Ecosystem

- species: vector<Species>
- numberSpecies : int
- numberIndependentSpecies: int
- numberPredatorPrey : int

+ Ecosystem ()
+ getNumberSpecies (): int const
+ getNumberIndependentSpecies():
  int const
+ getNumberPredatorPrey(): int const
+ addSpecies (species: Species & const): void
+ addIndependentSpecies (independentSpecies
  : IndependentSpecies & const): void
+ addPredatorPrey (predatorPrey: Predator
  Prey & const): void

Species

- size : double
- name: string
- pAlleleFrequency: double
- aAlleleFrequency: double

+ Species ()
+ Species (name: string, size
  : double, pAllele
  frequency: double,
  aAlleleFrequency: double)
+ getName(): string const
+ getpAlleleFrequency(): double
  const
+ getaAlleleFrequency():
  double const
+ findPercentDominant(): double
  const
+ findNumberDominant():
  double const
+ findPercentRecessive (): double
  const
+ findNumberRecessive (): double
  const
+ findHomozygousDominant():
  double const
+ findHomozygousRecessive ():
  double const
+ findHeterozygous (): double
  const
+ equilibriumDominant (dominant:
  double, heterozygous: double,
  recessive: double): bool
+ getSize (): double const

IndependentSpecies

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

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

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

+ getCarryingCapacity(): double const
+ getTime(): double const

+ getGrowthRate(): double const
+ getPopulationSize(): double

PredatorPrey