

Predator Prey

- predatorName: string
- predatorsize: double
- preyGrowthRate: double
- predatorDeathRate: double
- time: double
- alpha: double
- gamma: double

+ PredatorPrey() + PredatorPrey(const PredatorPrey & species)

+ PredatorPrey(name: string, size: double, time: double, growthRate: double, pAlleleFrequency: double)

+ PredatorPrey(name: string, predatorName: string, size: double, predatorsize: double, time: double, growthRate: double, deathRate: double, alpha: double, gamma: double)

+ getPredatorName(): string const

+ setPredatorName(predatorName: string): void

+ getPredatorsSize(): double const

+ setPredatorsSize(predatorsSize: double): void

+ getPredatorDeathRate(): double const

+ setPredatorDeathRate(deathRate: double): void

+ getTime(): double const

+ setTime(time: double): void

+ getPreyGrowthRate(): double const

+ getAlpha(): double const

+ setAlpha(alpha: double): void

+ getGamma(): double const

+ setGamma(gamma: double): void

+ calculatePreyPopulation(): double

+ calculatePredatorPopulation(): double

IndependentSpecies

- time: double
- growthRate: double
- carryingCapacity: double

+ IndependentSpecies() (const IndependentSpecies & species)
+ IndependentSpecies(name: string, size: double, time: double, growthRate: double, carryingCapacity: double, pAlleleFrequency: double)

+ IndependentSpecies(name: string, size: double, time: double, growthRate: double, carryingCapacity: double)

+ getTime(): double const

+ setTime(time: double): void

+ getGrowthRate(): double const

+ getCarryingCapacity(): double const

+ calculatePopulationSize(): double

- findPhi(): double const

- findK(): double const

- isValid(): bool const