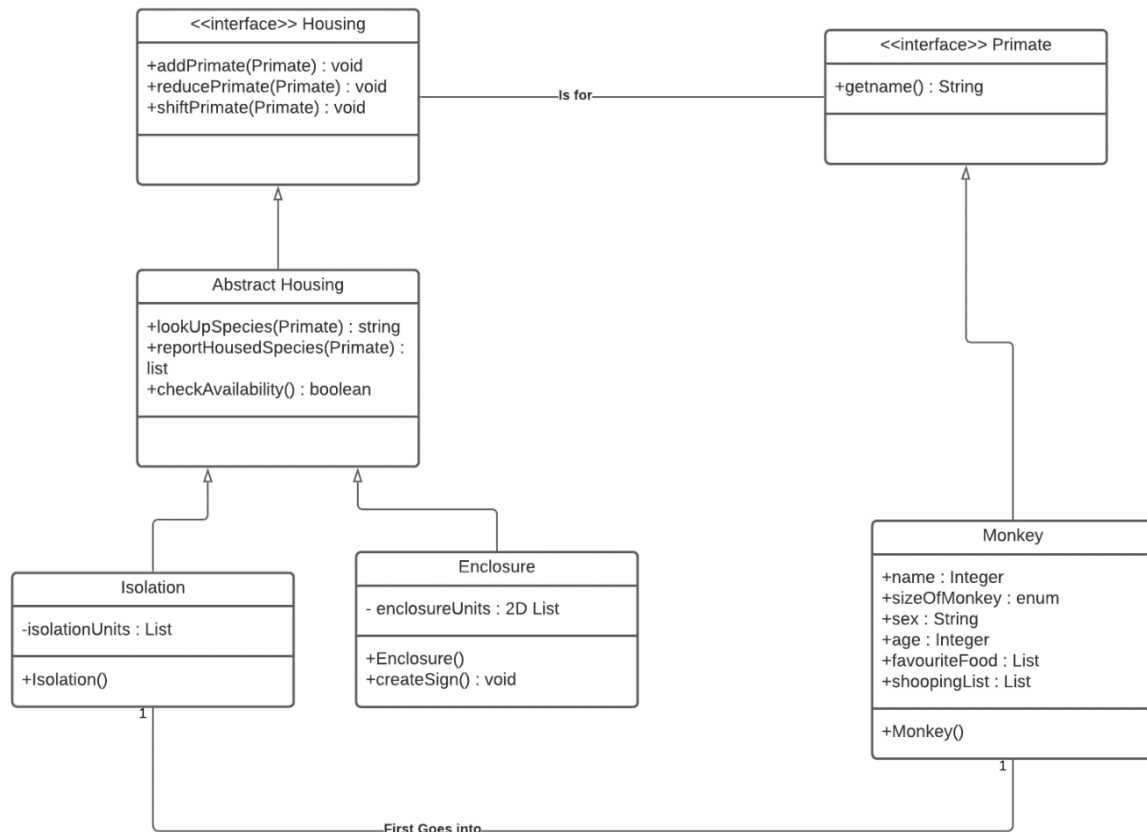# Project 1 PDP

UML Class Diagram

Test cases description

1. addPrimates(): void - The addPrimates method lets users add a primate object. To test it, we can check if the object received is a valid Primate object or not.

2. reducePrimates(): void - The reducePrimates method reduces a primate object. To test it, we can check if there is a primate object present or not and also if the object to be removed is a valid Primate object or not.

3. shiftPrimate(): void - The shiftPrimate method lets users shift a primate from isolation to enclosure. To test it, we can check if the primate object received is a

valid primate object. We should also check if any primate object is present to be shifted.

4. lookUpSpecies(): String - The lookUpSpecies method returns where a particular species is housed. To test, we can check if the species to be looked up is a valid species or not.

5. getName(): String - The getName method is used to get the name of an individual monkey. To test, we can check if the name returned by the method matches with the actual name.

6. reportHousedSpecies(): List - The reportHousedSpecies method gives the housing info of the alphabetically sorted Species. To test, we can check if the list returned is of valid type or not. We can also check by comparing its value to the actual value.

Classes Description:

Housing: - This is the interface which includes the various method signatures like addPrimate, shiftPrimate, reducePrimate. This all method takes the instance of the Primate interface due to which we can add remove or shift any kind of primate.

Abstract Housing: - This is the abstract class which helps us to reuse the code as the two method which extends it has somewhat similar functionality.

Isolation: - This class includes the monkeys kept in isolation. Each index of the isolation units contains the instance of primate type which includes the details of the monkey. By this way we can easily track which monkey resides in which isolation.

Enclosure: - This class includes the troop of the monkeys kept in isolation. Each index of the column in enclosure units indicates the detail of individual monkey. And the indexes of the rows specify the specifies the group of monkeys that is Troop. By this way we can easily track which monkey resides in which troop.

Primate: - This is an interface which includes the method signatures suitable for a primate. So, we can further implement this to get different species.

Monkey: - This class includes the details of an individual monkey. It includes the field like name, age, size, favourite food, and shopping required for monkey.