PDA: Software Development

Level 8

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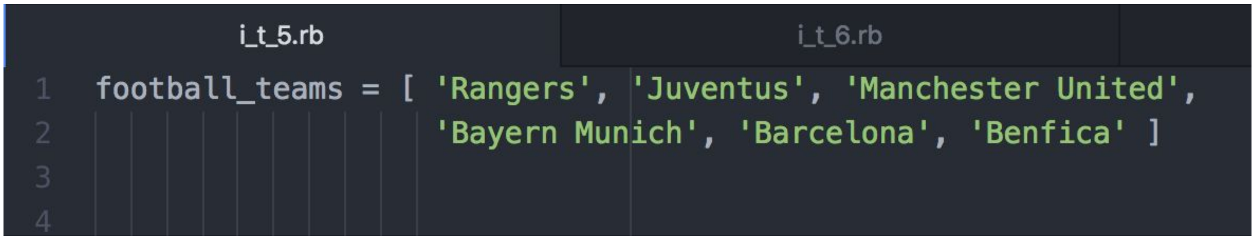
Cohort E15

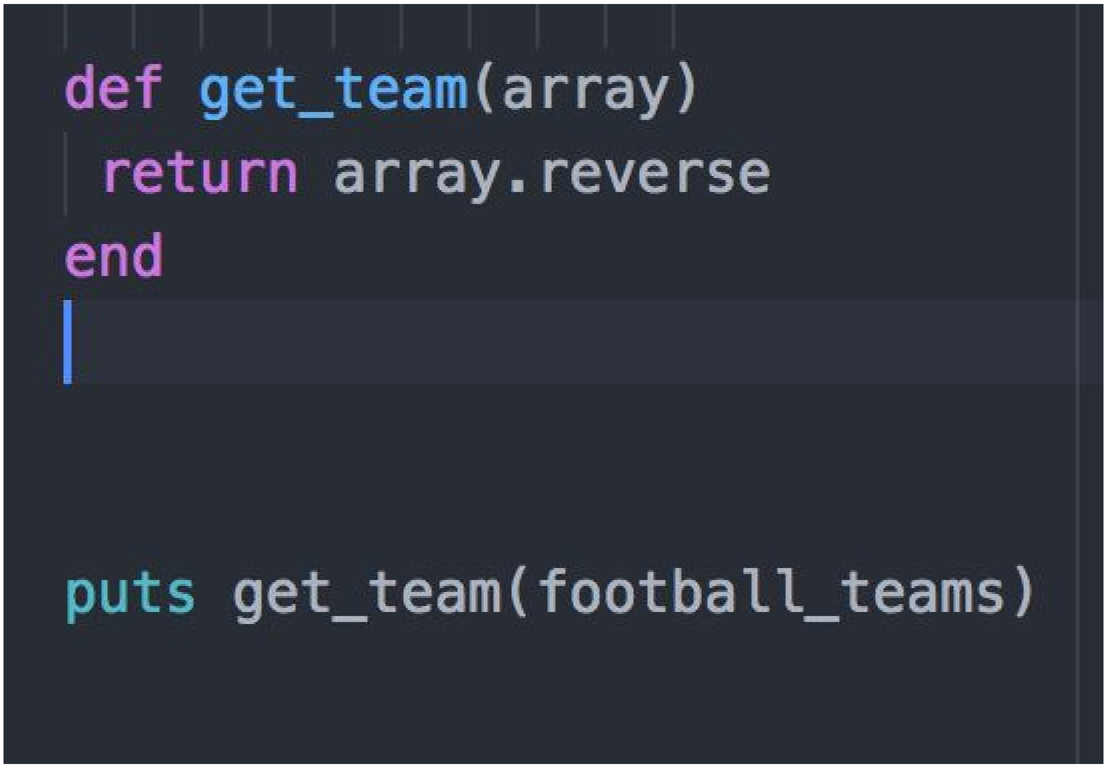
Ref: I.T 5

Array in program



```ruby
football_teams = [ 'Rangers', 'Juventus', 'Manchester United',
                   'Bayern Munich', 'Barcelona', 'Benfica' ]
```

Function that uses array

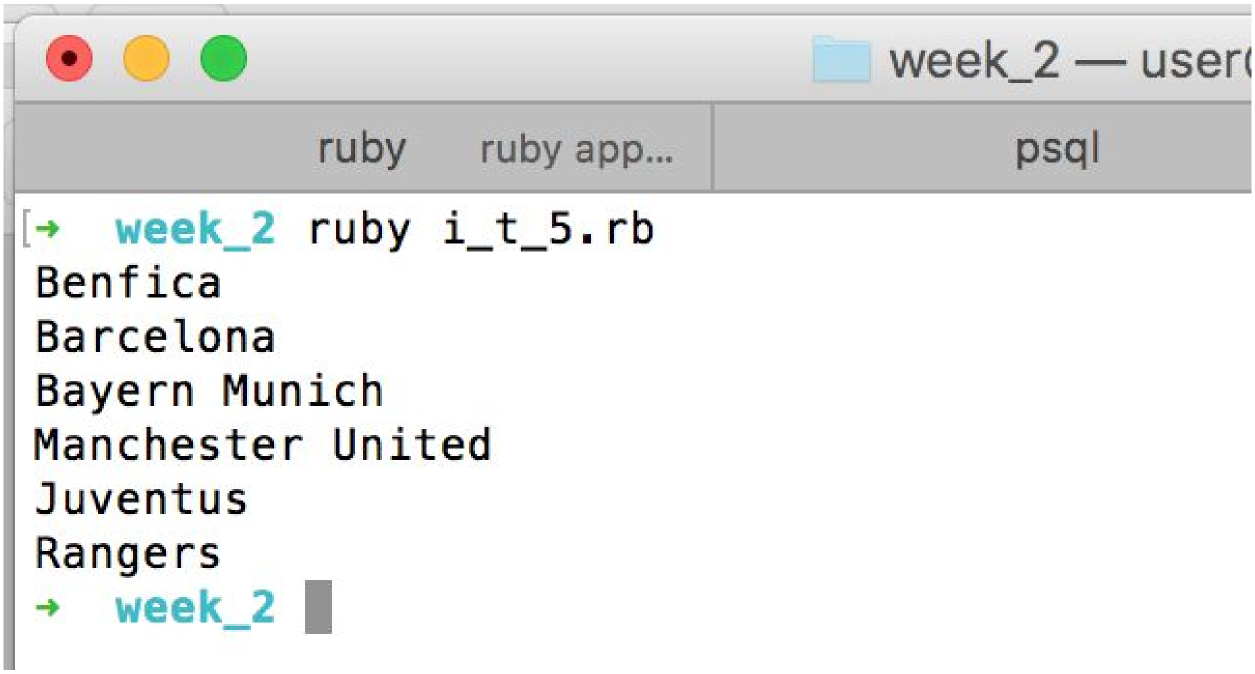


```ruby
def get_team(array)
  return array.reverse
end



puts get_team(football_teams)
```

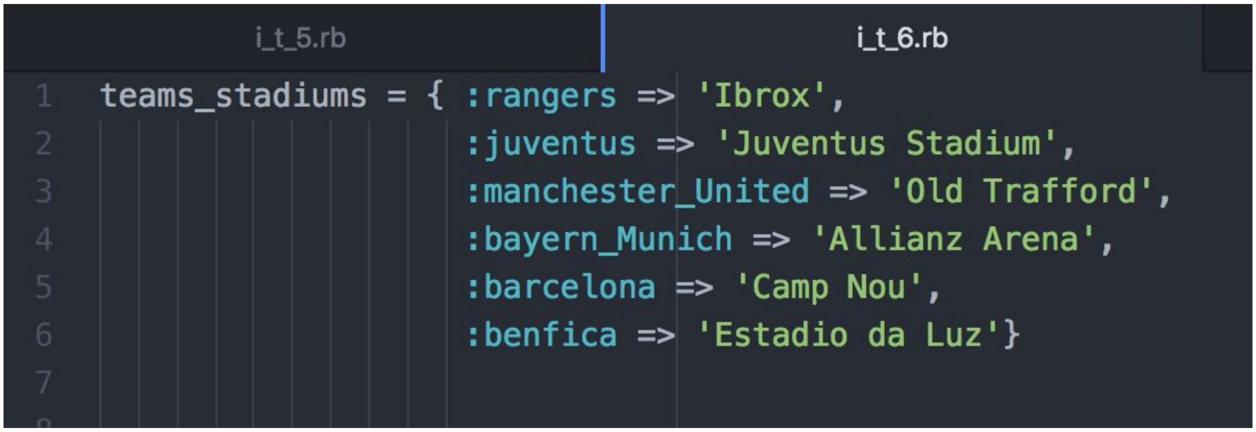
Result of function



```
[→  week_2 ruby i_t_5.rb
Benfica
Barcelona
Bayern Munich
Manchester United
Juventus
Rangers
→  week_2
```

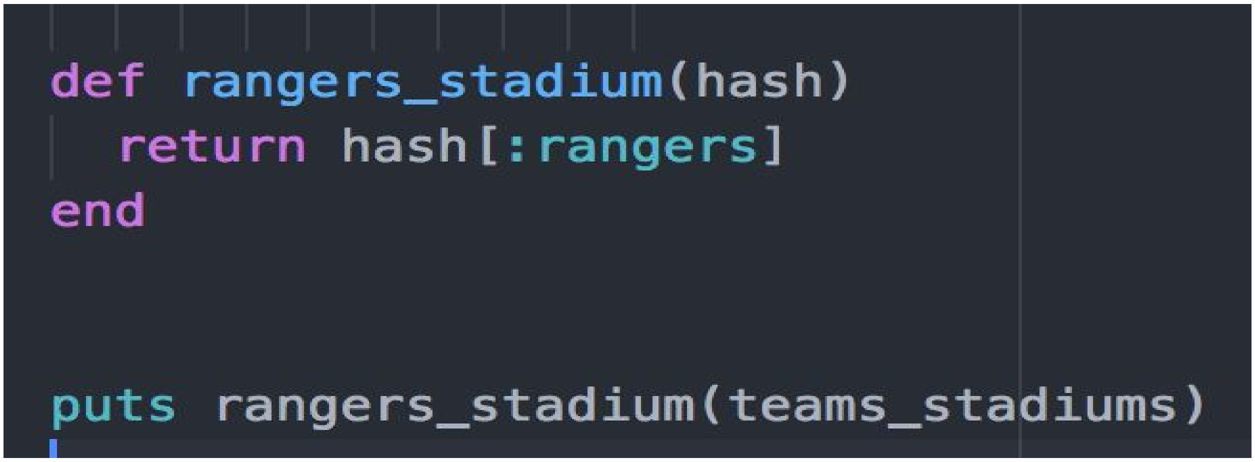
Ref I.T 6

Hash in a program



```ruby
teams_stadiums = { :rangers => 'Ibrox',
                   :juventus => 'Juventus Stadium',
                   :manchester_United => 'Old Trafford',
                   :bayern_Munich => 'Allianz Arena',
                   :barcelona => 'Camp Nou',
                   :benfica => 'Estadio da Luz'}
```

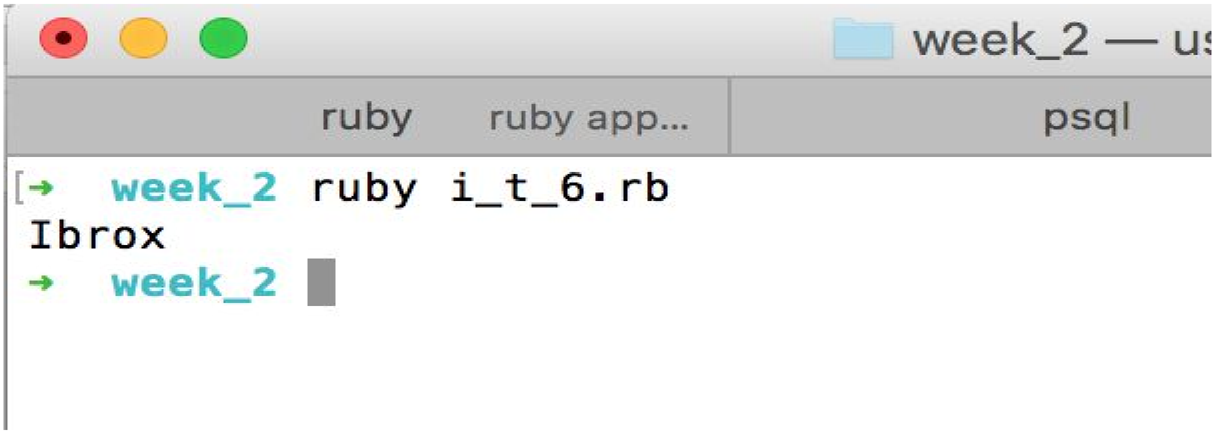
Function that uses hash



```ruby
def rangers_stadium(hash)
  return hash[:rangers]
end


puts rangers_stadium(teams_stadiums)
```

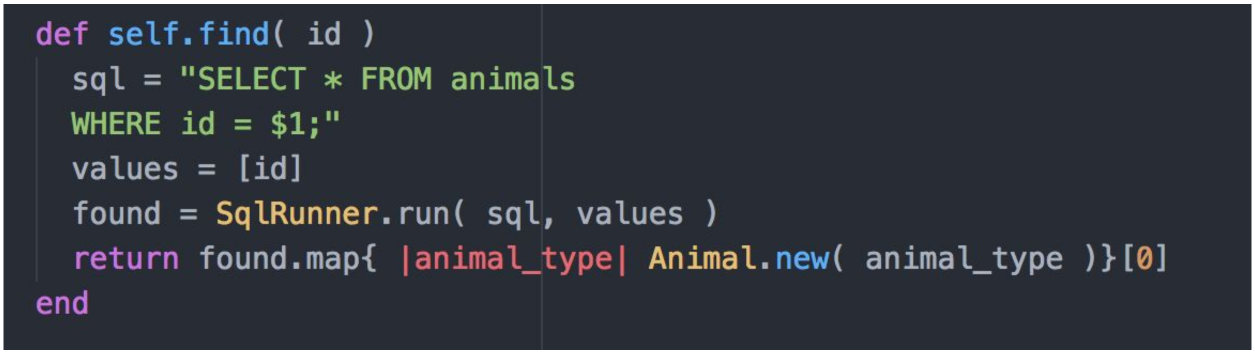
Result of function



```
[→  week_2 ruby i_t_6.rb
Ibrox
→  week_2
```

Ref I.T 3

Function that searches data

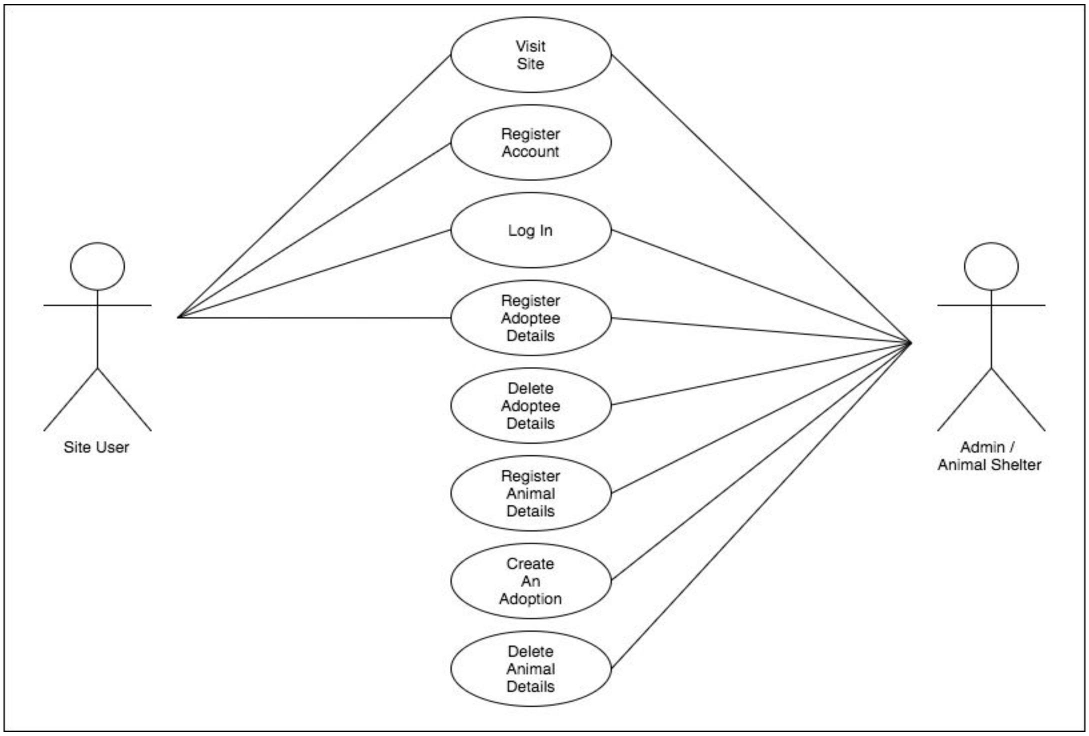


```ruby
def self.find( id )
  sql = "SELECT * FROM animals
  WHERE id = $1;"
  values = [id]
  found = SqlRunner.run( sql, values )
  return found.map{ |animal_type| Animal.new( animal_type )}[0]
end
```

Ref I.T 4

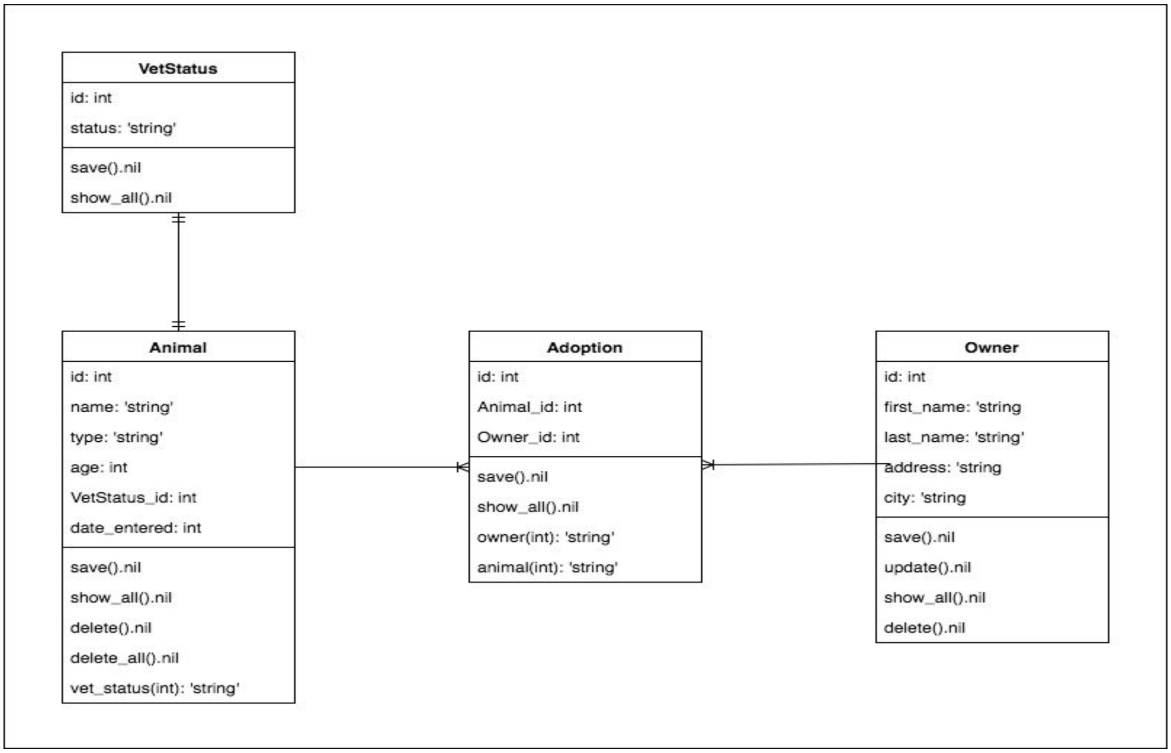
A.D 1

Use of case diagram



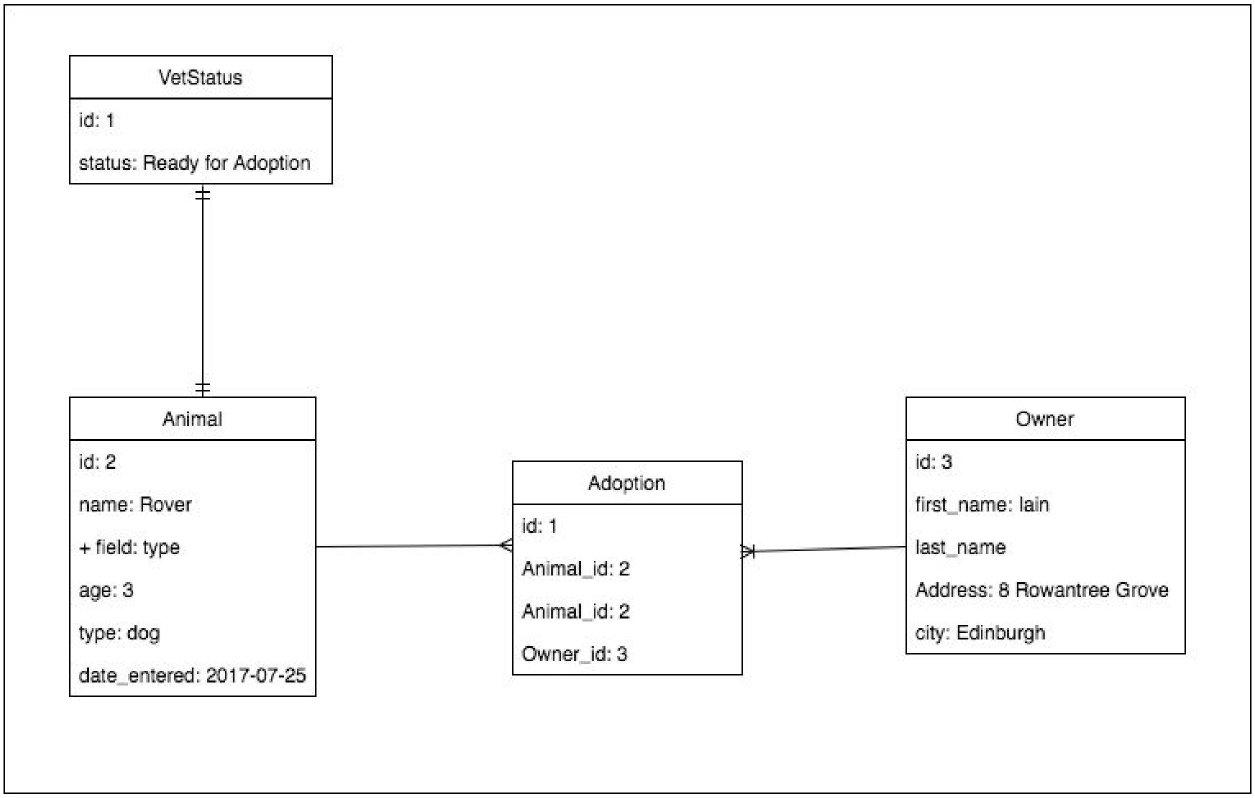
A.D 2

Use of Class diagram



A.D 3

Use of object diagram



A.D 4

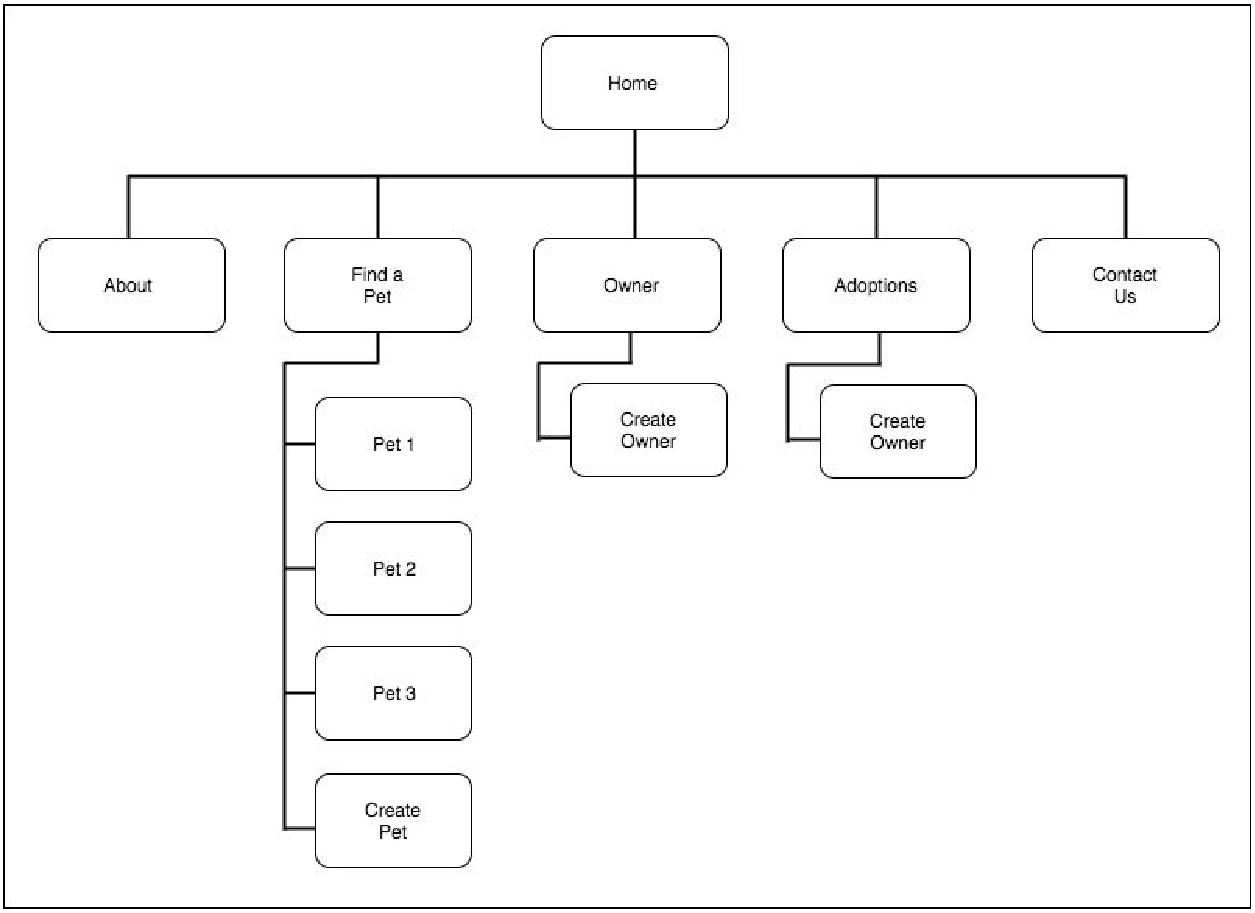
Activity Diagram

A.D 6

Implementations Constraints Plan

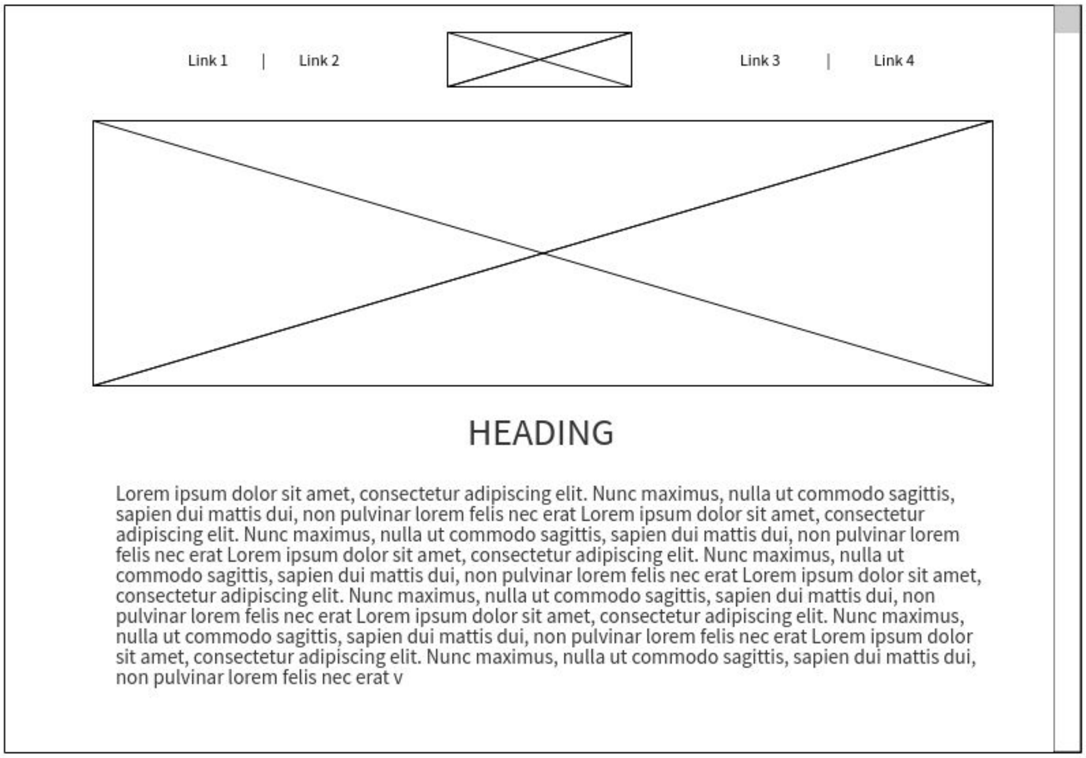
P 5

Use of Sitemap



P 6

Wireframes



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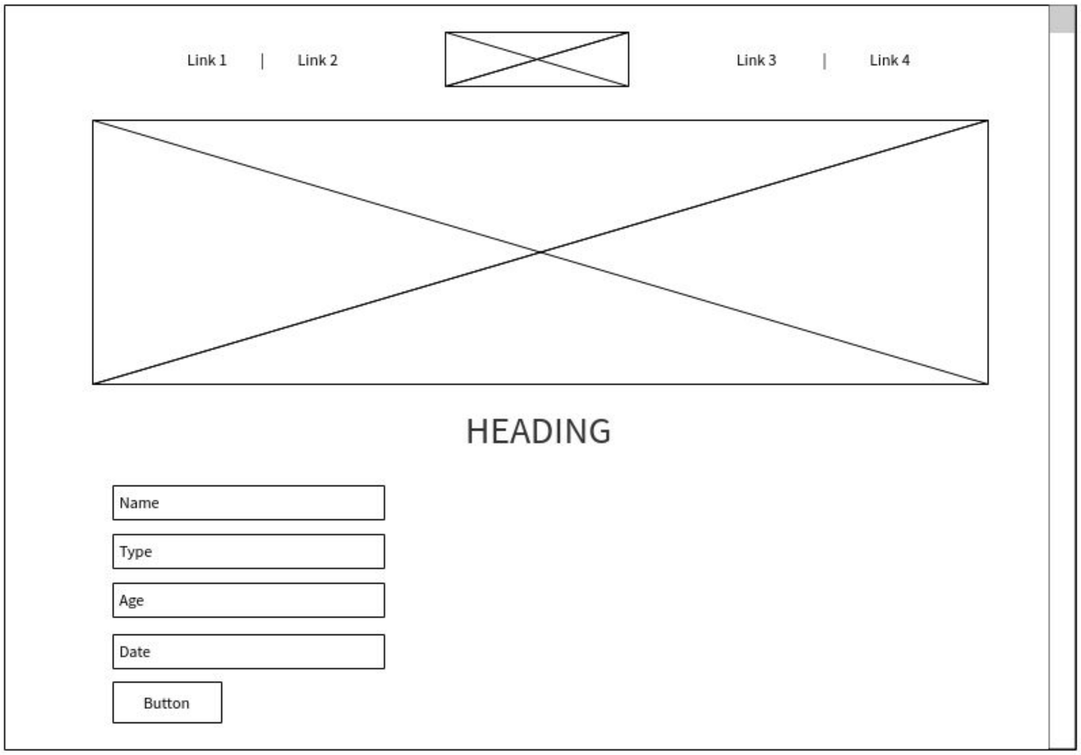

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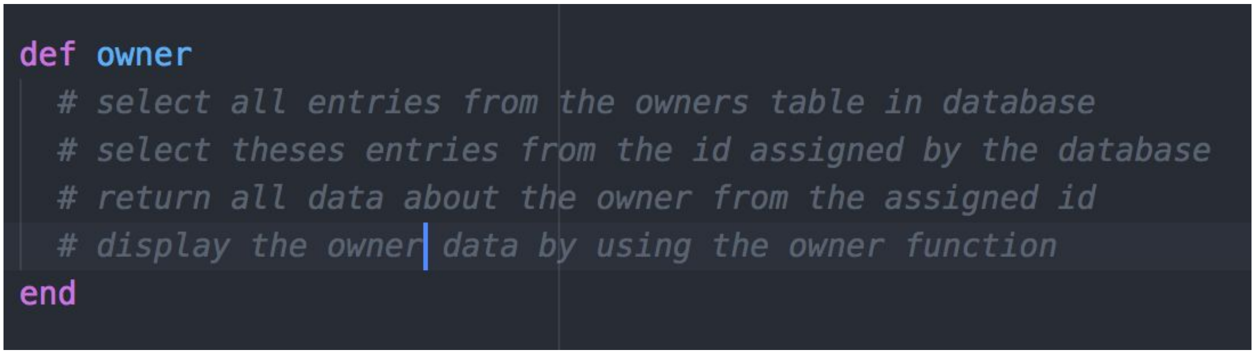
P 10

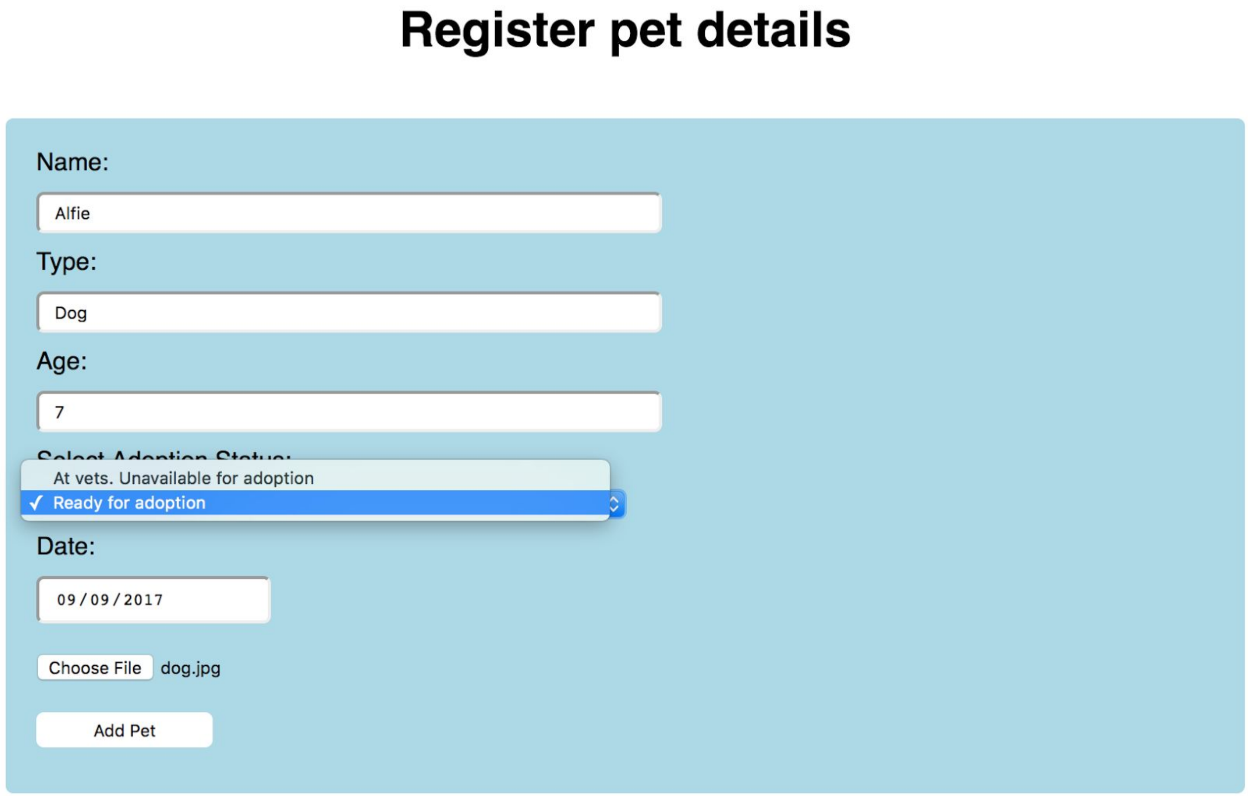
Pseudocode



```
def owner
  # select all entries from the owners table in database
  # select theses entries from the id assigned by the database
  # return all data about the owner from the assigned id
  # display the owner data by using the owner function
end
```

P13

User input being processed



Register pet details

Name:

Alfie

Type:

Dog

Age:

7

Select Adoption Status:

At vets. Unavailable for adoption

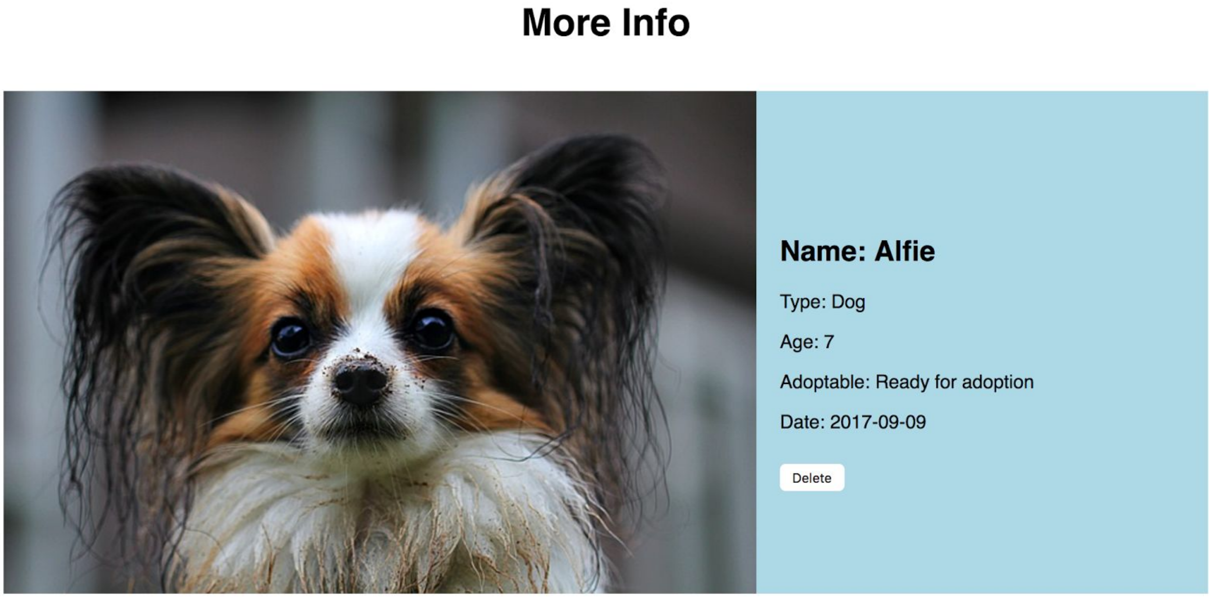
✓ Ready for adoption

Date:

09/09/2017

Choose File dog.jpg

User input being used



More Info

Name: Alfie

Type: Dog

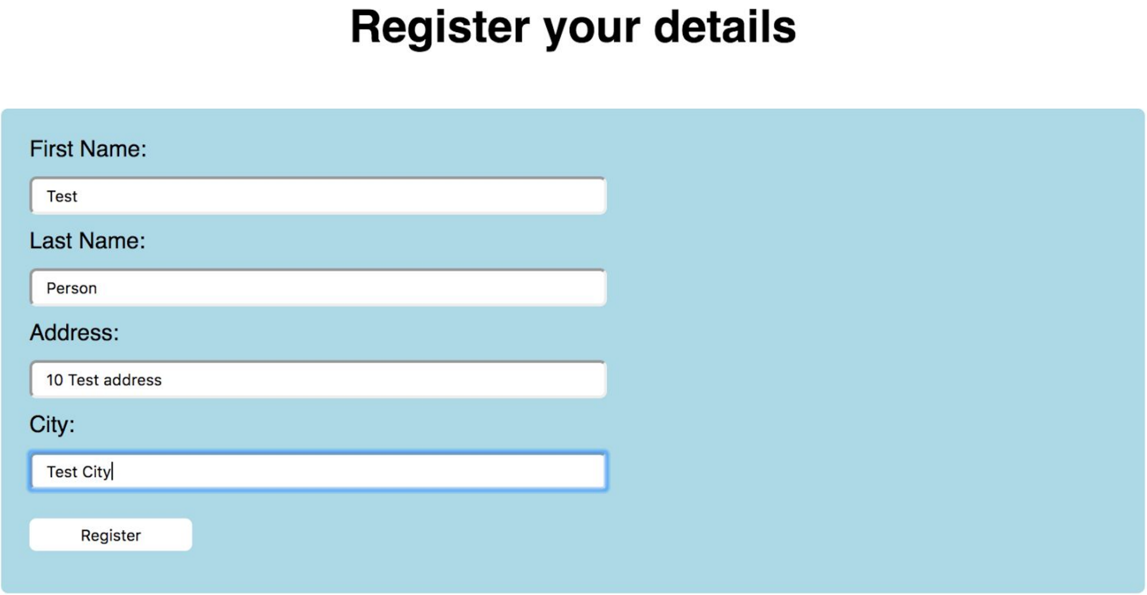
Age: 7

Adoptable: Ready for adoption

Date: 2017-09-09

P14

Interaction with data persistence



Register your details

First Name:

Test

Last Name:

Person

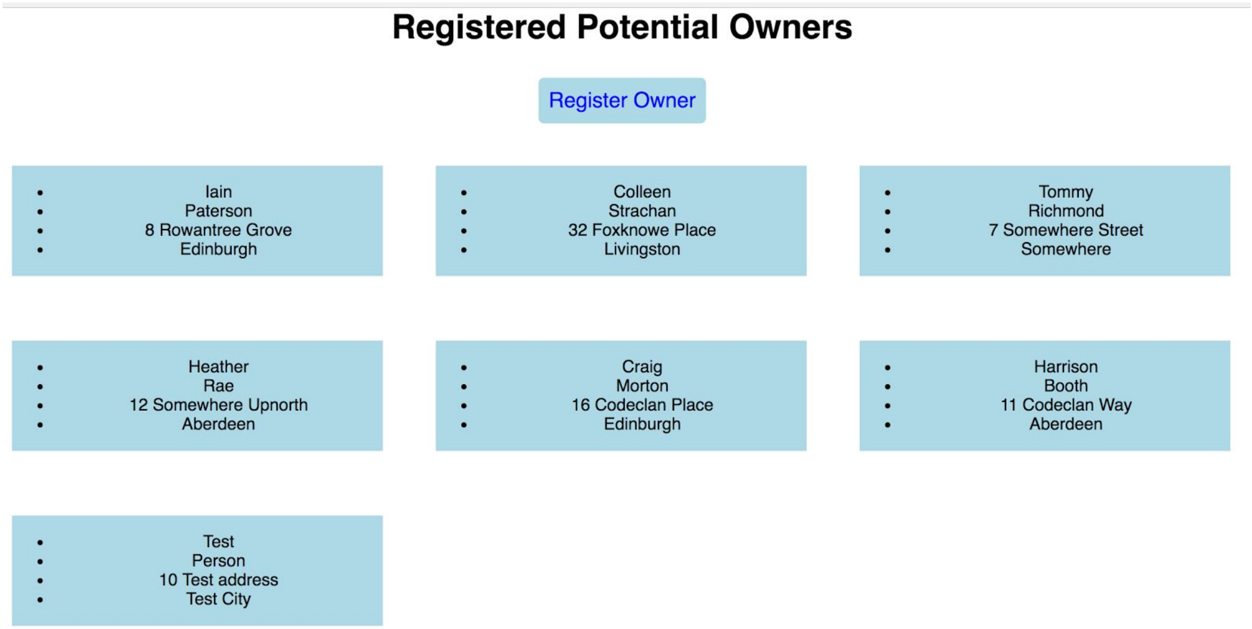
Address:

10 Test address

City:

Test City

Conformation of data being saved



Registered Potential Owners

- Iain
- Paterson
- 8 Rowantree Grove
- Edinburgh

- Colleen
- Strachan
- 32 Foxknowe Place
- Livingston

- Tommy
- Richmond
- 7 Somewhere Street
- Somewhere

- Heather
- Rae
- 12 Somewhere Upnorth
- Aberdeen

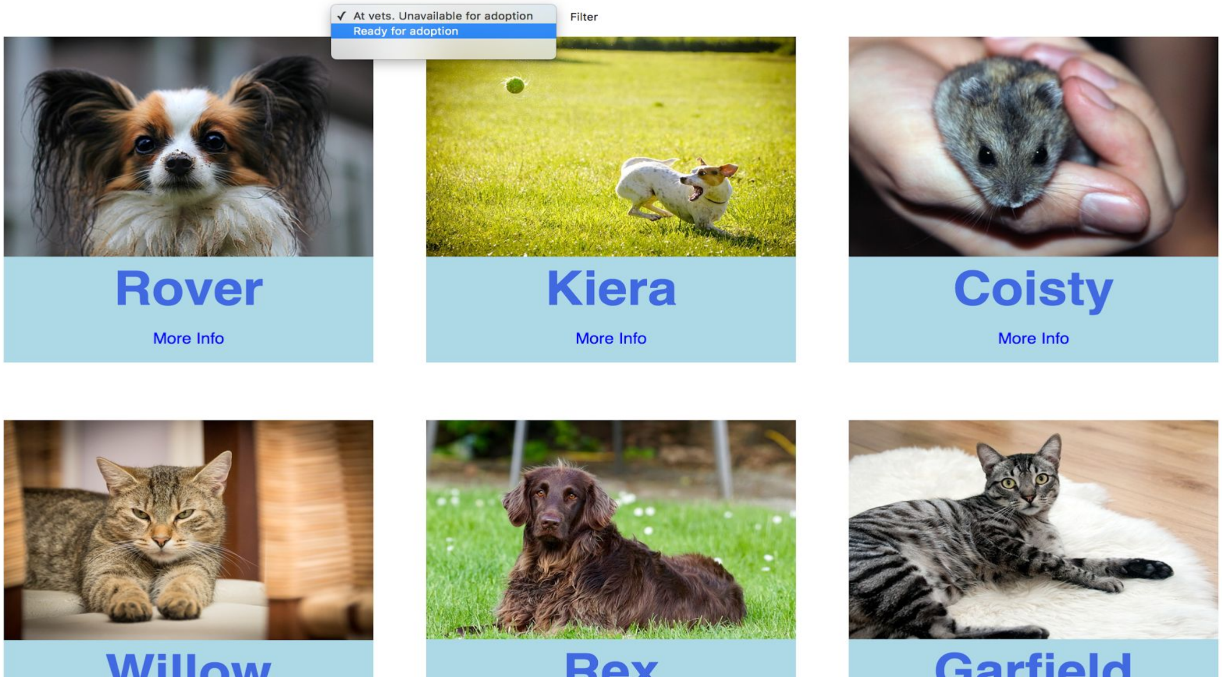
- Craig
- Morton
- 16 Codeclan Place
- Edinburgh

- Harrison
- Booth
- 11 Codeclan Way
- Aberdeen

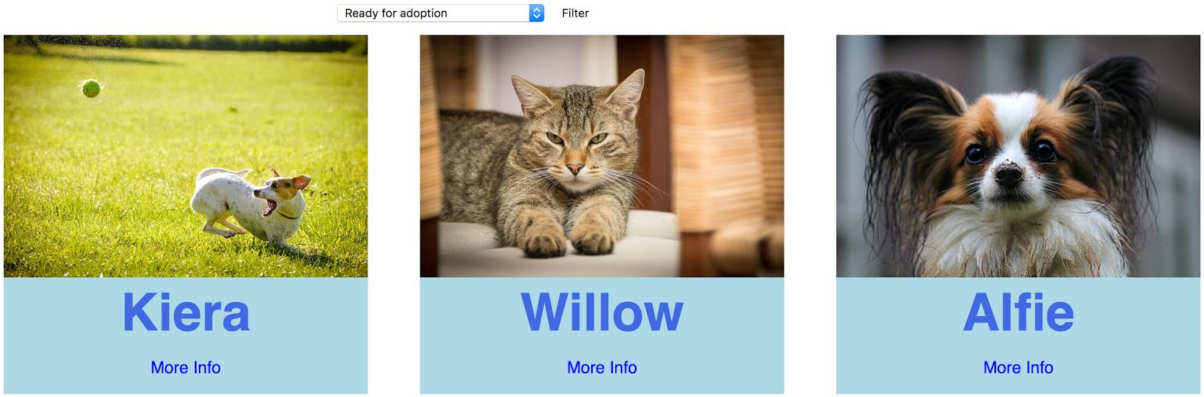
- Test
- Person
- 10 Test address
- Test City

P15

The user requesting information

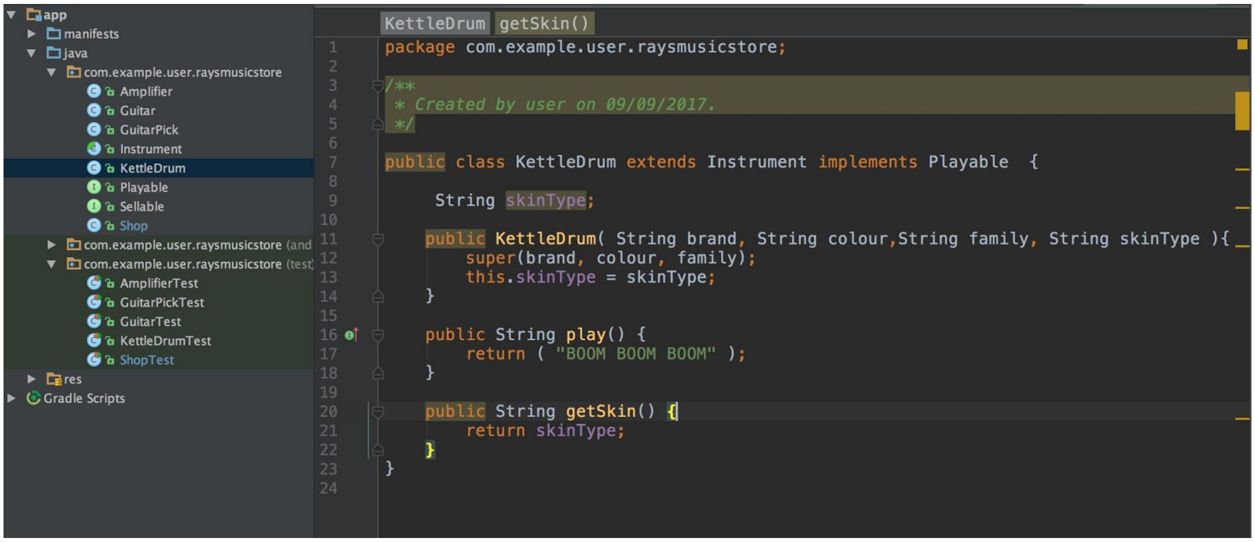


The user request being processed



I.T 7

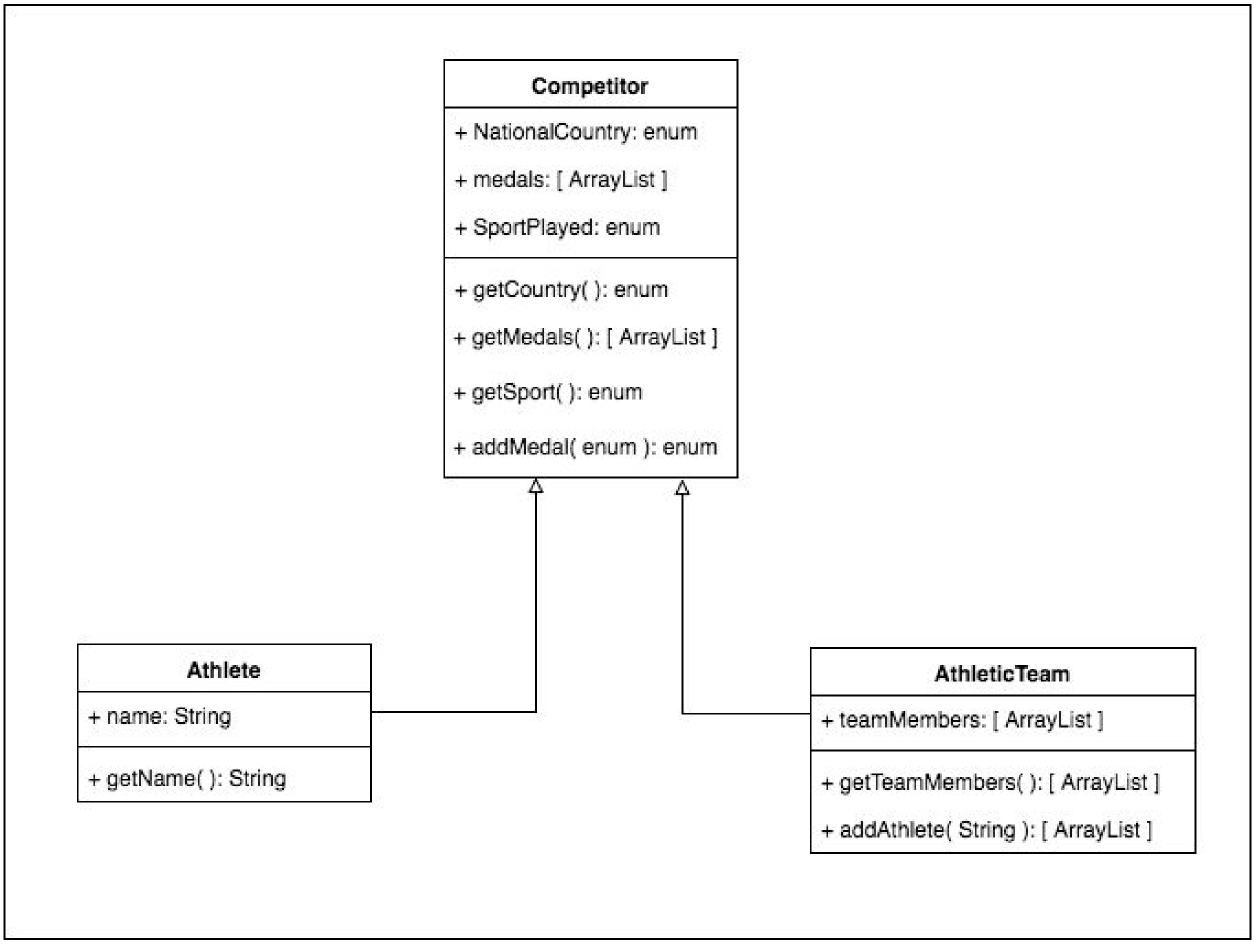
Polymorphism in a program: KettleDrum implements Playable interface.



```java
package com.example.user.raysmusicstore;

/**
 * Created by user on 09/09/2017.
 */

public class KettleDrum extends Instrument implements Playable  {

     String skinType;

    public KettleDrum( String brand, String colour,String family, String skinType ){
        super(brand, colour, family);
        this.skinType = skinType;
    }

    public String play() {
        return ( "BOOM BOOM BOOM" );
    }

    public String getSkin() {
        return skinType;
    }
}
```

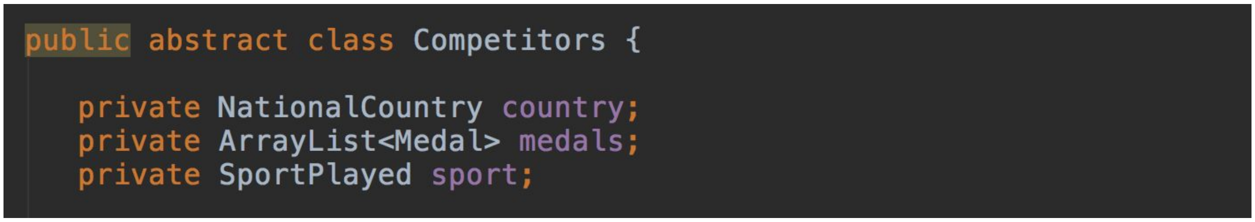
A.D 5

Inheritance Diagram



I.T 1

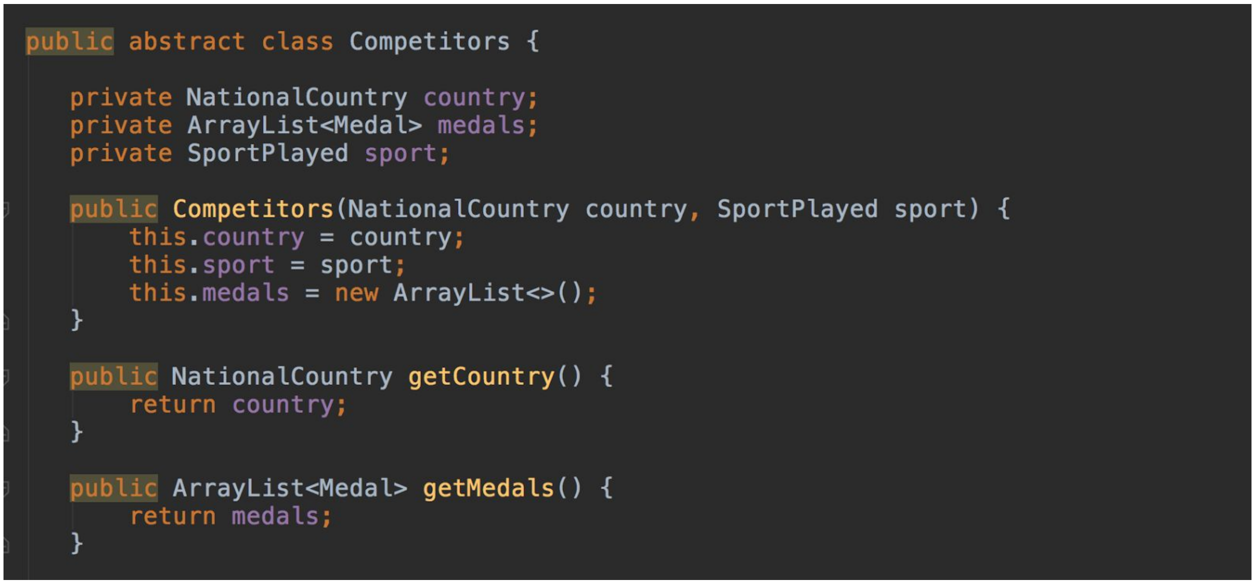
Screenshot of encapsulation



```
public abstract class Competitors {

    private NationalCountry country;
    private ArrayList<Medal> medals;
    private SportPlayed sport;
```

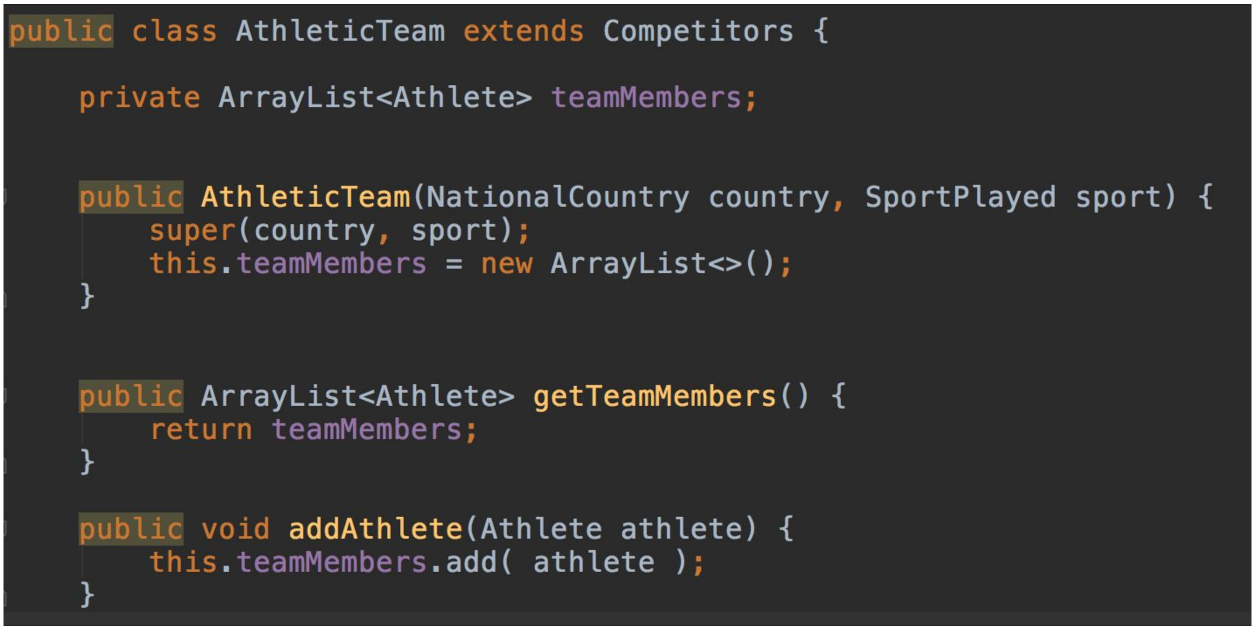
I.T 2

A Class that uses inheritance



```java
public abstract class Competitors {

    private NationalCountry country;
    private ArrayList<Medal> medals;
    private SportPlayed sport;

    public Competitors(NationalCountry country, SportPlayed sport) {
        this.country = country;
        this.sport = sport;
        this.medals = new ArrayList<>();
    }

    public NationalCountry getCountry() {
        return country;
    }

    public ArrayList<Medal> getMedals() {
        return medals;
    }
```

A Class that inherits from previous class.



```java
public class AthleticTeam extends Competitors {

    private ArrayList<Athlete> teamMembers;


    public AthleticTeam(NationalCountry country, SportPlayed sport) {
        super(country, sport);
        this.teamMembers = new ArrayList<>();
    }


    public ArrayList<Athlete> getTeamMembers() {
        return teamMembers;
    }

    public void addAthlete(Athlete athlete) {
        this.teamMembers.add( athlete );
    }
```