

Problem identification

A vet asks to carry out a program that develops the following specifications: register new clients with their pets, that is, that the system stores the data of a user with its respective animal. Perform a hospitalization consisting of hosting a pet in a mini room of the veterinarian and at the same time create a clinical history for it. Make a report of all clinical records that exist at the time and show this report to the user. In addition, when the user requires it, he must show the contact details of a specific client. After this the program must calculate the total cost of a hospitalization taking into account the days that this pet, the type of pet and the cost for medications. Finally, the application must register a pet, for this you must remove the pet from the mini room where you are and eliminate the clinical history of that room, but you must first store this in a history of medical records.

Entities

Vet

- Name
- Relation with (mini room, medical record, person)

MiniRoom

- Availability
- Relation with (Medical record)

MedicalRecord

- Symptom
- Diagnosis
- Relation with (Date, medicine, person, pet)

Person

- Name
- Id
- Address
- Phone

- Relation with (Pet)

Pet

- Name
- Age
- Height
- Weight
- Relation with (Medical record)
- Identifier

Date

- Day
- Month
- Year

Medicine

- Name
- Dose
- Dose cost
- Frequency

Service

- Service type
- Cost
- Relation with (Date, Pet, Person)

Specifications

| | |
|--|---|
| Name | R# 1 Sign clients |
| Resume | Allows to the vet sign new clients, according to his name, id, address and phone and a pet with name, specie, age and weight. |
| Input | |
| Client: name, id, address and phone. Pet: name, specie, age and weight. | |
| Output | |
| The client has been signed | |

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| Name | R# 2 Hospitalization |
| Resume | Allows to know if the mini room is available to get a pet in and then create a medical record. |
| Input | |
| A pet, a mini room | |
| Output | |
| A new pet has been introduced to a mini room and its medical record has been created | |

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| Name | R# 3 Medical record report |
| Resume | Implement a complete report of all the medical record of the hospitalized patients at the moment |
| Input | |
| | |
| Output | |
| The report has been created | |

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| Name | R# 4 Owner's contact information |
| Resume | Shows the contact information of the owner of the patient hospitalized using the name of the person or the animal. |
| Input | |
| The name of the person or the animal. | |
| Output | |
| “The contact information of the owner is:...” | |

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| Name | R# 5 Hospitalization costs |
| Resume | Calculate the cost of the hospitalization, taking into account the weight, the specie and the time that the pet is in the hospitalization. Also the medicines that have been applied to the pet. |
| Input | |
| Weight, specie, days in the hospitalization and the medicine dose | |
| Output | |
| “The total cost of the hospitalization is:” | |

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| Name | R# 6 Pet discharged |
| Resume | Allows to discharge a pet from a mini room and delete its medical record from the mini room |
| Input | |
| A pet | |
| Output | |
| “Pet discharged from the room | |

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| Name | R# 7 Medical records history |
| Resume | Before a pet has been deleted from a mini room, allows to save its medical record in a history |
| Input | |
| The medical record of the pet | |
| Output | |
| “The medical record has been saved” | |

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| Name | R# 8 Update clinical history. |
| Resume | Whenever a new clinical history is going to be created, check in the history if a pet was already hospitalized, in case there is a previous medical history, it must be added to the new one. |
| Input | |
| A pet | |
| Output | |
| “A new medical record has been added to the patient:” | |

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| Name | R# 9 Índice de masa corporal de mascota |
| Resume | Permite calcular el índice de masa corporal de una mascota a partir de su altura y su peso |
| Input | |
| | |
| Output | |
| Se ha calculado el índice de masa corporal de la mascota | |

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| Name | R# 10 Actualizar información de contacto del cliente |
| Resume | Permite al usuario modificar la dirección y el teléfono de determinado cliente |
| Input | |
| | |
| Output | |
| Se ha modificado la dirección y el teléfono del cliente seleccionado. | |

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| Name | R# 11 Añadir medicina |
| Resume | Permite añadir una nueva medicina durante la hospitalización de un paciente |
| Input | |
| | |
| Output | |
| Se ha añadido la medicina | |

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| Name | R# 12 Añadir a diagnóstico |
| Resume | Permite añadir notas al diagnóstico de un paciente mientras se encuentra hospitalizado |
| Input | |
| | |
| Output | |
| Se han añadido las notas ingresadas al diagnóstico | |

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|--|---|
| Name | R# 13 Añadir síntomas nuevos |
| Resume | Permite añadir síntomas nuevos a un paciente que se encuentra hospitalizado |
| Input | |
| | |
| Output | |
| Se han añadido nuevos síntomas al paciente | |

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| Name | R# 14 Calcular ingresos por servicio |
| Resume | Permite calcular los ingresos por servicio a partir del tipo de servicio y el costo que éste acarree. |
| Input | |
| | |
| Output | |
| Se han calculado los ingresos por servicio | |

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|--|---|
| Name | R# 15 Calcular ingresos totales veterinaria |
| Resume | Permite calcular los ingresos totales que obtiene la veterinaria a partir de cada servicio. |
| Input | |
| | |
| Output | |
| Se han calculado los ingresos totales de la veterinaria. | |

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| Name | R# 16 Promedio ingresos por servicio |
| Resume | Permite calcular el promedio de ingresos por cada servicio |
| Input | |
| | |
| Output | |
| Se ha calculado el promedio de ingresos por determinado servicio | |

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| Name | R# 17 Promedio ingresos de veterinaria en una semana |
| Resume | Permite calcular el promedio de ingresos de la veterinaria a lo largo de una semana |
| Input | |
| | |
| Output | |
| Se ha calculado el promedio de ingresos durante una semana | |

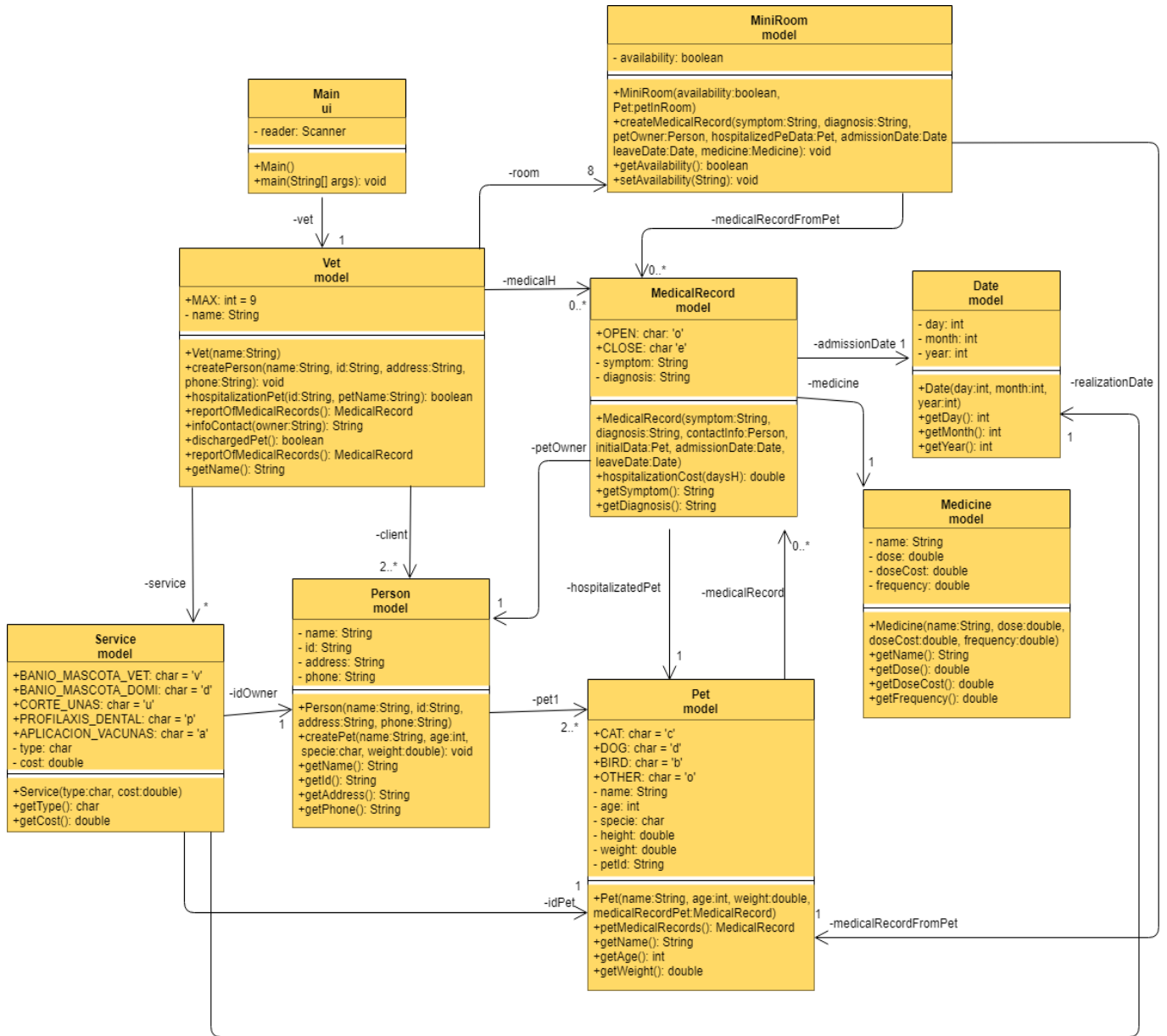
| | |
|---|---|
| Name | R# 18 Reporte de servicios con lapso dado |
| Resume | Permite generar un reporte de los servicios prestados dada una fecha inicial y una final. |
| Input | |
| | |
| Output | |
| El reporte de los servicios se ha generado. | |

Traceability analysis

| <u>S.</u> | Class | Method |
|-----------|---------------|---|
| #1 | Vet, Person | +createPerson(name:String, id:String, address:String, phone:String): void +createPet(name:String, age:int, specie:char, weight:double): void |
| #2 | Vet | +hospitalizationPet(id:String, petName:String): boolean |
| #3 | Vet, Pet | +reportOfMedicalRecords(): MedicalRecord +petMedicalRecords(): MedicalRecord |
| #4 | Vet | +infoContact(owner:String): String |
| #5 | MedicalRecord | +hospitalizationCost(daysH): double |
| #6 | Vet | +dischargedPet(): boolean |
| #7 | Vet | +dischargedPet(): boolean |
| #8 | Vet | +hospitalizationPet(id:String, petName:String): Boolean |
| #9 | Pet | +calculateBmi(): double |
| #10 | Vet | +UpdateContactInfo(newAddress:String, newPhone:String): void |
| #11 | MedicalRecord | +addMedicine(mName:String, mDose:double, mCost:double, mFrequency:double): void |
| #12 | MedicalRecord | +addDiagnostic(newDiag:String): void |
| #13 | MedicalRecord | +addSymptom(newSym): void |
| #14 | Service | +calculateIncomes(): double |
| #15 | Vet | +calculateTotalIncomes(): double |
| #16 | Vet | +calculatePromIncomesPerService(): double |
| #17 | Vet | +calculatePromVetIncomes(): double |

S.: Specifications

Class diagram



Objects Diagram

