Sanctury

- Isolation: Housing[]
- emptyIsolation: Hashset(int)
- Enclosure: Housing[]
- emptyEnclosure: Hashset(int)

- Sanctuary(numOfIsolation: int, numOfEnclosure: int)
- increaseIsolation(int)
- increaseEnclosure(int)
- report(): String[]
- lookFor(species: String): Housing
- shoppingList(): String[]

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Housing

- TYPE: String
- SIZE: int
- species: String
- resident: Monkey[]

- Housing(type: String, size: int)
- addMonkey(monkey: Monkey)
- popMonkey(monkey: Monkey)

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Monkey

- NAME: String
- SPECIES: String
- SEX: String
- WEIGHT: int
- FOOD: String
- AGE: int

- Monkey(name: String, species: String, sex: String, weight: int, age: int, food: String)

1. Monkey

Testing construction	Input	
Constructor with invalid name	Monkey("", "drill", "Male", 80, 12, "eggs")	IllegalArg
Constructor with invalid species	Monkey("good", "ok", "Male", 80, 12, "eggs")	IllegalArg
Constructor with invalid sex	Monkey("good", "drill", "ok", 80, 12, "eggs")	IllegalArg
Constructor with invalid weight	Monkey("good", "drill", "Male", -80, 12, "eggs")	IllegalArg
Constructor with invalid age	Monkey("good", "drill", "Male", 80, -12, "eggs")	IllegalArg
Constructor with invalid food	Monkey("good", "drill", "Male", 80, 12, "apples")	IllegalArg
Constructor with valid input	Monkey("good", "drill", "Male", 80, 12, "eggs")	

2. Housing

Testing construction	Input	Expected
Constructor with invalid type	Housing("ok", 10)	IllegalArgumentException
Constructor with invalid size	Housing("Isolation", -1)	IllegalArgumentException
Constructor with valid type and size	Housing("Isolation", 10)	None
Constructor with valid type and size	Housing("Enclosure", 10)	None

Testing addMonkey()	Input	Expected
Add a monkey	addMonkey(monkeyA)	None

Testing popMonkey()	Input	Expected
Pop a monkey	popMonkey(monkeyA)	None

3. Sanctuary

Testing construction	Input	Expected
Constructor with invalid input	Sanctuary(-1, 1)	IllegalArgumentException
Constructor with invalid input	Sanctuary(1, -1)	IllegalArgumentException
Constructor with valid input	Sanctuary(1, 1)	None

Testing increaseIsolation()	Input	Expected
increase one each time	increaseIsolation()	None

Testing increaseEnclosure()	Input	Expected
increase one each time	increaseEnclosure()	None

Testing report()	Input	Expected
report species housed	report()	String[] in alphabetical order

Testing lookFor()	Input	Expected
look up for a special species	lookFor("species name")	a Housing object

Testing shoppingList()	Input	Expected
print a list for favorite food	shoppingList()	String[]