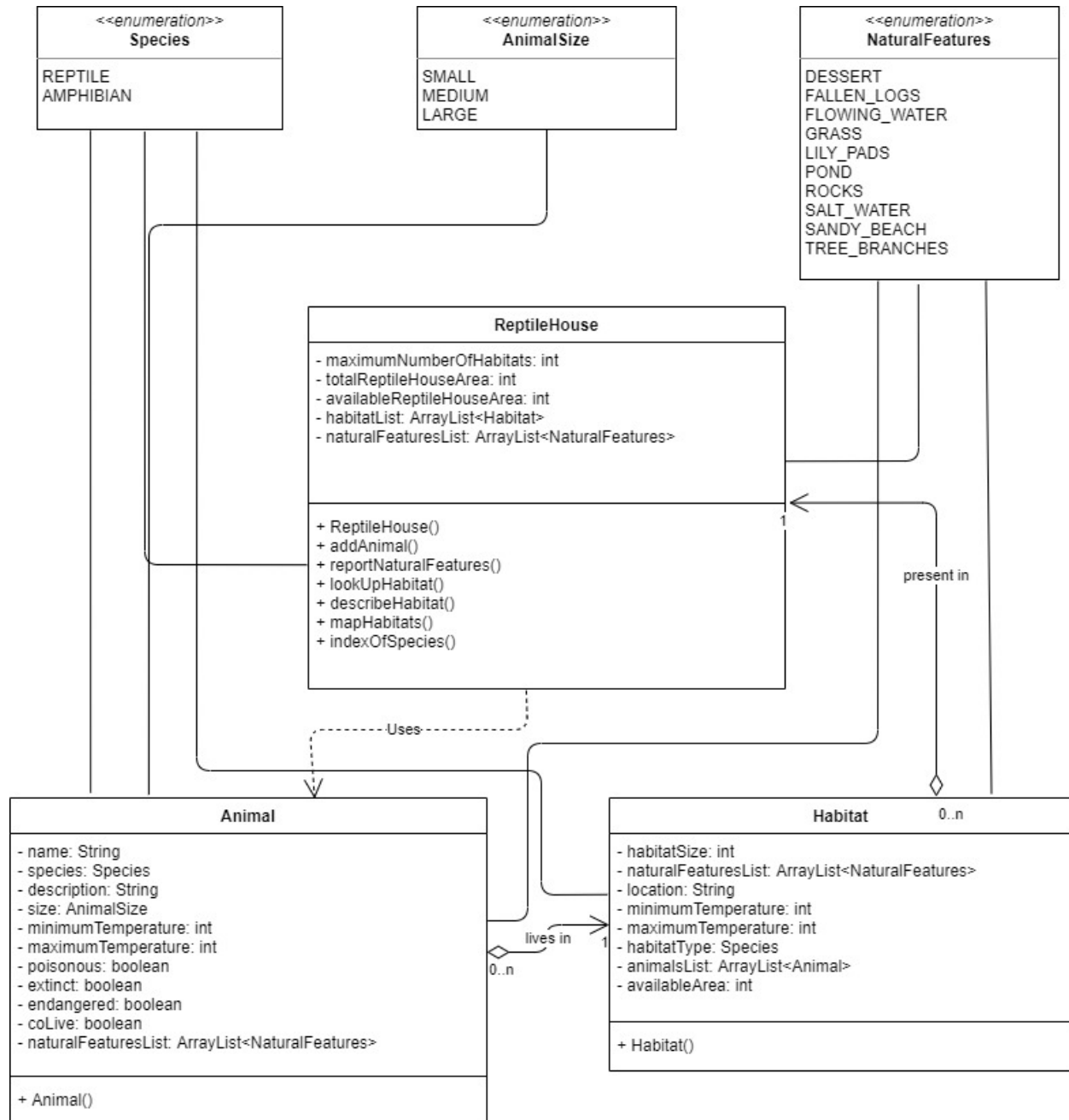


## Project 1 – Reptile Houses UML Class Diagram



## Testing design for Project 1 – Reptile Houses

### ReptileHouse class test cases:

Testing constructor for ReptileHouse	Input parameters to ReptileHosue	Expected value
Constructor builds a reptile house	(3, 100)	Instance of ReptileHouse class
Constructor disallows negative maximum number of habitats	(-1, 100)	IllegalArgumentException
Constructor disallows 0 as maximum number of habitats	(0, 100)	IllegalArgumentException
Constructor disallows negative total area of reptile house	(3, -100)	IllegalArgumentException
Constructor disallows 0 as total area of reptile house	(3, 0)	IllegalArgumentException

Testing addAnimal() of ReptileHouse	Input parameters to addAnimal()	Expected value
Method adds an animal into a habitat	new Animal("Tree Frog", AMPHIBIAN, "tree frogs have disc-shaped adhesive pads on their fingers and toes", SMALL, 60, 90, true, false, true, true); addAnimal(animal)	Animal added to animalsList of habitat

Testing reportNaturalFeatures() of ReptileHouse	Input parameters to reportNaturalFeatures()	Expected value
Method reports the natural features of a reptile house	new Habitat("A", 30, {Dessert}, "California", 70, 80)	"Natural Feature – Dessert, Habitat – A, Space Left – 10"

Testing lookUpHabitat() of ReptileHouse	Input parameters to lookUpHabitat()	Expected value
Method looks up habitats that host a species in a reptile house	lookUpHabitat(AMPHIBIAN)	"Habitat – A"
Method reports when there is no habitat for a species	lookUpHabitat(REPTILE)	"Habitat not found for the Species"

Testing describeHabitat() of ReptileHouse	Input parameters to describeHabitat()	Expected value
---	---------------------------------------	----------------

Method describes the habitat of a reptile house	describeHabitat(habitat)	“Species – AMPHIBIAN. Description – Tree frogs: tree frogs have disc-shaped adhesive pads on their fingers and toes. SMALL in size, is Poisonous, not extinct, is endangered, can live with other species. Species Present – 1”
---	--------------------------	---

Testing mapHabitats() of ReptileHouse	Input parameters to mapHabitats ()	Expected value
Method describes the habitat of a reptile house by location and species it hosts	mapHabitats()	“Habitat – A, Location – California, Natural Features – Dessert, Fallen logs, Species – AMPHIBIAN”

#### Habitat class test cases:

Testing constructor for Habitat	Input parameters to Habitat	Expected value
Constructor builds a habitat	(“A”, 30, {Dessert, Fallen logs}, “California”, 70, 80)	Instance of Habitat class
Constructor disallows empty name of habitat	(“”, 30, {Dessert, Fallen logs}, “California”, 70, 80)	IllegalArgumentException
Constructor disallows negative size of habitats	(“A”, -30, {Dessert, Fallen logs}, “California”, 70, 80)	IllegalArgumentException
Constructor disallows 0 as size of habitats	(“A”, 0, {Dessert, Fallen logs}, “California”, 70, 80)	IllegalArgumentException
Constructor disallows empty natural features	(30, {}, “California”, 70, 80)	IllegalArgumentException
Constructor disallows more than 3 natural features	(“A”, 30, {Dessert, Fallen logs, Sandy Beach, Salt water}, “California”, 70, 80)	IllegalArgumentException
Constructor disallows empty location value	(“A”, 30, {Dessert, Fallen logs, Sandy Beach, Salt water}, “”, 70, 80)	IllegalArgumentException
Constructor disallows having maximum temperature less than minimum temperature	(“A”, 30, {Dessert, Fallen logs, Sandy Beach, Salt water}, “”, 70, 60)	IllegalArgumentException

#### Animal class test cases:

Testing constructor for Animal	Input parameters to Animal	Expected value
Constructor creates an animal	(“Tree Frog”, AMPHIBIAN, “tree frogs have disc-shaped adhesive pads on their fingers and toes”,	Instance of Animal class

	SMALL, 60, 90, true, false, true, true)	
Constructor disallows empty name of animal	("", AMPHIBIAN, "tree frogs have disc-shaped adhesive pads on their fingers and toes", SMALL, 60, 90, true, false, true, true)	IllegalArgumentException
Constructor disallows empty description of animal	("Tree Frog", AMPHIBIAN, "", SMALL, 60, 90, true, false, true, true)	IllegalArgumentException
Constructor disallows having maximum temperature less than minimum temperature	("Tree Frog", AMPHIBIAN, "tree frogs have disc-shaped adhesive pads on their fingers and toes", SMALL, 60, 50, true, false, true, true)	IllegalArgumentException