Animal population simulator Design

|  |
| --- |
| Animal |
| -Eat : int  -Breed: int  -Die: int  -Population: int |
| +get\_population:int  +set\_population:int |

|  |
| --- |
| Predator/Prey |
| -eat:int |

|  |
| --- |
| Dingo |
| -eat:int  -population:int |
| +get\_population:int  +set\_population:int |

|  |
| --- |
| Fox |
| -eat:int  -population:int |
| +get\_population:int  +set\_population:int |

|  |
| --- |
| Kangaroo |
| -eat:int  -population:int |
| +get\_population:int  +set\_population:int |

|  |
| --- |
| Rabbit |
| -eat:int  -population:int |
| +get\_population:int  +set\_population:int |

Variables

Animal

* Breed, increases the amount of animals for each class for the period of time that the simulator is running for.
* Die, after a period of time, animals would die from either being eaten or from old age.
* Population: the number of animals for each class (ie, Dingo, Fox, Kangaroo and Rabbit)

Methods

Animal

* get\_population, get the population stored in the “population” property
* set\_population, sets the population according the amount of the amount of animal that are eaten into the “population” property

Predator{Dingo,Fox}

* Eat, removes a random number of animals from either Kangaroo or Rabbit classes population.