Milestone 3 Final Testing Plan

PetTest

Construction Tests

Test Case	Input	Expected Value
Valid Construction	`new PetImpl("Fortune", 1)`	Pet object created with name "Fortune" and space 1
Null Name	`new PetImpl(null, 0)`	`IllegalArgumentException` : "Pet name cannot be null"
Empty Name	`new PetImpl("", 0)`	`IllegalArgumentException` : "Pet name cannot be null or empty"
Blank Name	`new PetImpl(" ", 0)`	`IllegalArgumentException` : "Pet name cannot be null or empty"
Negative Space Index	`new PetImpl("TestPet", -1)`	`IllegalArgumentException` : "Space index cannot be negative"

Basic Operation Tests

Test Case	Input	Expected Value
Get Pet Name	`pet.getPetName()`	Returns "Fortune"
Get Current Space Index	`pet.getCurrentSpaceIndex()`	Returns 0
Copy Pet	`pet.copy()`	New Pet instance with same properties
Set Space Index	`pet.setSpaceIndex(2)`	Updates space index to 2
Get Pet Description	`pet.getPetDescription()`	Returns "Pet: Fortune is currently at space 0"

DFS Movement Tests

Test Case	Input	Expected Value
Invalid DFS Spaces	`pet.moveFollowingDFS(null)`	`IllegalArgumentException`
Empty DFS Spaces	`pet.moveFollowingDFS(emptyList)`	`IllegalArgumentException`
Basic DFS Movement	Multiple `moveFollowingDFS()` calls	Follows expected DFS pattern
Multiple Traversals	Two complete traversals	Identical traversal patterns
Reset After Manual Move	Move + DFS	DFS restarts from new position
Different Starting Positions	DFS from each space	Valid DFS patterns from each start

Milestone3PlayerTest

Look Around Tests

Test Case	Input	Expected Value
Look Around With Pet	`lookAround()` with pet in same space	Contains pet name and location
Multiple Players	`lookAround()` with multiple players	Shows all players in vicinity

Test Case	Input	Expected Value
Pet in Neighbor Space	`lookAround()` with pet nearby	Shows pet location and "can't take eyes off it"
Target and Pet Same Space	`lookAround()` with both present	Shows both target and pet information

Attack Tests

Test Case	Input	Expected Value
Attack With Item	`attack("Knife", target)`	Shows attack message and damage
Attack With Poke	`attack("poke", target)`	Shows poke message and 1 damage
Multiple Item Sequence	Series of attacks	Uses items in damage order
Non-existent Item	`attack("NonexistentItem", target)`	`IllegalArgumentException`

Computer Player Tests

Test Case	Input	Expected Value
Bot Max Attack	Multiple attacks	Chooses highest damage weapon
Equal Damage Items	Multiple equal items	Uses any of equal items
Single Item Attack	One item available	Uses only available item
Transition to Poke	No items left	Uses poke attack
Attack With New Item	Add better weapon	Uses new higher damage weapon
Attack When Visible	Players nearby	Cannot attack
Pet Blocks Visibility	Pet in same space	Can attack

Milestone3SpaceTest

Visibility Tests

Test Case	Input	Expected Value
Pet Same Space	`isSpaceVisible()` with pet present	Returns false
Pet Different Space	`isSpaceVisible()` with pet elsewhere	Returns true
Negative Index	`isSpaceVisible(-1)`	Returns true
Large Index	`isSpaceVisible(999)`	Returns true

Space Info Tests

Test Case	Input	Expected Value
Complete Info	`getSpaceInfo()`	Contains space, items, players, target info
No Items	`getSpaceInfo()` empty space	Shows "No items" message
No Players	`getSpaceInfo()` no players	Shows "No players" message
Pet Present	`getSpaceInfo()` with pet	Shows pet presence

Test Case	Input	Expected Value
Pet Absent	`getSpaceInfo()` without pet	No pet information

Milestone3GameFacadeTest

Basic Operation Tests

Test Case	Input	Expected Value
Null World Construction	`new GameFacadeImpl(null)`	`IllegalArgumentException`
Space Info Invalid Space	`getSpaceInfo("NonexistentSpace")`	`IllegalArgumentException`
Move to Invalid Space	`movePlayer("NonexistentSpace")`	`IllegalArgumentException`
Move to Non-neighbor	`movePlayer("NonNeighborSpace")`	`IllegalArgumentException`

Attack Tests

Test Case	Input	Expected Value
No Weapon Attack	Attack without weapon	`IllegalArgumentException`
Zero Health Target	Attack with 0 health	Updates winner
Blocked by Neighbor	Attack with visible neighbor	Attack fails
Pet Blocks Vision	Attack with pet present	Attack succeeds
Different Space Attack	Attack from different space	Attack fails
Multiple Players Attack	Attack with multiple players	Visibility checks

Pet Movement Tests

Test Case	Input	Expected Value
Move Pet Invalid Space	`movePet("InvalidSpace")`	`IllegalArgumentException`
Move Pet Wrong Space	Move from different space	"Cannot move from another space"
Move Pet Success	Valid move	Pet moves to new space
Pet Regular Movement	After each turn	Pet moves according to DFS

Milestone3ControllerTest

Command Tests

Test Case	Input	Expected Value
Move Pet Command	"move-pet Kitchen"	Shows successful movement
Move Pet Wrong Space	Move from different space	Shows error message
Attack Command	"attack Knife"	Shows attack result
Attack No Target	Attack without target present	Shows failure message

Test Case	Input	Expected Value
Attack Visible	Attack when visible	Shows visibility failure
Invalid Commands	Missing arguments	Shows argument error
Poke Attack	"attack poke"	Shows poke attack result

Sequence Tests

Test Case	Input	Expected Value
Multiple Commands	Series of valid commands	All commands execute
Invalid Space Move	Move to invalid space	Shows space error
Mixed Valid/Invalid	Mix of good/bad commands	Appropriate responses

WorldFactoryTest

Pet Creation Tests

Test Case	Input	Expected Value
Valid Pet Creation	Complete world spec	Pet created correctly
Empty Pet Name	Empty name in spec	`IllegalArgumentException`
Pet Name with Spaces	Multi-word pet name	Name preserved correctly
Starting Position	New world creation	Pet starts with target
World Linking	Pet movement in world	Pet correctly linked