

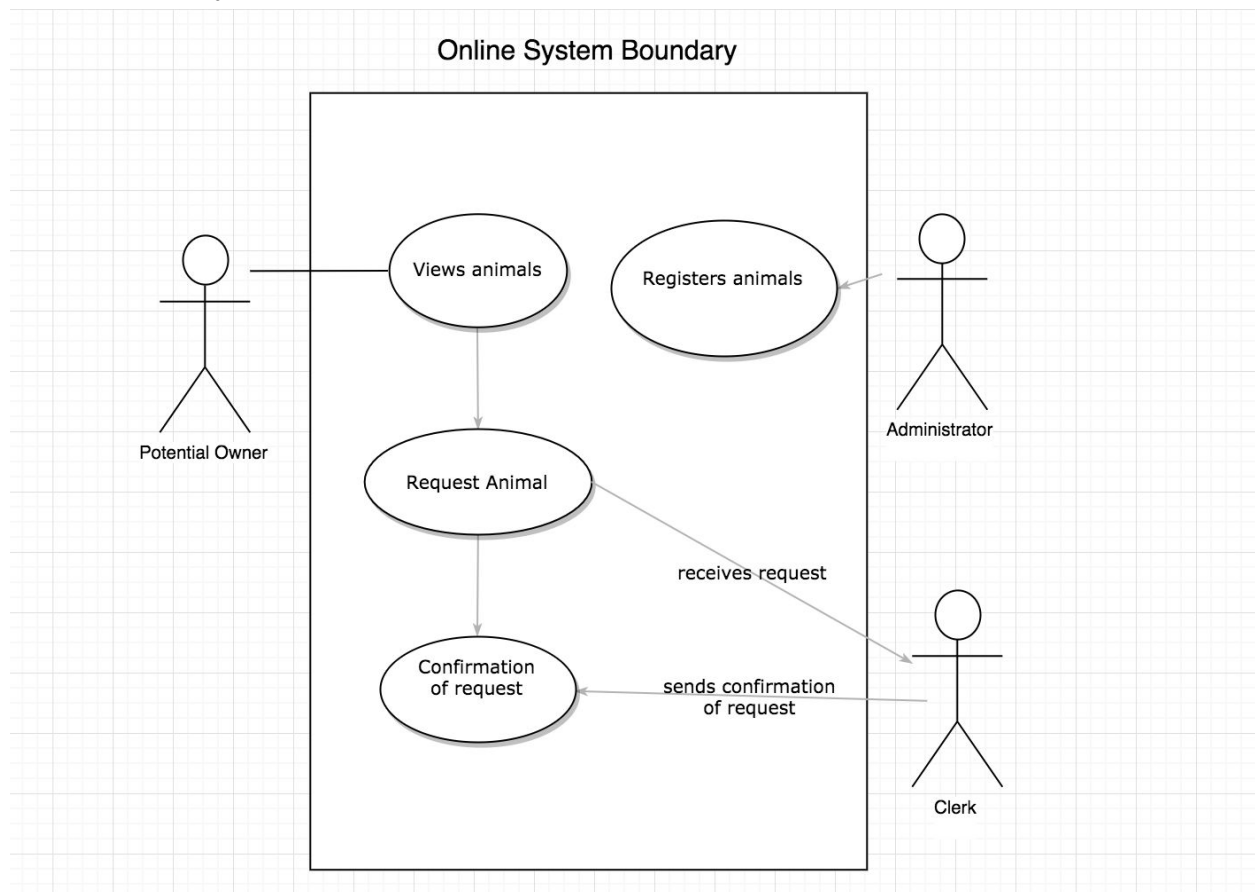
Evidence for Analysis and Design Unit

Simon Atkins

Cohort e20

A.D.1 Use case Diagram

Animal shelter system use case

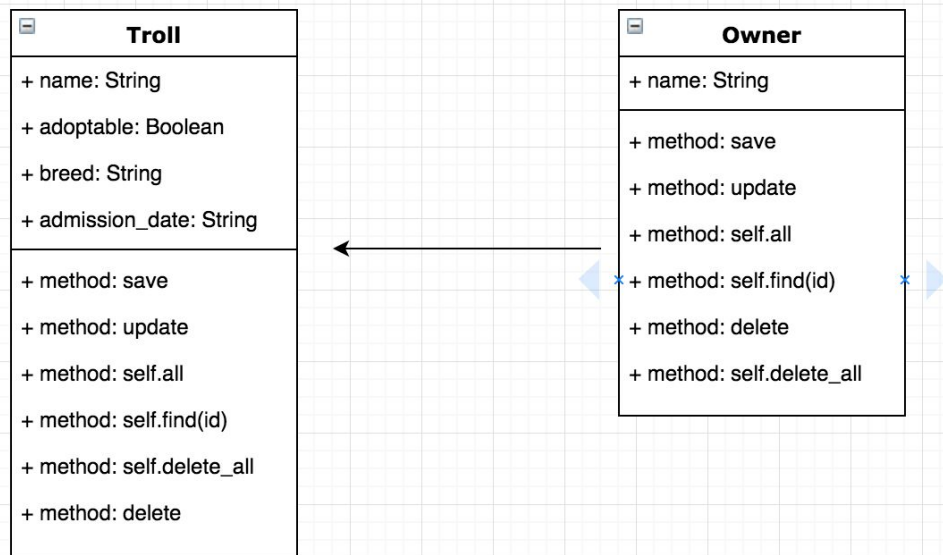


A.D.2 Class Diagram

Internet Troll Adoption Center

Each class includes CRUD methods

Owner requires a Troll

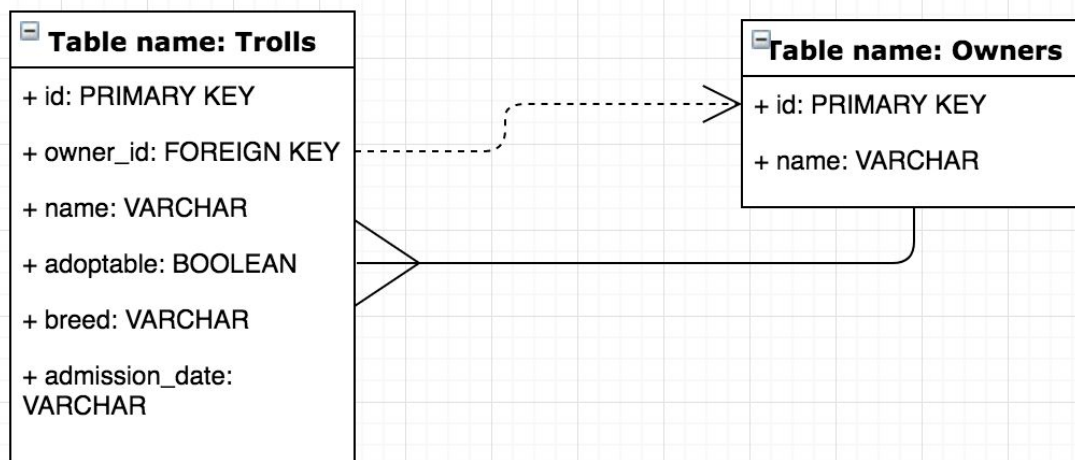


A.D.3 Object Diagram

Internet Troll Adoption Center

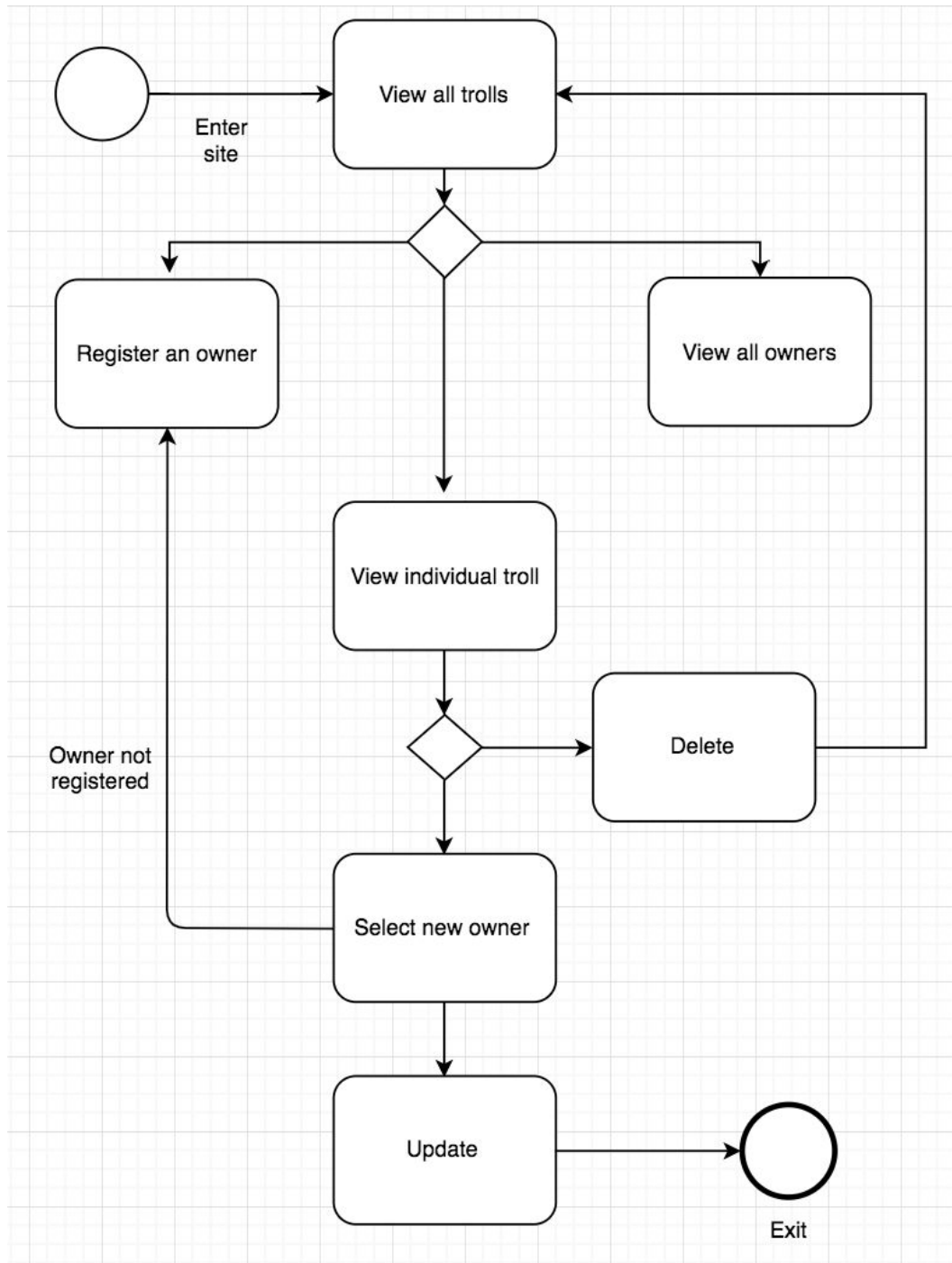
One-to-many: An Owner can have many Trolls but a Troll can only have one Owner

The owner_id field for each Troll references the primary key of an Owner

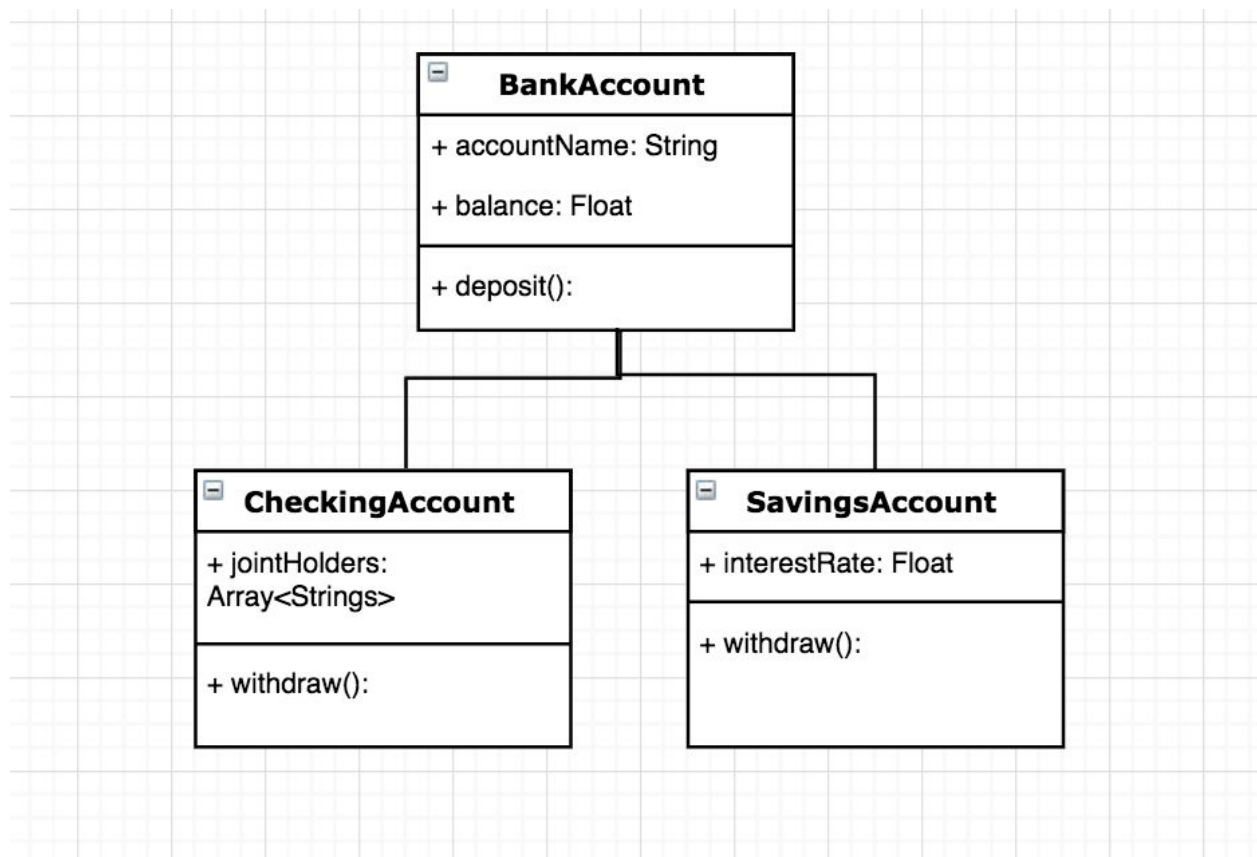


A.D.4 Activity Diagram

User enters site to update Owner for a Troll in Troll Shelter project.



A.D.5 Inheritance Diagram



A.D.6 Implementation Constraints

Hardware and Software Platforms

Constraints and possible effect: Slow, outdated hardware and software for example can make it difficult for developers to quickly develop the software. User hardware and software constraints can mean they aren't able to view a site or process the amount of information.

Solution: Employers should ensure that hardware and software meets standard requirements for developers. Regarding users, developers should agree on a benchmark for what the reasonable minimum requirements are that can be expected of a user, before building the software.

Performance Requirements

Constraints and possible effect: Potential slow performance due to having too much logic in the Controller files of the app, for example.

Solution: Refactor code so that logic takes place at the database level through SQL queries instead of Ruby logic in the Controller files.

Persistent Storage and Transactions

Constraints and possible effect: Potential issues with storage space for large amounts of information as well as security of personal data.

Solution: Ensure that all personal data is correctly encrypted, purchase enough database storage from third parties, and delete data older than a certain number of years.

Budgets

Constraints and possible effect: Budget constraints often means fewer staff members than necessary and/or unsatisfactory equipment needed for project completion.

Solution: A greater budget allocation via senior management or increased funding from external partners.

Time

Constraints and possible effect: Time constraints can mean that developers are overworked, and that features of the software are negatively affected.

Solution: Developers and their managers may have to discuss time constraints with stakeholders and negotiate what features of the software should take priority so as to reach an MVP.