Evidence for project unit

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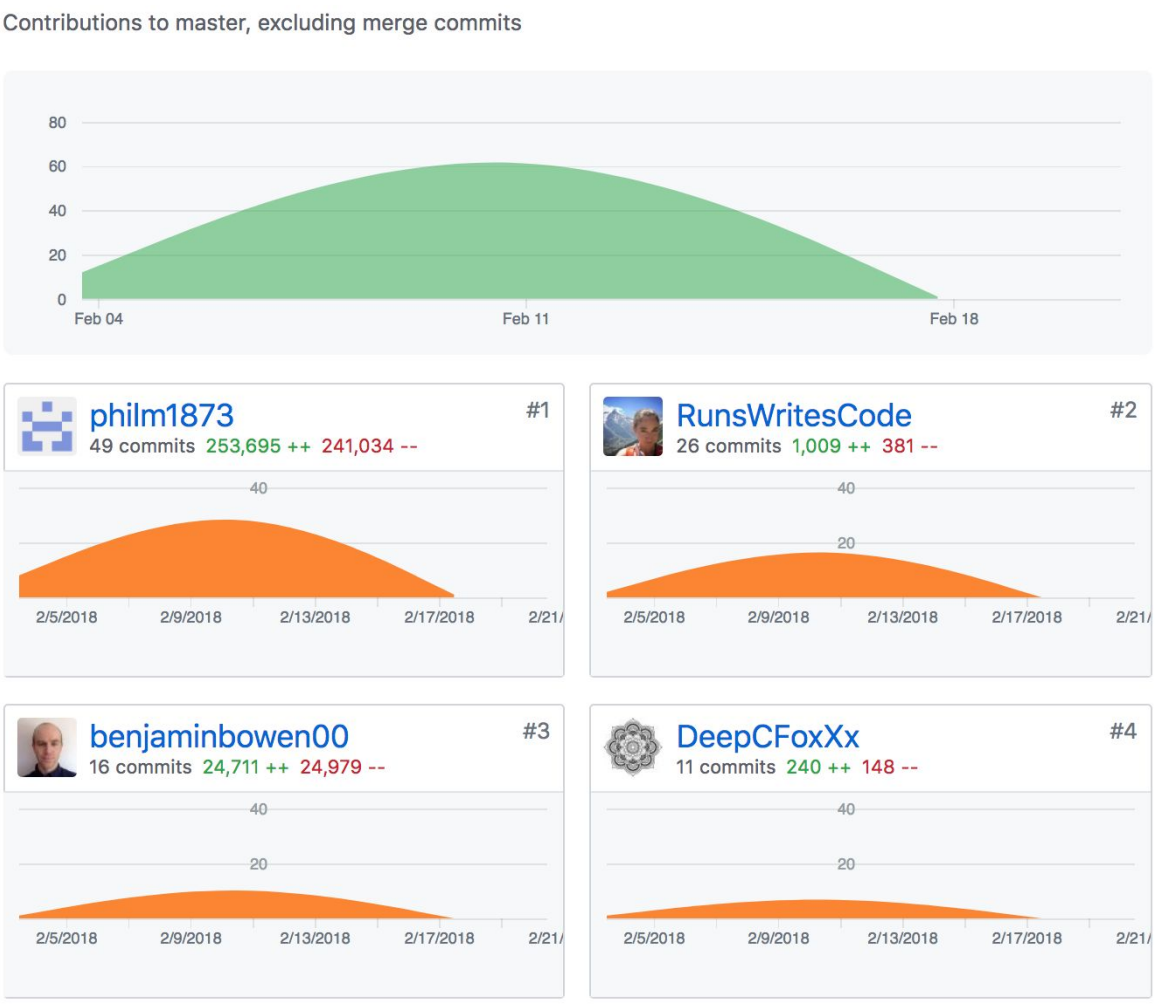
E17

P.1 Github contributors page



P.2 Project brief

Shares App

A local trader has come to you with a portfolio of shares. She wants to be able to analyse it more effectively. She has a small sample data set to give you and would like you to build a minimal viable product (MVP) that uses the data to display her portfolio in useful ways so that she can make better decisions.

MVP

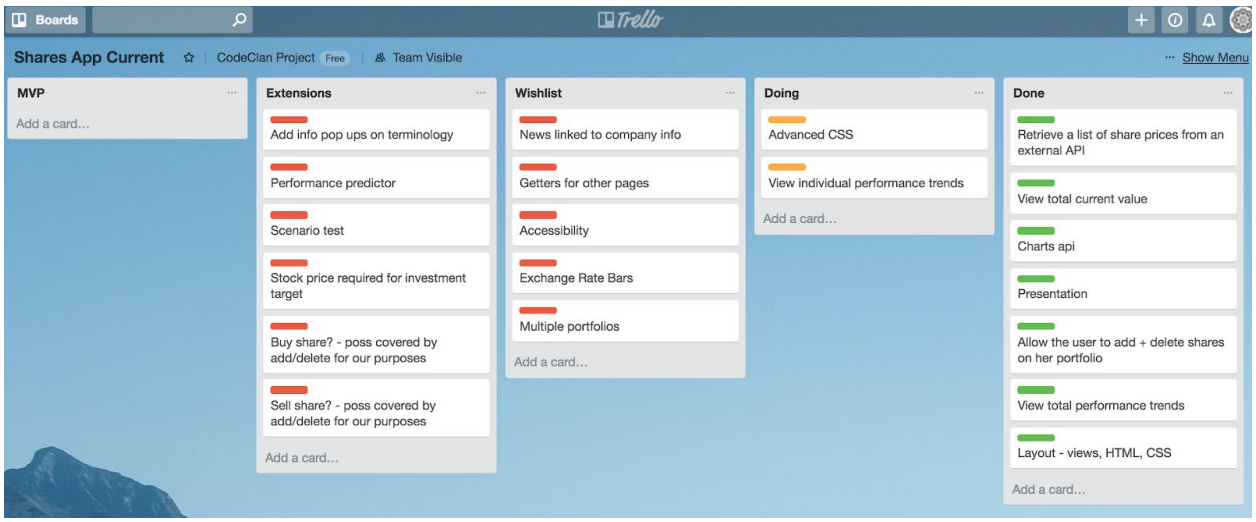
- View total current value
- View individual and total performance trends
- Retrieve a list of share prices from an external API and allow the user to add shares to her portfolio
- Provide a chart of the current values in her portfolio

Examples of further features

Speculation based on trends and further financial modelling.

- Based on the last 6 weeks of data, (e.g. it reduced by 5%) predict the performance of a stock for the next 6 weeks. Based on that what would be the sum of the total on a certain day in the future.
- She wants to know what would happen to the value of her portfolio if the price of a share changed by 10% or if she reduced her quantity by 15%.
- What price does a stock have to get to in order to meet her investment target?
- To get her £1700 worth of RBS shares what price does it have to go to?
- Buy new shares
- Sell shares

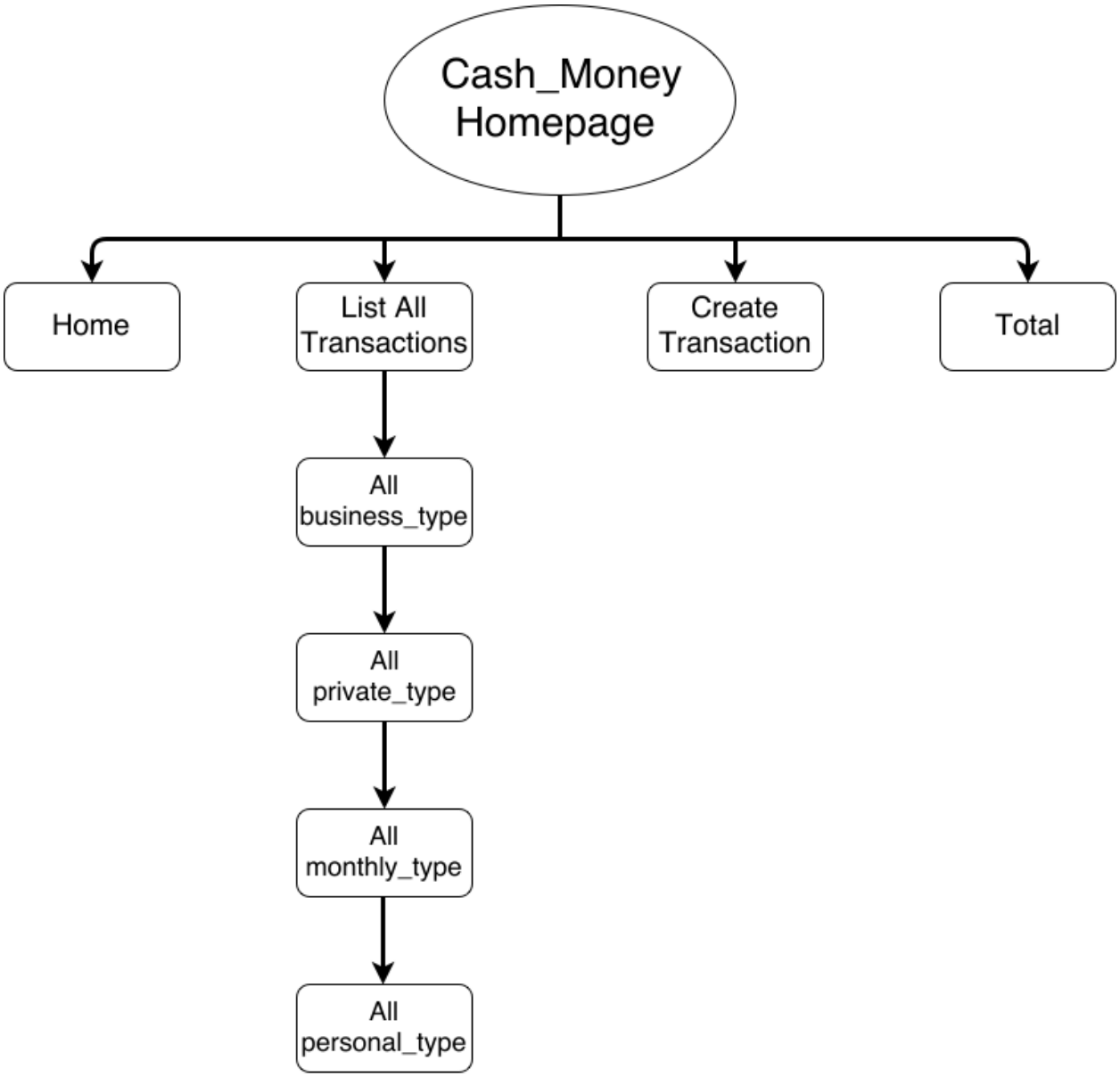
P.3 Use of Trello



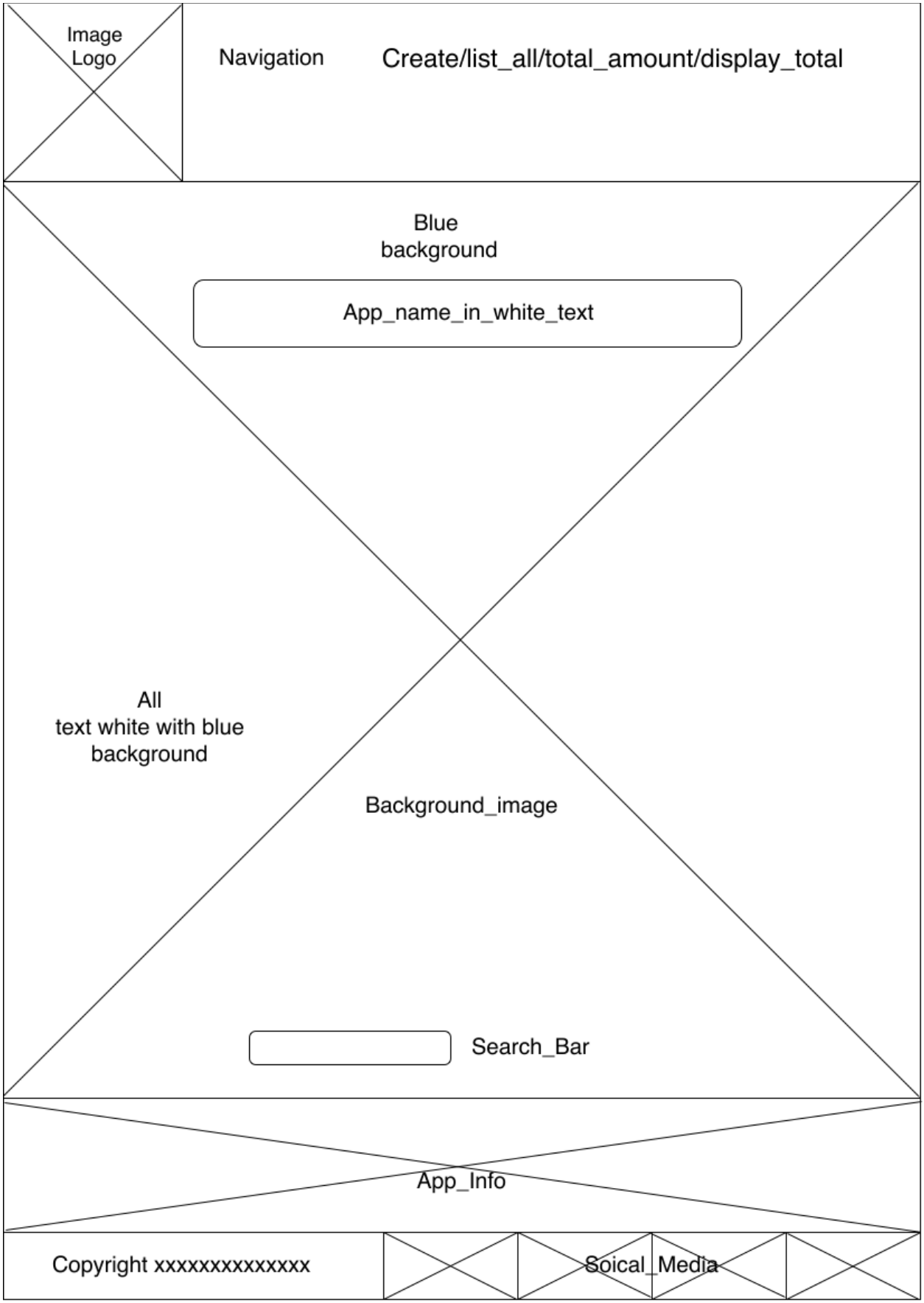
P.4 Acceptance criteria

Acceptance Criteria	Result/output	Pass/Fail
User can select individuall stock and see proformance over set period of time	2nd Page shows line graph of the preformance of select stock onload	Pass
When individuall stock is selected news reports relevant to stock are displayed	2nd Page shows five news reports returned from news api rendered at the bottom of the page	Pass
Total portfolio value must be displayed	Onload the page displays the cumulative portfolio value returned from stock api	Pass
Total loss and profit for selected stock to be displayed	2nd page onload shows total loss and profit for stock selected from users portfolio	Fail
User will be able to buy and sell stock	When stock is sold / bought current prices returned from api will be reflected in portfolio	Fail
Each individuall news report will have a clickable image linked to source of story	2nd page onload shows five news reports with images returned from news api	N/A

P.5 User site map



P.6 Wireframes



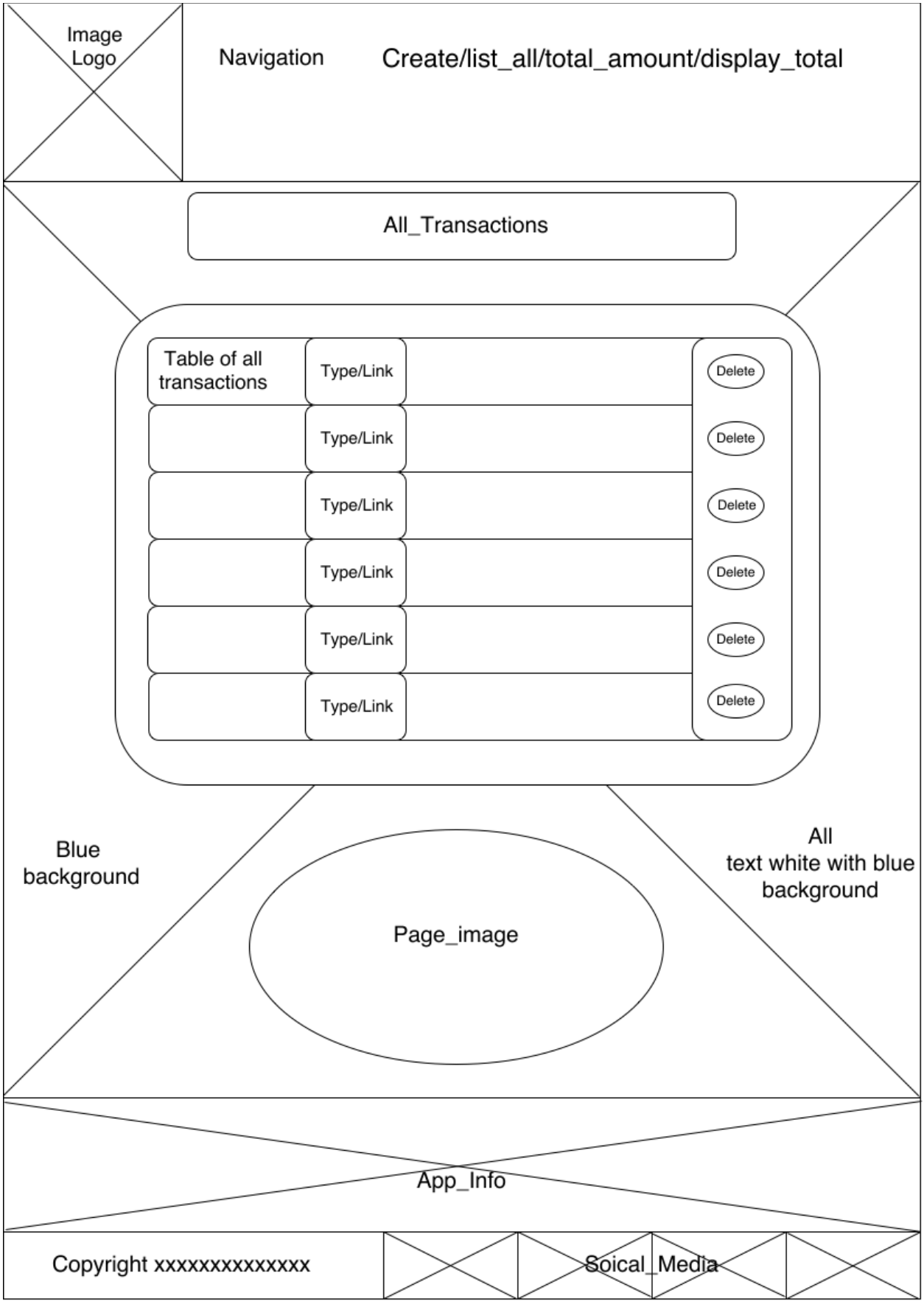
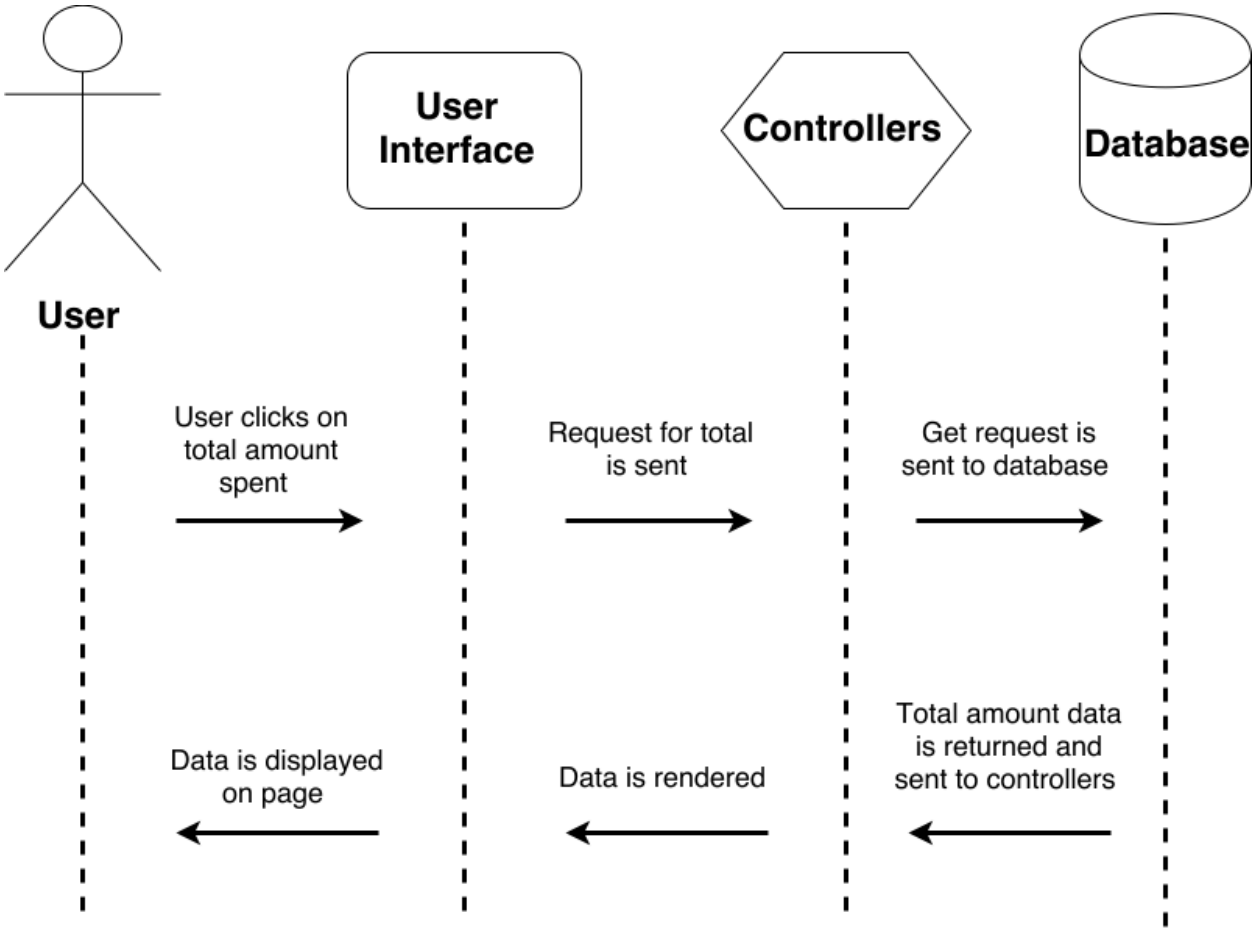
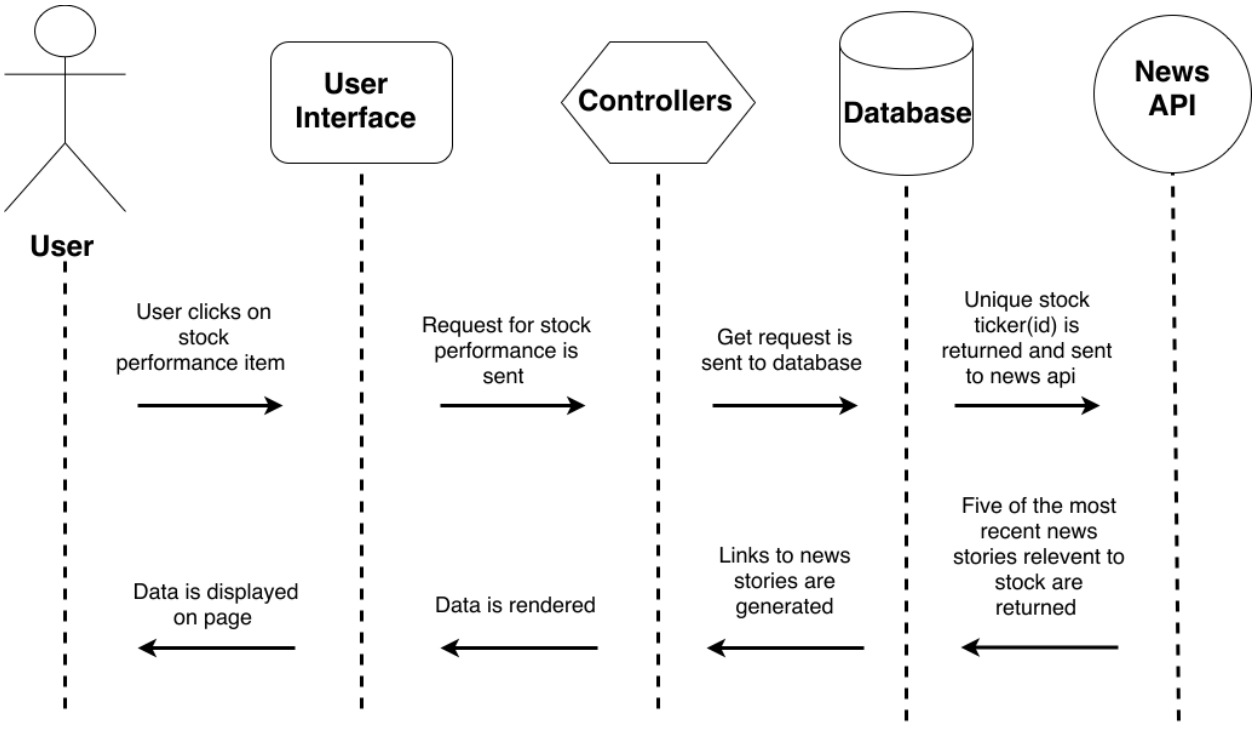


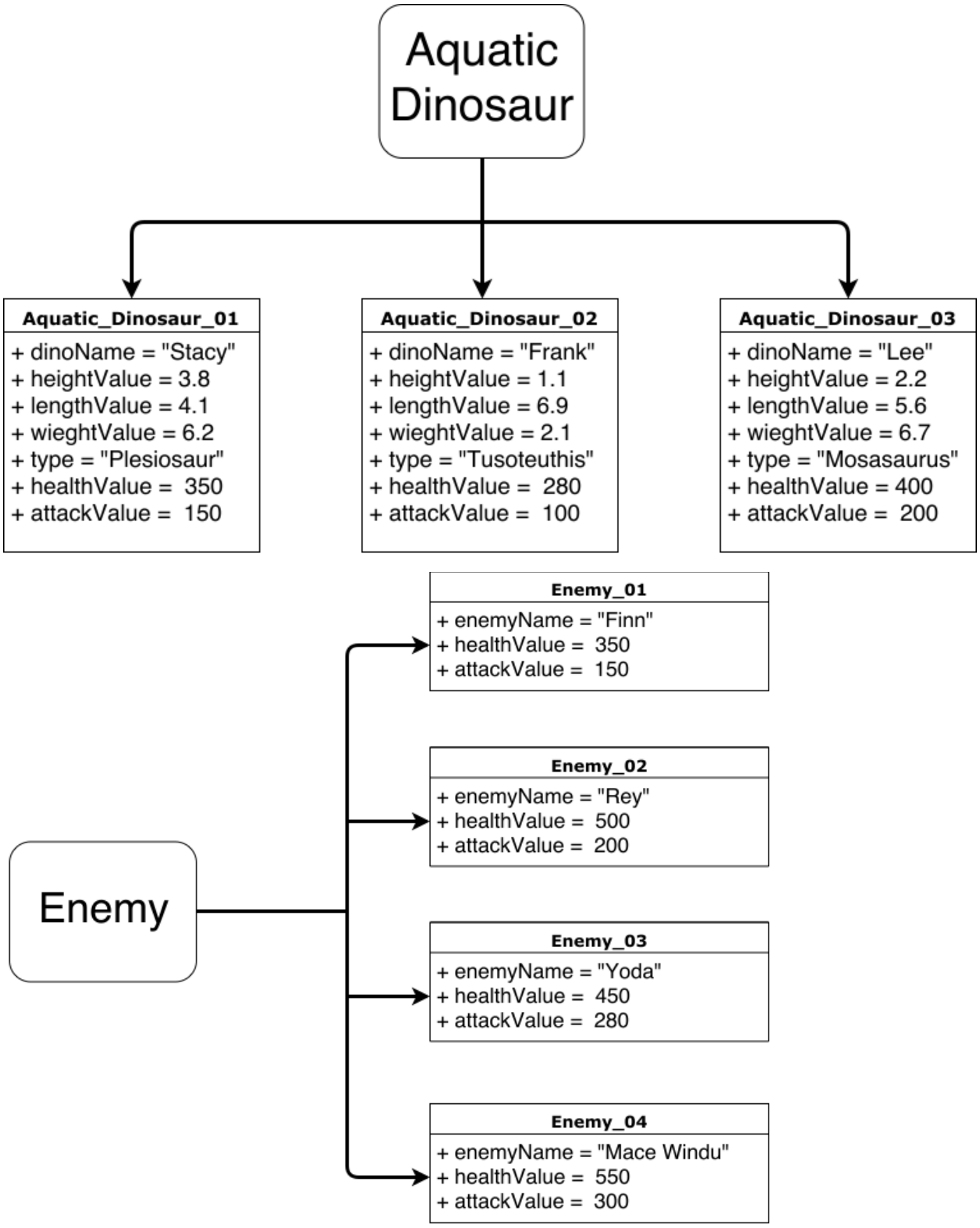
Image
Logo
Navigation
Create/list_all/total_amount/display_total
All_Transactions
Table of all transactions
Type/Link
Delete
Type/Link
Delete
Type/Link
Delete
Type/Link
Delete
Type/Link
Delete
Type/Link
Delete
Blue background
All text white with blue background
Page_image
App_Info
Copyright xxxxxxxxxxxxx
Soical_Media

P.7 System interaction diagrams





P.8 Object diagrams



P.9 Choice of two algorithms

Algorithm_01 is sorting through an array comparing elements and switching them until they are in order of low to high.

```ruby
def array_sort_algorithm(array)
  n = array.length

  loop do

    swapped = false

    (n-1).times do |i|
      if array[i] > array[i + 1]
        array[i], array[i + 1] = array[i + 1], array[i]
        swapped = true
      end
    end

    break if not swapped
  end

  array
end
```

The reason I chose to use this algorithm was to get a better understanding of algorithms in general and sorting methods in ruby.
Having done that I feel this example has given me a a better understanding of how to switch elements in an array and how ruby goes through an array comparing elements within it to output a result.

Algorithm_02 is using ruby's built in date function to find how many sundays fall on the first of the month from the the start date to the end date.

```ruby
require 'date'

start_date = Time.local(1987, 07, 23)
end_date = Time.local(2018, 02, 25)
sunday_counter = 0

while end_date >= start_date
  if end_date.strftime("%A") == "Sunday" && end_date.strftime("%d") == "01"
    sunday_counter += 1
  end
  end_date -= 86400
end
```

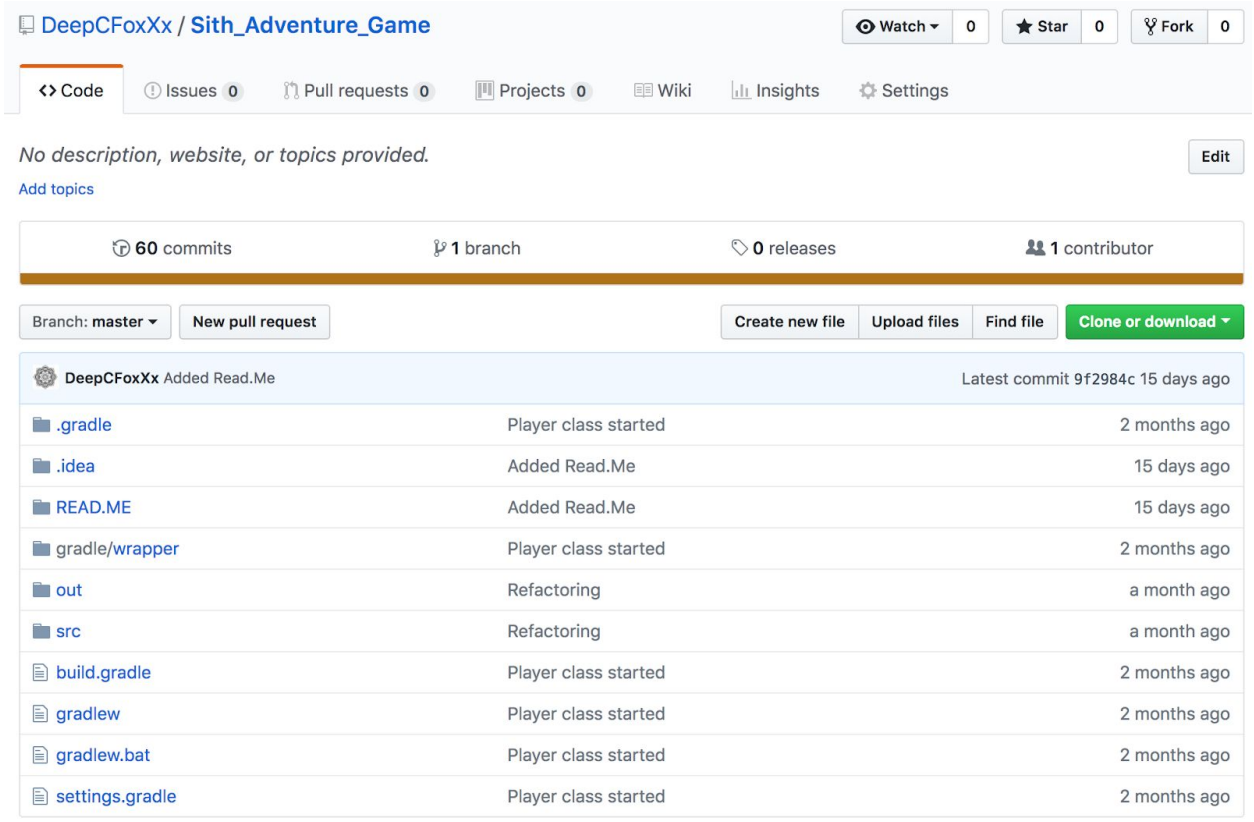
The reason I chose to use this algorithm was to complete an exercise in finding the number of sundays that fall on the first of the month from your birthday (start_date) to the present day (end_date).
I feel this example would have limited use outside of the exercise but feel it was worth doing to get a better understanding of built in ruby functions such as date / time I also learned how to use strftime (string to time).

P.10 Example of pseudocode

```
<div class="field-group">
  <label for="-field" class="label">Merchant:</label>
  <div class="field">
    <select name="merchant_id">
      <!--Need to access all merchant names in a drop down-->
      <% @merchants.each do |merchant| %>
      <!--Display each name individually and make them clickable-->
      <option value="<%= merchant.id %>"><%= merchant.merchant_name %></option>
      <!--Make them availabale and useable linked with id-->
      <% end %>
    </select>
  </div>
</div>
```

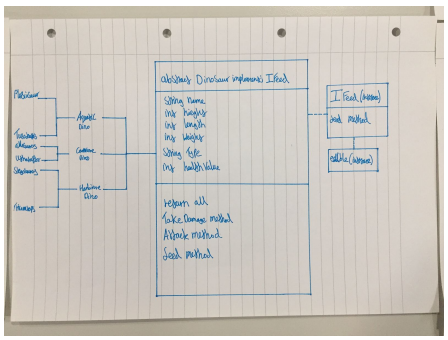
P.11 Github link to personal project

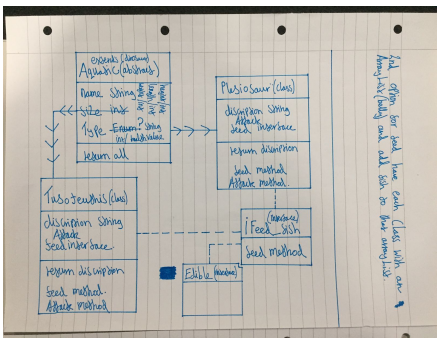
https://github.com/DeepCFoxXx/Sith_Adventure_Game

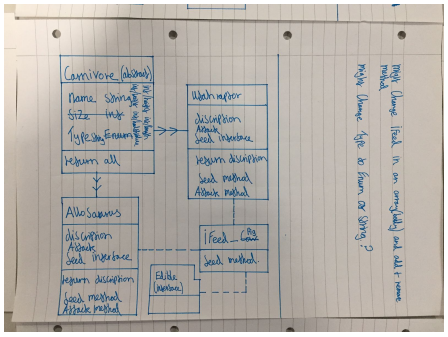


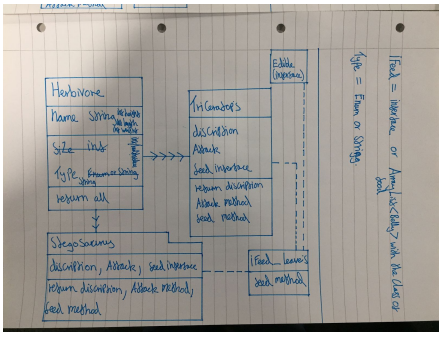
P.12 Planning in different stages

Before

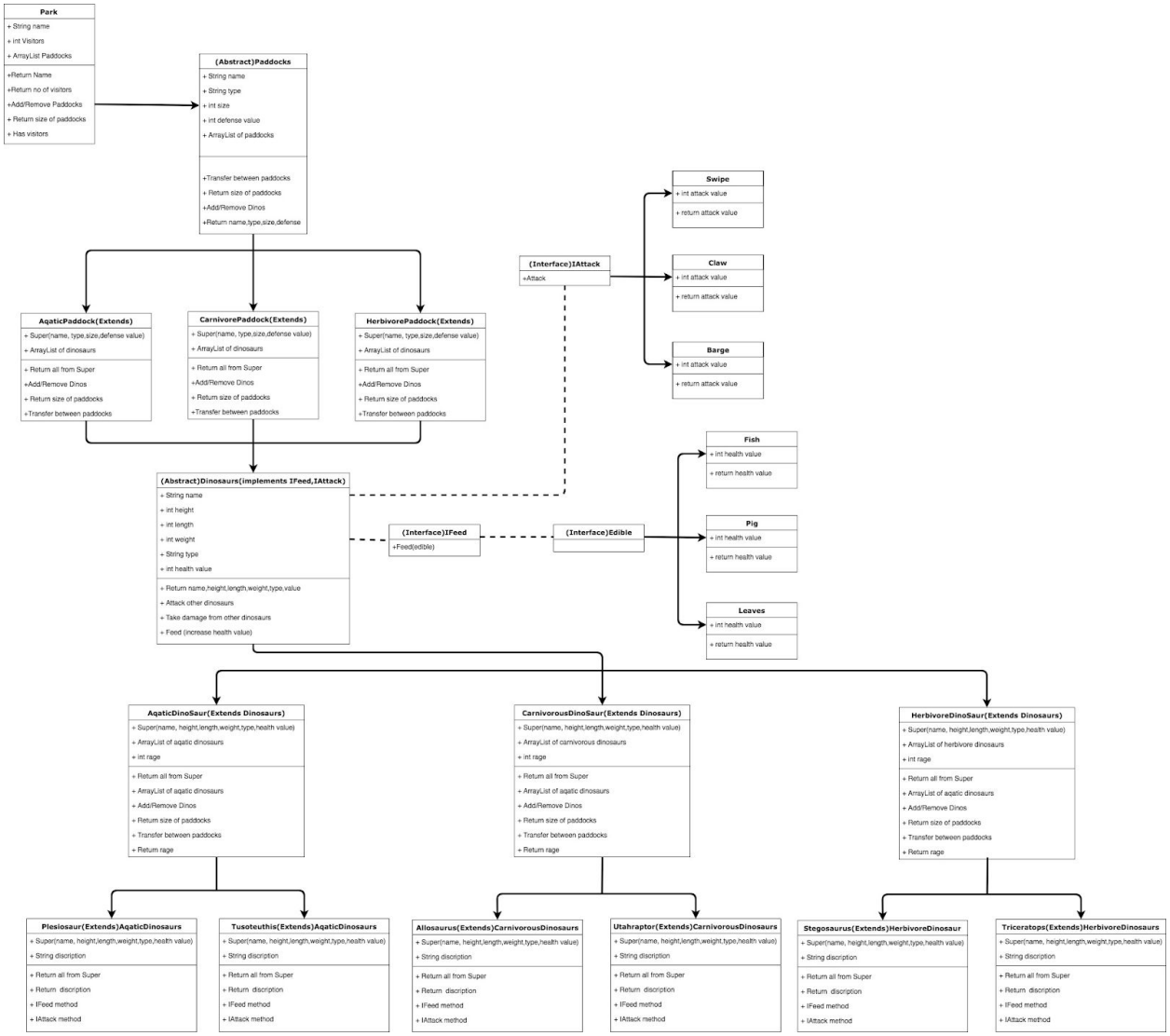






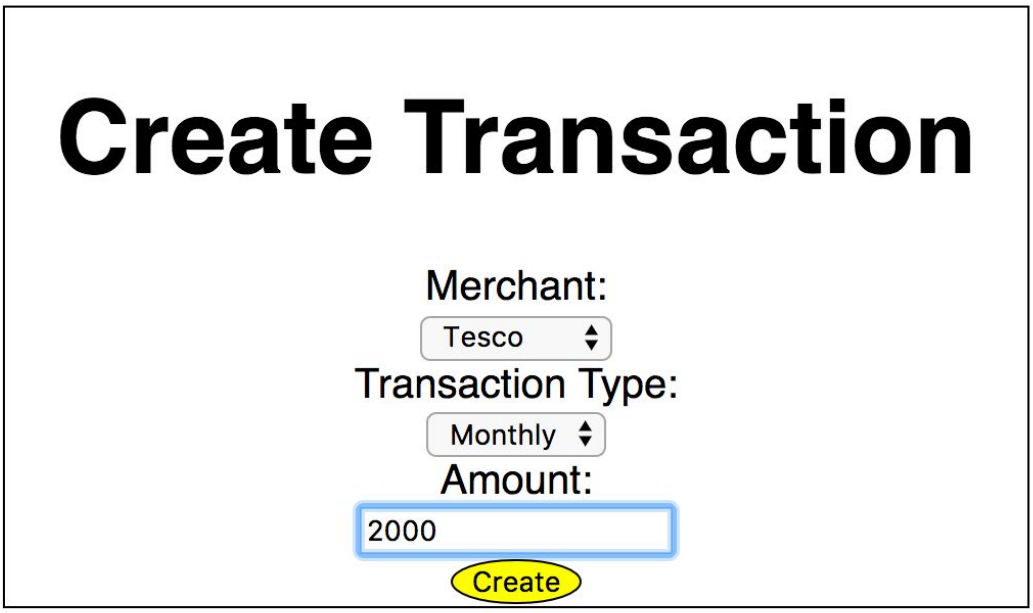


After


Park
+ String name
+ int Visitors
+ ArrayList Paddocks
+Return Name
+Return no of visitors
+Add/Remove Paddocks
+ Return size of paddocks
+ Has visitors
(Abstract)Paddocks
+ String name
+ String type
+ int size
+ int defense value
+ ArrayList of paddocks
+Transfer between paddocks
+ Return size of paddocks
+Add/Remove Dinos
+Return name,type,size,defense
Swipe
+ int attack value
+ return attack value
(Interface)IAttack
+Attack
Claw
+ int attack value
+ return attack value
Barge
+ int attack value
+ return attack value
AqaticPaddock(Extends)
+ Super(name, type,size,defense value)
+ ArrayList of dinosaurs
+ Return all from Super
+Add/Remove Dinos
+ Return size of paddocks
+Transfer between paddocks
CarnivorePaddock(Extends)
+ Super(name, type,size,defense value)
+ ArrayList of dinosaurs
+ Return all from Super
+Add/Remove Dinos
+ Return size of paddocks
+Transfer between paddocks
HerbivorePaddock(Extends)
+ Super(name, type,size,defense value)
+ ArrayList of dinosaurs
+ Return all from Super
+Add/Remove Dinos
+ Return size of paddocks
+Transfer between paddocks
Fish
+ int health value
+ return health value
(Abstract)Dinosaurs(implements IFeed,IAttack)
+ String name
+ int height
+ int length
+ int weight
+ String type
+ int health value
+ Return name,height,length,weight,type,value
+ Attack other dinosaurs
+ Take damage from other dinosaurs
+ Feed (increase health value)
(Interface)IFeed
+Feed(edible)
(Interface)Edible
Pig
+ int health value
+ return health value
Leaves
+ int health value
+ return health value
AqaticDinoSaur(Extends Dinosaurs)
+ Super(name, height,length,weight,type,health value)
+ ArrayList of aqatic dinosaurs
+ int rage
+ Return all from Super
+ ArrayList of aqatic dinosaurs
+ Add/Remove Dinos
+ Return size of paddocks
+ Transfer between paddocks
+ Return rage
CarnivorousDinoSaur(Extends Dinosaurs)
+ Super(name, height,length,weight,type,health value)
+ ArrayList of carnivorous dinosaurs
+ int rage
+ Return all from Super
+ ArrayList of aqatic dinosaurs
+ Add/Remove Dinos
+ Return size of paddocks
+ Transfer between paddocks
+ Return rage
HerbivoreDinoSaur(Extends Dinosaurs)
+ Super(name, height,length,weight,type,health value)
+ ArrayList of herbivore dinosaurs
+ int rage
+ Return all from Super
+ ArrayList of aqatic dinosaurs
+ Add/Remove Dinos
+ Return size of paddocks
+ Transfer between paddocks
+ Return rage
Plesiosaur(Extends)AqaticDinosaurs
+ Super(name, height,length,weight,type,health value)
+ String discription
+ Return all from Super
+ Return discription
+ IFeed method
+ IAttack method
Tusoteuthis(Extends)AqaticDinosaurs
+ Super(name, height,length,weight,type,health value)
+ String discription
+ Return all from Super
+ Return discription
+ IFeed method
+ IAttack method
Allosaurus(Extends)CarnivorousDinosaurs
+ Super(name, height,length,weight,type,health value)
+ String discription
+ Return all from Super
+ Return discription
+ IFeed method
+ IAttack method
Utahraptor(Extends)CarnivorousDinosaurs
+ Super(name, height,length,weight,type,health value)
+ String discription
+ Return all from Super
+ Return discription
+ IFeed method
+ IAttack method
Stegosaurus(Extends)HerbivoreDinosaur
+ Super(name, height,length,weight,type,health value)
+ String discription
+ Return all from Super
+ Return discription
+ IFeed method
+ IAttack method
Triceratops(Extends)HerbivoreDinosaurs
+ Super(name, height,length,weight,type,health value)
+ String discription
+ Return all from Super
+ Return discription
+ IFeed method
+ IAttack method

P.13 User input

User inputting 2000 in to a new transaction



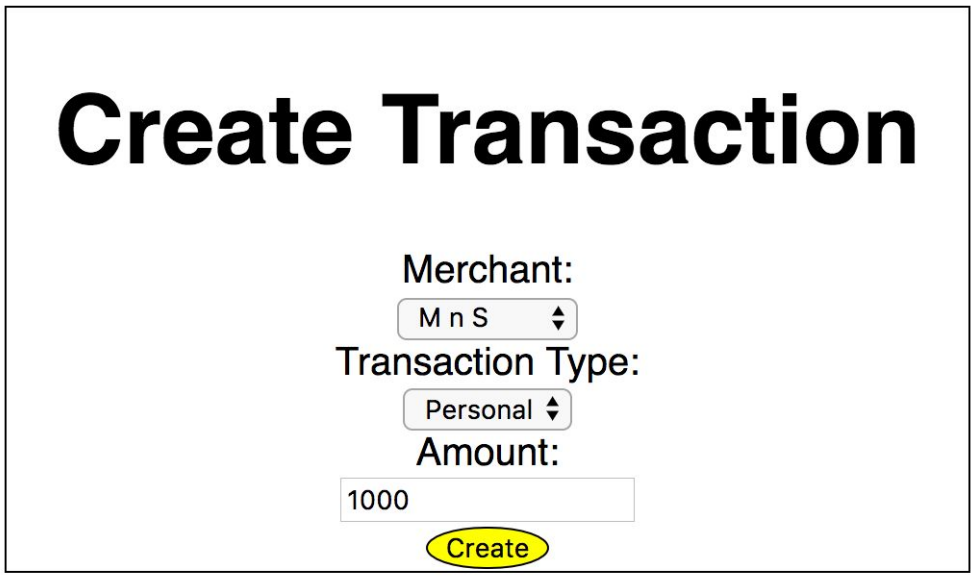
Input being added to total amount by type (Tesco/Monthly)

Total By Type

Total Amount By Transaction Type = £2030

P.14 Interaction with data persistence

Data being inputted into program



Conformation of data being saved

All Transactions

Value	Type	Merchant	Delete
£20	Business	ASDA	Delete
£15	Personal	Tesco	Delete
£50	Private	Morrisons	Delete
£30	Monthly	M n S	Delete
£1000	Personal	M n S	Delete

P.15 User output result

The user requesting information or an act to be performed (Delete last transaction)

All Transactions

Value	Type	Merchant	Delete
£20	Business	ASDA	Delete
£15	Personal	Tesco	Delete
£50	Private	Morrisons	Delete
£30	Monthly	M n S	Delete
£1000	Personal	M n S	Delete

The request being carried out

All Transactions

Value	Type	Merchant	Delete
£20	Business	ASDA	Delete
£15	Personal	Tesco	Delete
£50	Private	Morrisons	Delete
£30	Monthly	M n S	Delete

P.16 API being used in a program

The code that uses the api

```
var app = function() {
  var url = 'https://restcountries.eu/rest/v2';
  makeRequest(url, requestComplete);
  var selection = document.querySelector('#countries-dropdown');
  selection.addEventListener('change', displayInfo);
  console.log(getCountryByAlphaCode("FRA"));
};

window.addEventListener('load', app);
```

The API being used by the program while running

P.17 Bug report

User needs to view total portfolio value	Fail	Used returned stock id from database to request info from API	Pass
Modal box closes from clicking on home page	Fail	Added function to listen for event	Pass
User must be able to select stock to add to portfolio	Fail	Added search box that displays 10 companys when input is given	Pass
Piechart must display percentage of portfolio values	Fail	Added more functionality to charts controller	Pass

P.18 Testing your program

Test code

```
it('does task have difficulty level', function{
  assert.strictEqual(task1.difficultyLevel, 5);
})

it('tasks starts off empty', function(){
  assert.strictEqual(hero1.tasks.length, 0)
}

it('can add to tasks', function(){
  hero1.addTasks(task1);
  assert.strictEqual(hero1.tasks.length 1)
})

it('food can heal hero', function(){
  food1 = Food('Apple', 1);
  hero1.eatFood(food1);
  assert.strictEqual(hero1.health, 29);
})
```

The test code failing

```
➜  Heroes_and_Rats git:(master) ✗ npm tes

> heroes_and_rats@1.0.0 test /Users/markconroy/codeclan_work/home_work/week_11/day_05/Heroes_and_Rats
> mocha specs

/Users/markconroy/codeclan_work/home_work/week_11/day_05/Heroes_and_Rats/specs/hero_spec.js:70
  it('does task have difficulty level', function(){
                                        ^

SyntaxError: Unexpected token {
    at new Script (vm.js:51:7)
    at createScript (vm.js:138:10)
    at Object.runInThisContext (vm.js:199:10)
    at Module._compile (module.js:624:28)
    at Object.Module._extensions..js (module.js:671:10)
    at Module.load (module.js:573:32)
    at tryModuleLoad (module.js:513:12)
    at Function.Module._load (module.js:505:3)
    at Module.require (module.js:604:17)
    at require (internal/module.js:11:18)
    at /Users/markconroy/codeclan_work/home_work/week_11/day_05/Heroes_and_Rats/node_modules/mocha/lib/mocha.js:231:27
    at Array.forEach (<anonymous>)
    at Mocha.loadFiles (/Users/markconroy/codeclan_work/home_work/week_11/day_05/Heroes_and_Rats/node_modules/mocha/lib/mocha
.js:228:14)
    at Mocha.run (/Users/markconroy/codeclan_work/home_work/week_11/day_05/Heroes_and_Rats/node_modules/mocha/lib/mocha.js:53
6:10)
    at Object.<anonymous> (/Users/markconroy/codeclan_work/home_work/week_11/day_05/Heroes_and_Rats/node_modules/mocha/bin/_m
ocha:582:18)
    at Module._compile (module.js:660:30)
    at Object.Module._extensions..js (module.js:671:10)
    at Module.load (module.js:573:32)
    at tryModuleLoad (module.js:513:12)
    at Function.Module._load (module.js:505:3)
    at Function.Module.runMain (module.js:701:10)
    at startup (bootstrap_node.js:193:16)
    at bootstrap_node.js:617:3
npm ERR! Test failed.  See above for more details.
```

Test code with errors corrected

```
it('does task have difficulty level', function(){
  assert.strictEqual(task1.difficultyLevel, 5);
})

it('tasks starts off empty', function(){
  assert.strictEqual(hero1.tasks.length, 0)
})

it('can add to tasks', function(){
  hero1.addTasks(task1);
  assert.strictEqual(hero1.tasks.length, 1)
})

it('food can heal hero', function(){
  food1 = new Food('Apple', 1);
  hero1.eatFood(food1);
  assert.strictEqual(hero1.health, 29);
})
```

Test code passing