

## Testing Plan for Primates

- Nishtha Goswami (NUID - 001302613)

### 1. JungleFriendsSanctuary

Test Case	Comments	Exception expected (if any)
testGetTotalNumOfIsolationCages()	Test for getTotalNumOfIsolationCages()	
testGetTotalNumOfEnclosures()	Test for getTotalNumOfEnclosures()	
testAddCapacity()	Test for addCapacity()	
testMoveMonkeyToIsolation()	Test for moveMonkeyToIsolation()	
testMoveMonkeyToEnclosure()	Test for moveMonkeyToEnclosure()	
testGetAllMonkeysWithLocations()	Test for getAllMonkeysWithLocations() in alphabetical order.	
testGetSpeciesWithLocations()	Test for speciesWithLocations() in alphabetical order	
testGetLocationsForSpecies(Species)	Test for getLocationsForSpecies() and alerts if the given Species is not residing in the Sanctuary.	
testGetEnclosureSign(Enclosure)	Test for getEnclosureSign() for a given Enclosure.	
testGetFavFoodShoppingList()	Test for getFavFoodShoppingList()	
<b>Corner cases</b>		
testZeroIsolationCages()	Test for getTotalNumOfIsolationCages(). There can be 0 isolation cages.	
testZeroEnclosures()	Test for getTotalNumOfIsolationCages(). There can be 0 enclosures.	
testAddCapacityZeroIsolutions()	Test for addCapacity(). In case of 0 new isolation cages. No isolation cages will be added.	
testAddCapacityZeroEnclosures()	Test for addCapacity(). In case of 0 new enclosures. No enclosures will be added.	
<b>Exceptions</b>		
testNegativeNumOfEnclosures()	negative numOfEnclosures is illegal in constructor.	IllegalArgumentException
testNegativeNumOfIsolutions()	negative numOfIsolutions is illegal in constructor.	IllegalArgumentException
testNullSizeOfEnclosures()	null sizeOfEnclosures is illegal in constructor.	IllegalArgumentException
testSizeOfEnclosuresListSize()	testing that the size of sizeOfEnclosures list should be equal to numberOfEnclosures in constructor.	IllegalArgumentException
testSizeOfEnclosuresIllegalValues()	testing that the sizeOfEnclosures array should only include positive integers in constructor.	IllegalArgumentException
testMoveMonkeyToIsolationNullMonkey()	Primate cannot be null.	IllegalArgumentException
testMoveMonkeyToIsolation()	In case no isolation cages are left	UnsupportedOperationException or custom exception
testMoveMonkeyToEnclosureNullMonkey()	Primate cannot be null.	IllegalArgumentException
testMoveMonkeyToEnclosure()	In case no space in enclosures left	UnsupportedOperationException or custom exception
testAddCapacityNegativeNumOfEnclosures()	For addCapacity(), negative numOfEnclosures is illegal.	
testAddCapacityNegativeNumOfIsolutions()	For addCapacity(), negative numOfIsolutions is illegal.	
testAddCapacityNullSizeOfEnclosures()	For addCapacity(), null sizeOfEnclosures is illegal.	
testAddCapacitySizeOfEnclosuresListSize()	(For addCapacity(), testing that the size of sizeOfEnclosures list should be equal to numberOfEnclosures)	
testAddCapacitySizeOfEnclosuresIllegalValues()	For addCapacity(), testing that the sizeOfEnclosures array should only include positive integers.	
testGetEnclosureSignNullEnclosure()	Enclosure cannot be null	
testGetLocationsForSpecies()	Species cannot be null	

### 2. Monkey

Test Case	Comments	Exceptions (if any)
<b>Happy Scenarios (includes functionality)</b>		
testGetId()	Test for getId() // tests for auto generation	
testGetName()	Tét for getName()	
testGetSex()	Test for getSex()	
testGetSize()	Test for getSize()	
testGetSpecies()	Test for getSpecies()	
testGetWeight()	Test for getWeight()	

testGetAge()	Test for getAge()	
testGetFavouriteFood()	Test for getFavouriteFood()	
testSetWeight()	Test for getSetWeight()	
testSetAge()	Test for getSetAge()	
testSetSize()	Test for getSetSize()	
<b>Exceptions</b>		
testEmptyOrNullName()	Name cannot be null or empty.	IllegalArgumentException
testNullSpecies()	Species cannot be null.	IllegalArgumentException
testNullSex()	Sex cannot be null.	IllegalArgumentException
testNullSize()	Size cannot be null.	IllegalArgumentException
testFavouriteFood()	Favorite food cannot be null.	IllegalArgumentException

### 3. AbstractHousing

Test Case	Comments	Exceptions
testGetSpecies()	Test for getSpecies()	

### 4. Isolation

Test case	Comments	Exceptions (if any)
<b>Happy Scenarios (includes functionality)</b>		
testIsLocationAvailable()	Test for isLocationAvailable()	
testGetResidents()	Test for getResidents(). Returns a singleton list of Primate.	
testRemoveMonkey()	Test for removeMonkey(). Monkey is removed. Isolation is empty.	
testGetHousingType()	Test for getHousingType(). Returns ISOLATION.	
testAddMonkey()	Test for addMonkey(). Monkey is added. No more monkeys can be added to the isolation.	
testGetId()	Tests the getId() and auto generation.	
<b>Exceptions</b>		
testIsLocationAvailablePrimateNull()	Primate cannot be null.	IllegalArgumentException.
testAddMonkeyNullPrimate()	Primate cannot be null.	IllegalArgumentException
testAddMonkeyAlreadyFull()	Isolation is not empty. Cannot add new monkey to this isolation.	UnsupportedOperationException or custom exception
testRemoveMonkeyEmptyOrNullId()	Primate id cannot be null or empty.	IllegalArgumentException
testRemoveMonkeyIdDoesNotMatch()	If Primate id passed to be removed if not equal to the resident monkey id then the monkey cannot be removed.	UnsupportedOperationException or custom exception

### 5. Enclosure

Test case	Comments	Exceptions (if any)
<b>Happy Scenarios (includes functionality)</b>		
testIsLocationAvailable()	Test for isLocationAvailable()	
testGetResidents()	Test for getResidents(). Returns the whole troop.	
testRemoveMonkey()	Test for removeMonkey(). Monkey is removed from the troop. Species is null.	
testGetHousingType()	Test for getHousingType(). Returns ENCLOSURE.	
testAddMonkey()	Test for addMonkey(). Monkey is added to the troop.	
testGetId()	Tests the getId() and auto generation.	
<b>Exceptions</b>		
testIsLocationAvailablePrimateNull()	Primate cannot be null.	IllegalArgumentException.
testEnclosureNonPositiveCapacity()	Capacity cannot be zero or negative.	IllegalArgumentException
testAddMonkeyAlreadyFull()	Enclosure does not have enough capacity for the given Primate.	UnsupportedOperationException or custom exception
testRemoveMonkeyEmptyOrNullId()	Primate id cannot be null or empty.	IllegalArgumentException
testRemoveMonkeyIdDoesNotMatch()	If Primate id passed to be removed if not equal to the resident monkey id then the monkey cannot be removed from the troop.	UnsupportedOperationException or custom exception
testAddMonkeyNullPrimate()	Primate cannot be null.	IllegalArgumentException
testAddMonkeyNotHealthy()	If monkey is unhealthy, it cannot be added to the Enclosure.	UnsupportedOperationException or custom exception
<b>Corner cases</b>		
testAddMonkeyOnlySmallSize()	Enclosure only has capacity for small or medium monkey and throws exception for Large monkey.	UnsupportedOperationException or custom exception (in case of Large monkey)

<code>testRemoveMonkeyLastMonkey()</code>	When removing last or only monkey of the troop, Species become null and enclosure is completely empty.
---	--

