Note (top left): Methods "equals" and "ToString" have been omitted since they are inherited from Object. Getters and Setters have also been omitted. Class serial numbers for serialization have also been omitted. All classes, except for MotelManager, implement Serializable

Classes and packages:

- Motel Manager
- Motel
  - _hotel _keepers
  - _vets
  - _species
  - _vaccines
- hva.core.animals
  - Species
  - Animal
- hva.core.habitat
  - Habitat
  - Tree
  - _habitats
- hva.core.vaccine
  - Vaccine
  - VaccineRegist
- hva.core.employee
  - Vet
  - Keeper
  - «abstract» Employee
- hva.core.calculator
  - «interface» Calculator
  - CalculateAnimalSatisfaction — «binds» T → Animal
  - CalculateCleaningEffort — «binds» T → Tree
  - CalculateGlobalSatisfaction — «binds» T → Motel
  - CalculateKeeperSatisfaction — «binds» T → Keeper
  - CalculateVetSatisfaction — «binds» T → Vet

```
Duplicate Animal Exception ──────────────────────────┐
Duplicate Employee Exception ─────────────────────────┤
Duplicate Habitat Exception ──────────────────────────┤
Duplicate Tree Exception ─────────────────────────────┤
Duplicate Vaccine Exception ──────────────────────────┤
Open File Exception ──────────────────────────────────┤
Non Existing Responsability Exception ────────────────┤
Unknown Animal Exception ─────────────────────────────┤
Unknown Employee Exception ───────────────────────────┼──▷ Exception
Unknown Habitat Exception ────────────────────────────┤
Unknown Species Exception ────────────────────────────┤
Unknown Tree Exception ───────────────────────────────┤
Unknown Vaccine Exception ────────────────────────────┤
Unknown Veterinarian Exception ───────────────────────┤
Veterinarian Do Not Have Penmission Exception ────────┤
Import File Exception ────────────────────────────────┤
Missing File Association Exception ───────────────────┤
Unavailable File Exception ───────────────────────────┤
Unrecognized Entry Exception ─────────────────────────┘
```

Animal

- -_id: String
- -_name: String
- -_health: String
- -_species: String
- -_habitat: String
- -_healthHistory: String[]

+ addAnimalToHabitat(idHabitat: String): void
+ removeAnimalFromHabitat(idHabitat: String): void

Species

- -_id: int
- -_name: String
- -_animalList: String[]

+ getSpeciesPopulation(): int
+ getAnimals(): Animal[]

«abstract»
Employee

- -_id: String
- -_name: String

+ addNewResponsability(idResponsability: String): void
+ removeCurrentResponsability(idResponsability: String): void

Keeper

- -_responsibleHabitats: int[]

Vet

- -_responsibleSpecies: int[]

Vaccine

- - id : String
- - name : String
- - species : String[]

+ applyVaccine() : void
+ calculateVaccineDamage(Animal : animal) : int
+ numberVaccinations() : int

VaccineRegist

- - animal : Animal
- - vaccine : Vaccine
- - vet : Vet
- - health : String

+ getByAnimal(id : int) : VaccineRegist
+ getByVaccine(id : int) : VaccineRegist
+ getByVet(id : int) : VaccineRegist

«interface»
Calculator

+ calculate(T : Type) : int

Calculate Animal Satisfaction

Calculate Cleaning Effort

+ cleaningComplexity(tree : tree) : int

Calculate Global Satisfaction

Calculate Keeper Satisfaction

+ work(keeper : Keeper) : int
+ workInHabitat(habitat : Habitat) : int
+ getSameHabitatKeeper(keeper : Keeper[]) : int

Calculate Vet Satisfaction

+ work(Vet : vet) : int
+ getSameSpeciesVet() : int
+ getCorrespondingAnimals() : int

Hotel

- _idSpecies : String[ ]
- _idHabitat : String[ ]
- _idVet : String[ ]
- _idKeeper : String[ ]
- _idTree : String[ ]
- _idVaccine : String[ ]
- _idVaccineApRegist : String[ ]

+ getHabitat(String id) : Habitat
+ getAnimal(String id) : Animal
+ getEmployee(String id) : Employee
+ getVaccine(String id) : Vaccine
+ getTree(String id) : Tree
+ getVet(String id) : Vet
+ showAllAnimals() : void
+ registerAnimal(String idAnimal, String name, String idSpecies, String idHabitat) : void
+ transferToHabitat(String idAnimal, String idHabitat) : void
+ showSatisfactionOfAnimal(String idAnimal) : void
+ showAllEmployees() : void
+ registerEmployee(String idEmployee, String name, String type) : void
+ addResponsability(String idResponsability) : void
+ removeResponsability(String idResponsability) : void
+ showSatisfactionOfEmployee(String idEmployee) : void
+ showAllHabitats() : void
+ registerHabitat(String idHabitat, String name, int area) : void
+ changeHabitatArea(String idHabitat, int newArea) : void
+ changeHabitatInfluence(String idHabitat, String idSpecies, String newInfluenc) : void
+ showAllTreeInHabitat(String idHabitat) : void
+ showAllVaccines() : void
+ registerVaccine(String idVaccine, String name, String[ ] idSpecies) : void
+ vaccinateAnimal(String idVaccine, String idVet, String idAnimal) : void
+ showVaccinations() : void
+ showMedicalActsOnAnimal(String idAnimal) : void
+ showMedicalActsByVeterinarian(String idVet) : void
+ showWrongVaccinations() : void

Habitat

- _id
- _name: String
- _animalList: String[]
- _TreeList: String[]
- _area: int
- _speciesInfluence: Map < Interger, Interger >

+ sameSpecies(Specie specie): int
+ differentSpecies(Specie specie): int
+ getHabitatPopulation() : int
+ getInfluence(Animal animal) : int
+ setInfluence(Animal animal#, int influence) : void
+ getTreesFromHabitat() : Tree[]

Tree

- _id : int
- _name: String
- _age: float
- _leaf: int
- _habitat: String
- _cleaningDifficulty: int

+ getAge() : int
+ seasonalEffort() : int

HotelManager

- _CurrentSeason : int

+ save() : void
+ SaveAs(String filename) : void
+ load(String filename) : void
+ importFile(String filename) : void
+ getHotel() : Hotel
+ newFile() : void
+ openAnimalsMenu() : void
+ openEmployees Menu() : void
+ openFile() : void
+ openHabitatsMenu : void
+ openLookUps Menu : void
+ openVaccines Menu : void
+ saveFile() : void
+ advanceSeason : void
+ showGlobalSatisfaction() : void