

# Homestay App Specification

## Types

Base classes from requirement's class diagram:

$[Admin, Profile, File, DateRange, Pet, FamilyStructure]$

## The System

The system must hold a schema by itself with the purpose of declaring its elements as well as its invariants:

*HomestayApp*

$\exists STUDENTS$

$\exists HOSTS$

$managers : \mathbb{P} Admin$

$requests : Profile \rightarrow Profile$

$students \subseteq Profile$

$hosts \subseteq Profile$

$students \cap Hosts = \emptyset$

$\text{dom } requests \subset students$

$\text{ran } requests \subset hosts$

$\forall s : students \mid s \in \text{dom } Requests \bullet \#(s \triangleleft Requests) \leq 3$

## Actors

*STUDENTS*

$students : \mathbb{P} Profile$

$pet_preference : Pet \rightarrow \mathbb{N}$

$family_sstructure_preference : \mathbb{N} \rightarrow FamilyStructure$

$allergies : \mathbb{P} Allergie$

*HOSTS*

$hosts : \mathbb{P} Profile$

$pets : \mathbb{P} Pet$

$family_sstructure : FamilyStructure$