [Player1] Neighbours : 2 [Space1, Space2] Pet Present : No</p> <p>Space info Space2: Name : Space2 Items : 2 [Item1, Item2] Players : 1 [Player3] Neighbours : 2 [Space1, Space2] Pet Present : Yes</p> |
| Pet moving around after every turn | movePet("Space1") | <p>Pet Position : Space2</p> <p>After A Turn</p> <p>Pet Position : Space3</p> |
| Pet returning to the first space after completing one cycle | movePet("Space1") | <p>Before:</p> <p>Pet Position : Space10</p> <p>After:</p> <p>Pet Position : Space1</p> |

| Testing the attack target | Input | Expected |
|---------------------------|-------|----------|
|---------------------------|-------|----------|

| | | |
|----------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------|
| Player attacking a target with an item | attack("Item1") | Before: Target Health : 50 Player Items : 2 After: Target Health : 40 Player Items : 1 |
| Computer Player attacking a target with an item | attack("Item1") | Before: Target Health : 50 Player Items : 2 After: Target Health : 40 Player Items : 1 |
| Player poking the target | attack() | Before: Target Health : 50 After: Target Health : 49 |
| Player attacking a target with a player in neighbouring space | attack("Item1") | Before: Target Health : 50 Player Items : 2 After: Target Health : 50 Player Items : 1 |
| Player attacking a target when target not in the current space | attack("Item1") | Before: Target Health : 50 Player Items : 2 After: Target Health : 50 Player Items : 1 |
| Player attacking target with a player in current space | attack("Item1") | Before: Target Health : 50 Player Items : 2 After: Target Health : 50 Player Items : 1 |

| Testing the Look Around | Input | Expected |
|---------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Look around with multiple players and items in the neighbours | lookAround invoked | <p>Current Space : Space1 Items : 2 [Item1, Item2] Players : Player1, Player2</p> <p>Neighbours: Space2 Items : 2 [Item3, Item4] Players : Player4, Player3</p> <p>Space3 Items : 2 [Item5, Item6] Players : Player5, Player6</p> |
| Look around when a pet occupies a neighbour | lookAround invoked | <p>Current Space : Space1 Items : 2 [Item1, Item2] Players : Player1, Player2</p> <p>Neighbours: Space2 Items : 2 [Item3, Item4] Players : Player4, Player3</p> <p>Display Space Info of Space3 Name : Space1 Items : 2 [Item1, Item2] Players : 1 [Player1] Neighbours : 2 [Space1, Space2] Pet Present : Yes</p> |
| Look around when no neighbours | lookAround invoked | <p>Current Space : Space1 Items : 2 [Item1, Item2] Players : Player1, Player2</p> <p>Neighbours:</p> |
| Look around when no players in the space | lookAround invoked | <p>Current Space : Space1 Items : 2 [Item1, Item2] Players : 0</p> <p>Neighbours: Space2 Items : 2 [Item3, Item4] Players : Player4, Player3</p> |

| | | |
|----------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Space3 Items : 2 [Item5, Item6] Players : Player5, Player6 |
| Look around when no items in the space | lookAround invoked | Current Space : Space1 Items : 0 Players : 1 [Player1] Neighbours: Space2 Items : 0 Players : Player4, Player3 Space3 Items : 0 Players : Player5, Player6 |

| Testing the game over condition | Input | Expected |
|-------------------------------------------------------|-----------------------------------------------------|---------------------------------|
| Games is over when a normal player kills the target | Players attacks the target | Game Over Winner : PlayerA |
| Games is over when a computer player kills the target | Computer player attacks the target | Game Over Winner : Computer1 |
| Game tie after max turns | Players takes and turns and number of turns exhaust | Game is tied |
| Player attempting to play after game over | Player tries to send command | IllegalStateException |

| Testing the display information of space | Input | Expected |
|------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Space information when there is a pet | displaySpaceInformation("Space1") | Name : Space1 Items : 2 [Item1, Item2] Players : 1 [Player1] Neighbours : 2 [Space1, Space2] Pet Present : Yes |
| Space information when there is no pet | displaySpaceInformation("Space1") | Name : Space1 Items : 2 [Item1, Item2] Players : 1 [Player1] |

| | | |
|--|--|-----------------------------------------------------|
| | | Neighbours : 2 [Space1, Space2] Pet Present : No |
|--|--|-----------------------------------------------------|

Testing the Controller

| Testing the command invocation | Input | Expected |
|----------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------|
| Player moving a pet | Player invokes move command and enters the space name | "Pet moved to Space1" |
| Player attacking the target | Player invokes the attack command and enters the | "Attacking the target using an item" |
| Player using the look around command | Player invokes the look around command | "Looking around the space Space Name, items, players" |
| Player using the display space information command | Player invokes the display space info command and enters the space name | "Displaying Space information : name, items, players" |
| Player winning a game | Player attacks the target and wins the game | "Player A won the game" |