

**PDA: Software Development
Level 8
Student Evidence Checklist**

Full name	Emma Roberts
Cohort	G4

The evidence required can be taken from your assignments, homework that you have completed on your own or by creating a specific example for the PDA.

	Unit	Ref.	Evidence	Done
--	-------------	-------------	-----------------	-------------

I & T

I.T 5

Demonstrate the use of an array in a program. Take screenshots of:

*An array in a program

*A function that uses the array

*The result of the function running

```
room.rb
1 class Room
2
3   attr_reader :number_of_rooms
4
5   def initialize(number_of_rooms)
6     @number_of_rooms = [1, 2, 3, 4, 5]
7     @booked_rooms = []
8     @room_playlist = []
9     @room_capacity = []
10  end
```

```
def check_guests_in()
  @booked_rooms << @guests
  return @booked_rooms.count()
end
```

```
room.rb room_spec.rb
25
26 def test_check_guests_in()
27   assert_equal(1, @room.check_guests_in())
28 end
29
```

```
➤ specs git:(master) ruby room_spec.rb
Run options: --seed 27584
```

```
# Running:
```

```
*****
```

```
Finished in 0.001007s, 4598.6950 runs/s, 4598.6950 assertions/s.
```

```
5 runs, 5 assertions, 0 failures, 0 errors, 0 skips
```

```
➤ specs git:(master)
```

Week 2				
--------	--	--	--	--

I & T

I.T 6

Demonstrate the use of a hash in a program. Take screenshots of:

- *A hash in a program
- *A function that uses the hash
- *The result of the function running

```
1 countries = {  
2   uk: {capital: "London",  
3       population: "6 million",  
4       languages: ["English", "Gaelic" , "Welsh"]  
5   },  
6  
7   germany: {  
8     capital: "Berlin",  
9     population: "4 million",  
10    languages: ["German", "German Deutsch" , "Turkish"] }  
11 }  
12  
13  
14 p countries [:germany] [:capital]  
15 p countries [:uk] [:languages] [0]  
16 p countries [:germany] [:languages] [-1]  
17 p countries [:germany] [:languages].last()
```

→ day_3 git:(master) x ruby hashes.rb

"Berlin"

"English"

"Turkish"

"Turkish"

	I & T		Static and Dynamic testing task A https://github.com/emrob/PDA	
--	-------	--	--	--

	Unit	Ref.	Evidence	Done
--	-------------	-------------	-----------------	-------------

I & T

I.T 3

Demonstrate searching data in a program. Take screenshots of:

*Function that searches data

*The result of the function running

```
1
2  Park.prototype.moreThanTwoOffspring = function() {
3    var total = [];
4    for (var dino of this.enclosure) {
5      if (dino.offspring > 2) {
6        total.push(dino);
7      }
8    }
9    return total;
10  }
11 }
```

```
it('should get all the dinosaurs with an offspring count of more than 2', function(){
  park.addDino(dino1);
  park.addDino(dino2);
  park.addDino(dino3);
  assert.strictEqual(park.moreThanTwoOffspring().length, 2);
})
```

```
+ homework git:(master) npm run test
```

```
> homework@1.0.0 test /Users/user/codeclan_work/week_11/day2/homework
> mocha specs
```

Dinosaur

- ✓ should have a type
- ✓ should have a number of offspring
- ✓ number of offspring a dino has per year

Park

- ✓ enclosure should start empty
- ✓ should be able to add dinosaur
- ✓ should be able to remove all dinosaurs of a particular type
- ✓ should get all the dinosaurs with an offspring count of more than 2

```
7 passing (8ms)
```

Week 3

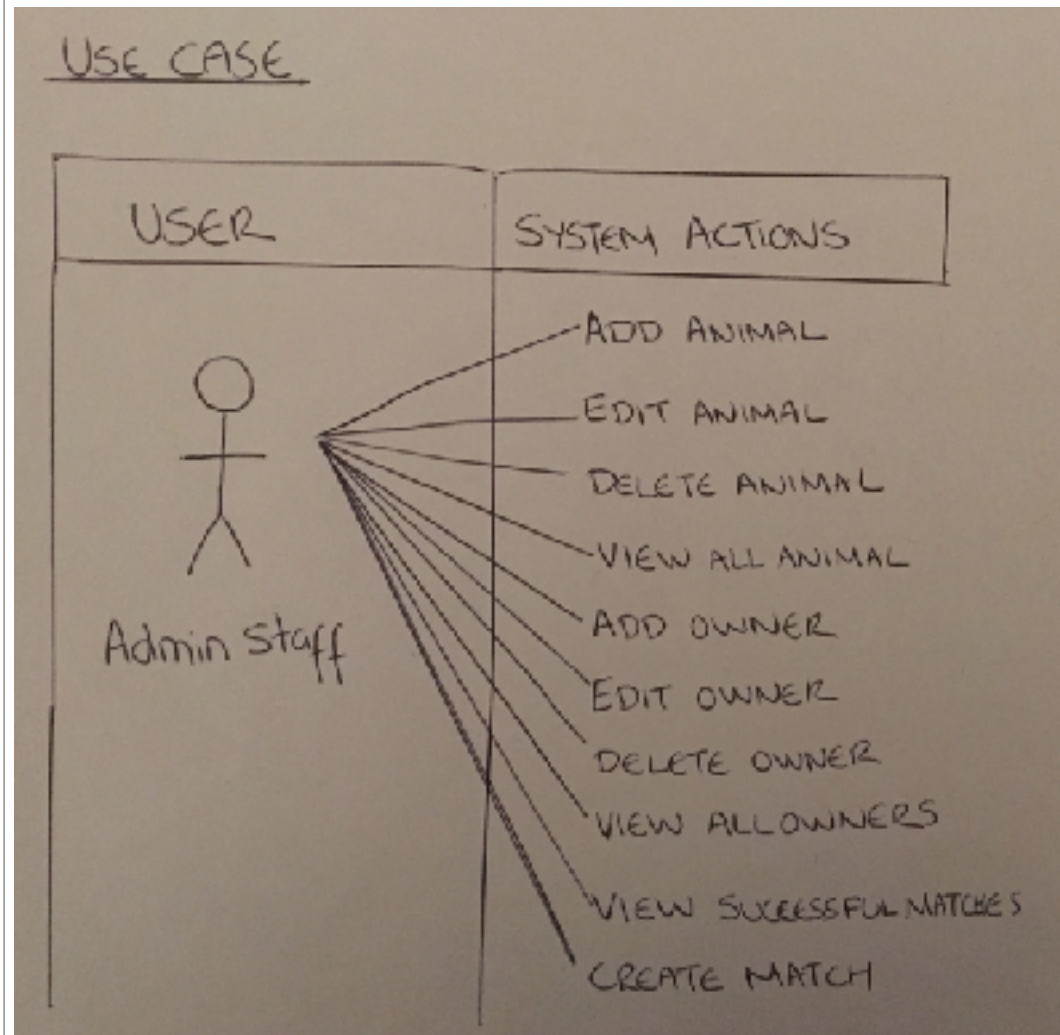
I & T	I.T 4	<p>Demonstrate sorting data in a program. Take screenshots of:</p> <ul style="list-style-type: none"> *Function that sorts data *The result of the function running <pre> removeAndClone: function (arr, valueToRemove) { var filtered_array = []; for (var num of arr) { if (num === valueToRemove) { var index = arr.indexOf(num); filtered_array.push(arr.splice(index, 1)); } } return arr; }, </pre> <pre> it('should find duplicate values in an array, returning a new array of the duplicates', function () { var arr = [1, 2, 3, 4, 4, 5, 5, 5] assert.deepStrictEqual(arrayTasks.findDuplicates(arr), [4, 5]) }) </pre> <pre> + start_point git:(master) ✗ npm run test > array_tasks@1.0.0 test /Users/user/codeclan_work/week_11/day3/Homework/start_point > mocha tests.js </pre> <p>Array tasks</p> <ul style="list-style-type: none"> ✓ should concatenate two arrays, returning a new array ✓ should insert an item in an array at any index position ✓ should square all values in an array, returning a new array ✓ should calculate the sum of all values in an array ✓ should find duplicate values in an array, returning a new array of the duplicates 	
-------	-------	---	--

Unit	Ref.	Evidence	Done
------	------	----------	------

A & D

A.D 1

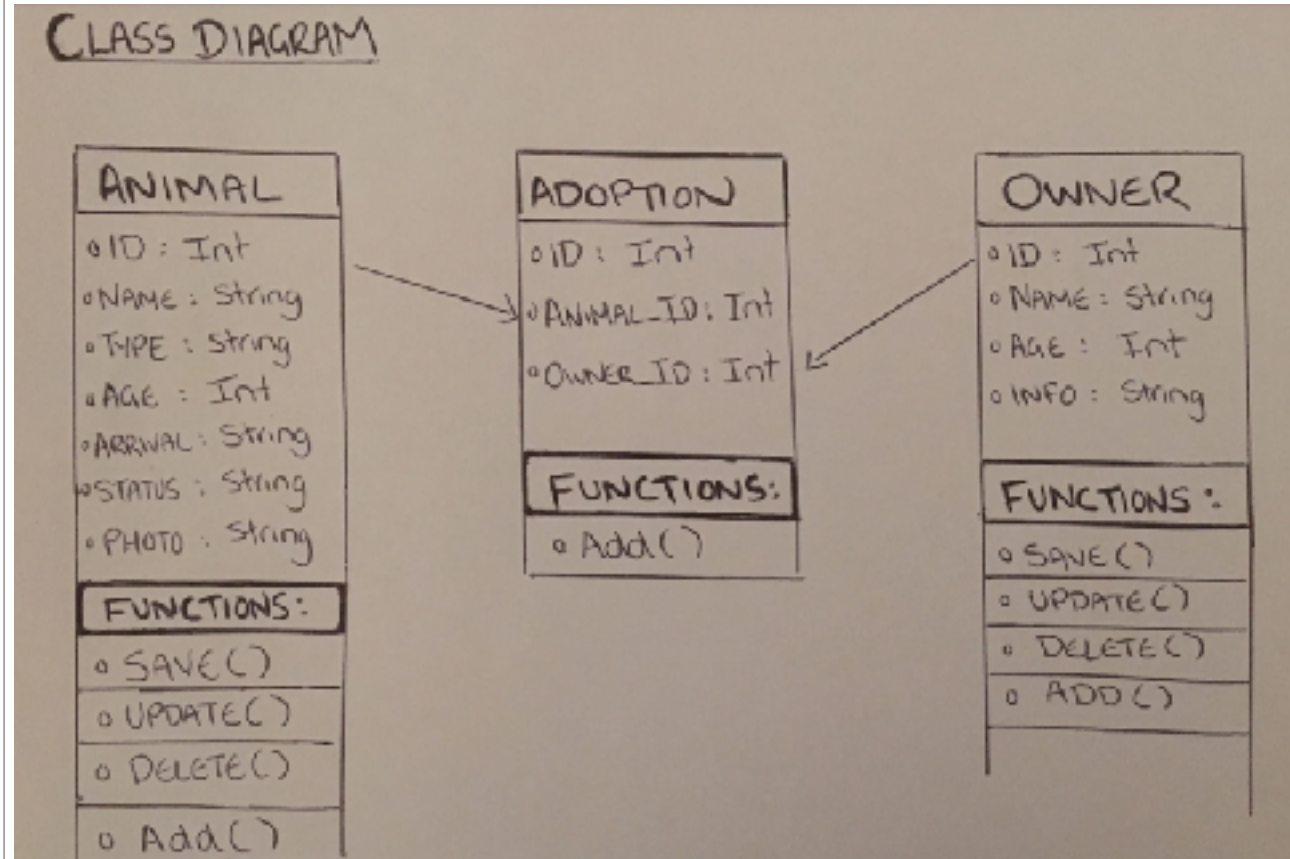
A Use Case Diagram



A & D

A.D 2

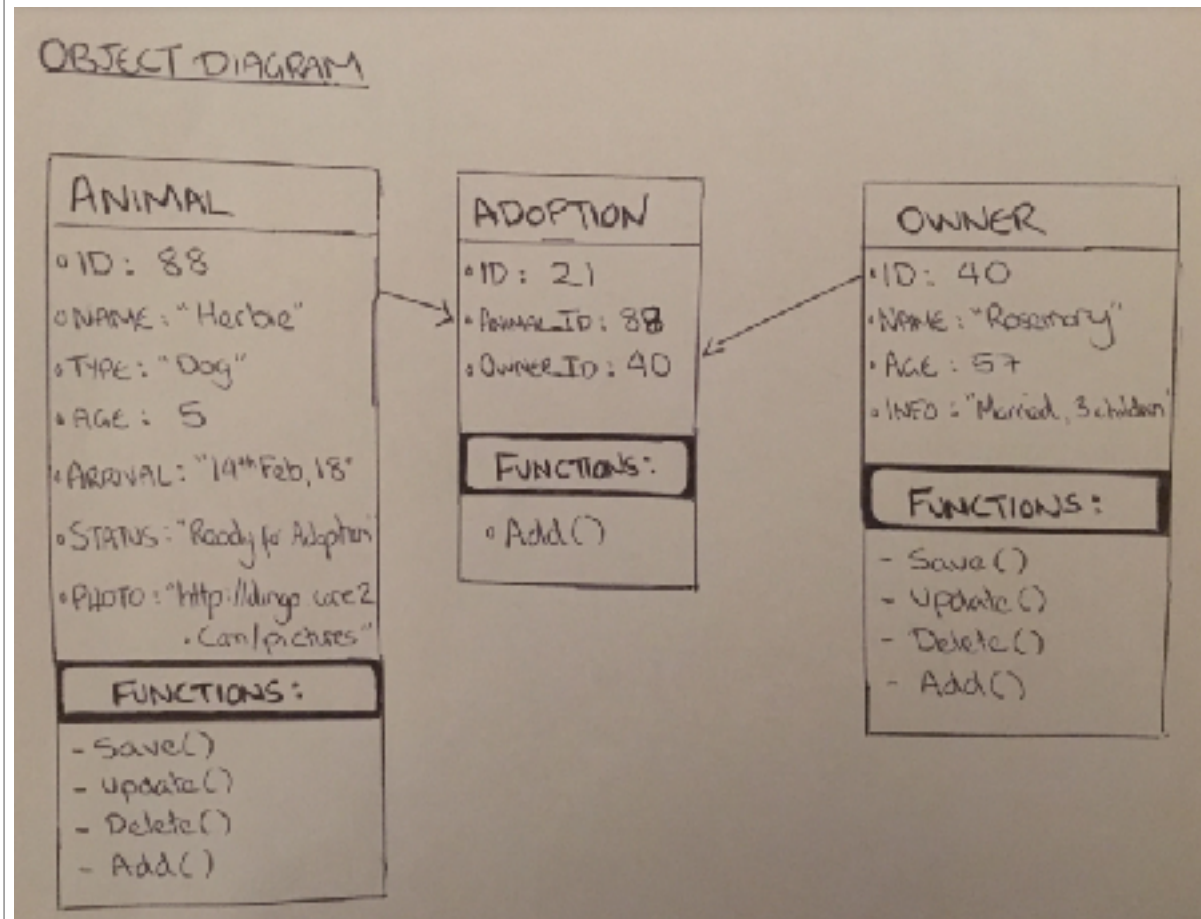
A Class diagram.



A & D

A.D 3

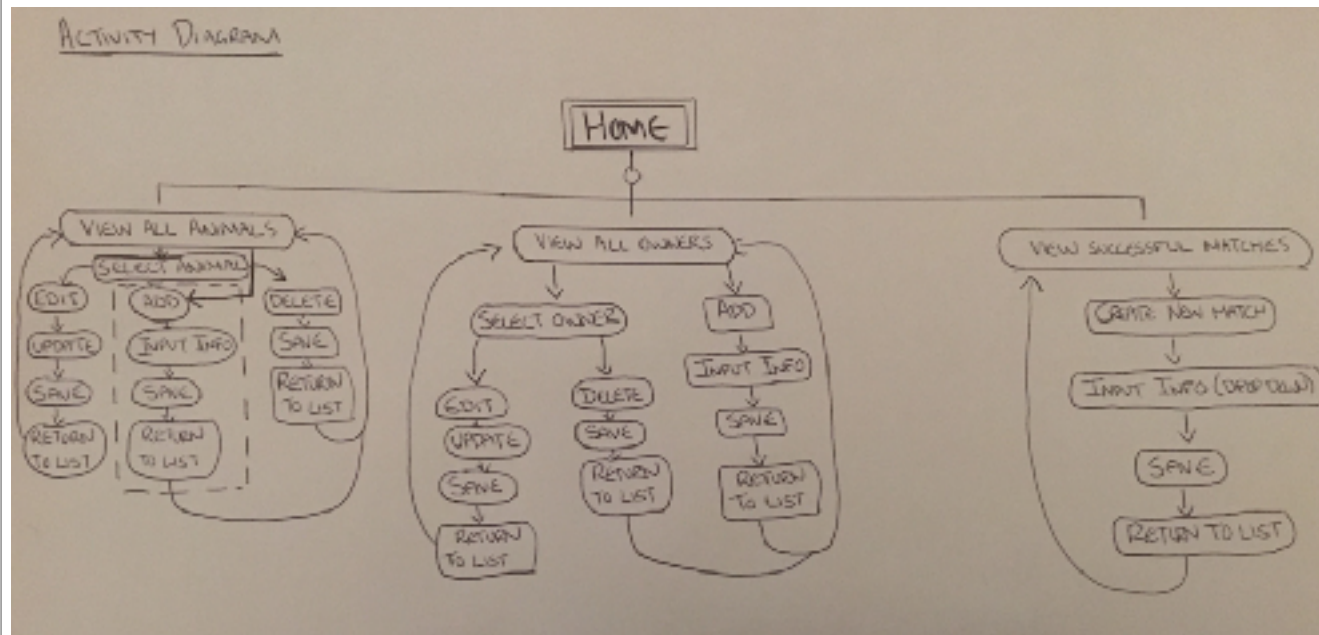
An Object diagram.



A & D

A.D 4

An Activity Diagram



A & D

A.D 6

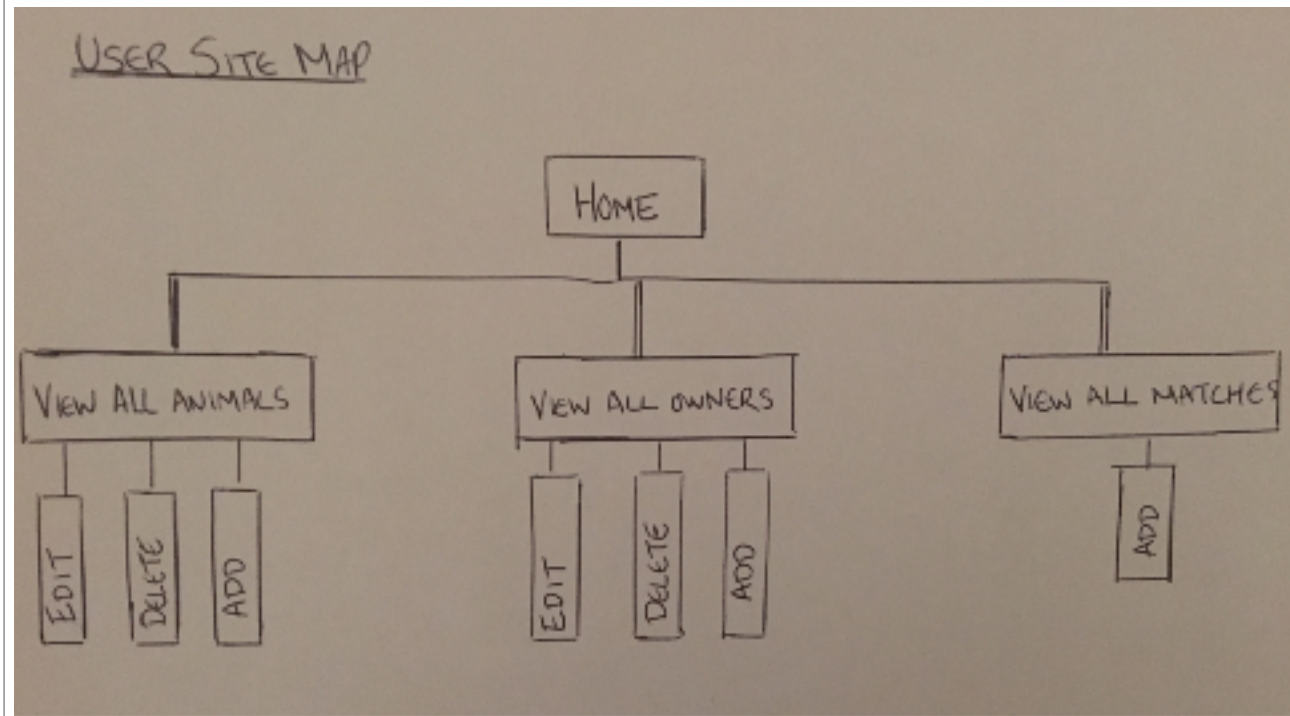
Produce an Implementations Constraints plan detailing the following factors:

- *Hardware and software platforms
- *Performance requirements
- *Persistent storage and transactions
- *Usability
- *Budgets
- *Time

P

P 5

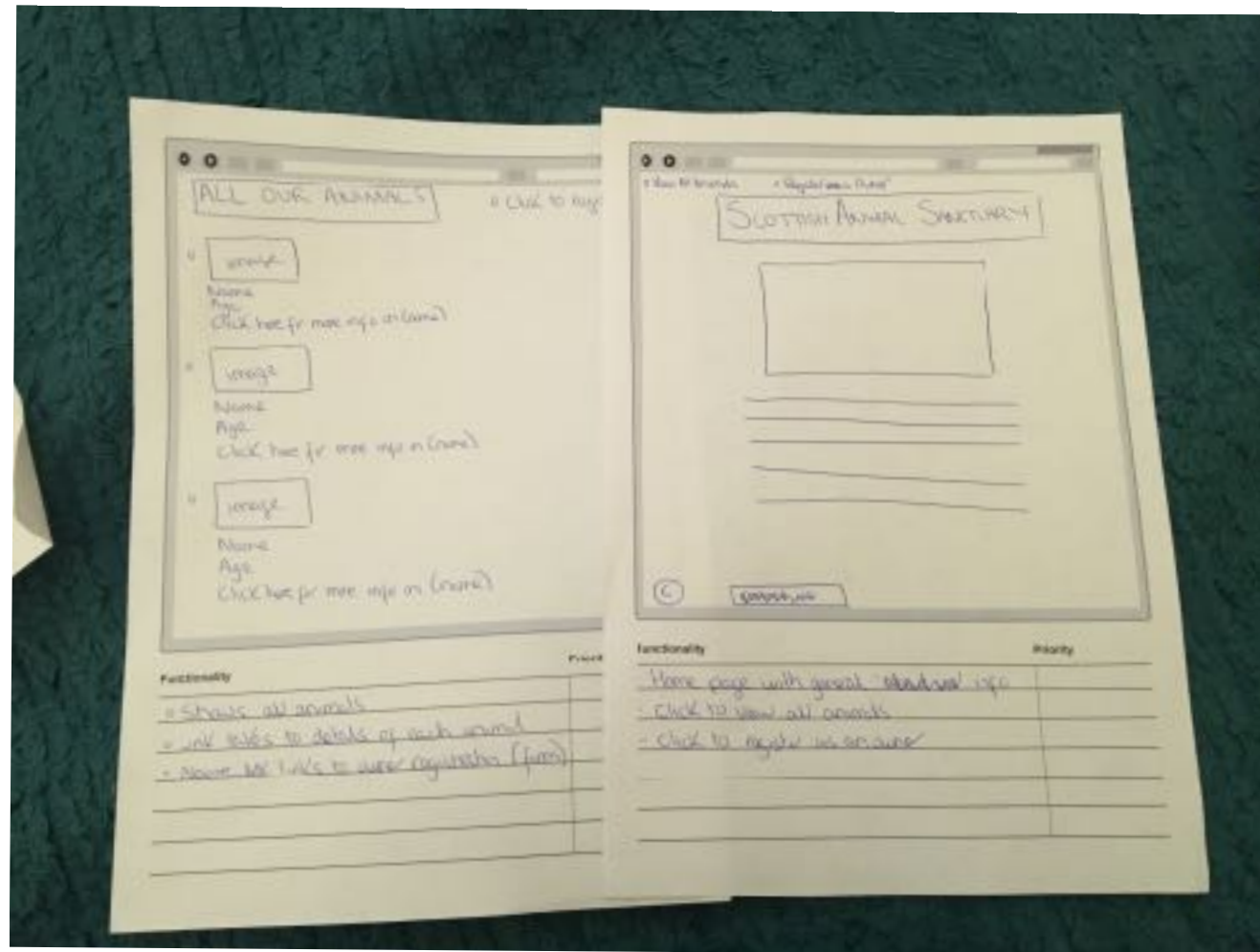
Create a user sitemap.



P

P 6

Produce two wireframe designs.



P

P 10

Take a screenshot of an example of pseudocode for a function.

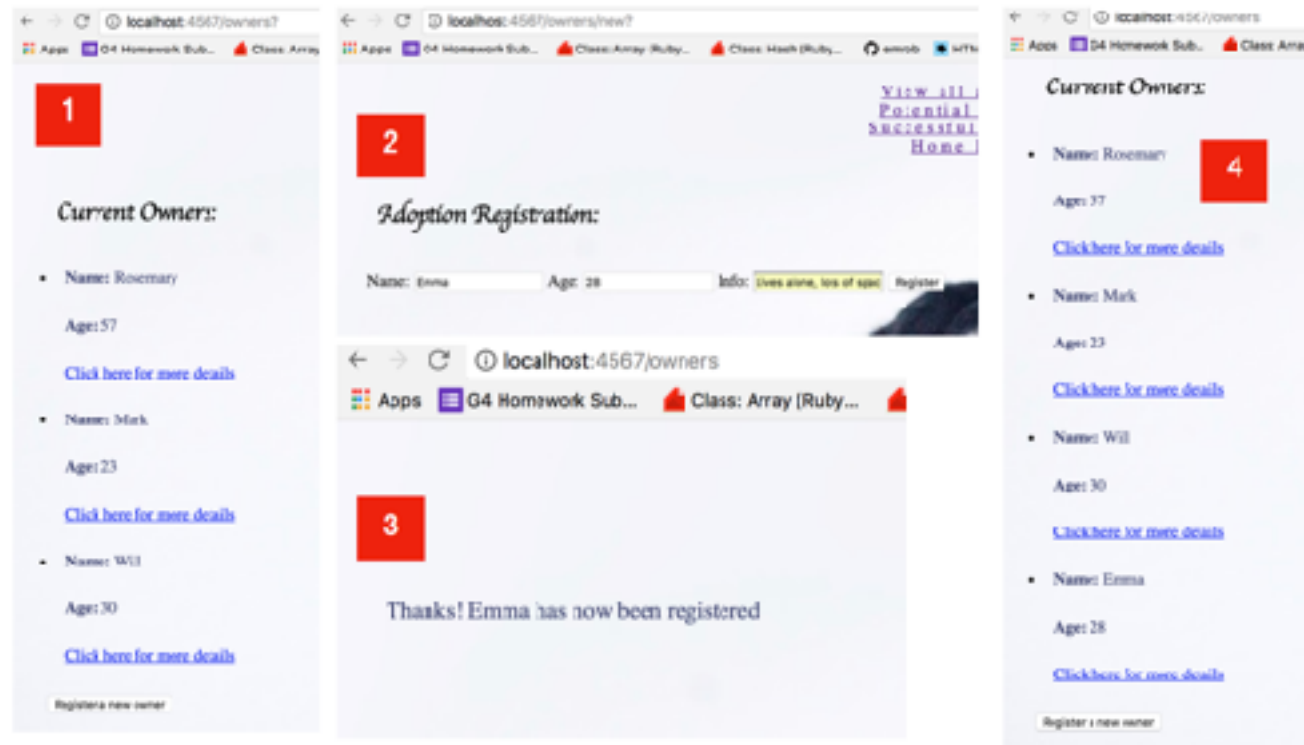
```
30
31  findDuplicates: function (arr) {
32    let result = [];
33
34    arr.forEach(function(element, index) {
35
36      // Find if there is a duplicate or not
37      if (arr.indexOf(element, index + 1) > -1) {
38
39        // Find if the element is already in the
40        • result array or not
41        if (result.indexOf(element) === -1) {
42          result.push(element);
43        }
44      });
45
46      return result;
47    },
48
```


P

P 13

Show user input being processed according to design requirements. Take a screenshot of:

- * The user inputting something into your program
- * The user input being saved or used in some way



P


P 14

Show an interaction with data persistence. Take a screenshot of:

- * Data being inputted into your program
- * Confirmation of the data being saved

```
seed.rb      delete.rb      show.rb      homepage.rb      shelter_controller.rb
41
42 animal4 = Animal.new({
43   "name" => "Herbie",
44   "type" => "Dog",
45   "age"  => 5,
46   "arrival_date" => 'Feb 14 2018',
47   "adoption_status" => "Ready for adoption",
48   "photo" => "https://dingo.care2.com/pictures/greenliving/uploads/2017/10/Happy-small-dog.jpg"
49 })
50 animal4.save()
```

```
[2] pry(main)> animal4
=> #<Animal:0x007f8252429ec0
  @adoption_status="Ready for adoption",
  @age=5,
  @arrival_date="Feb 14 2018",
  @id=74,
  @name="Herbie",
  @photo=
    "https://dingo.care2.com/pictures/greenliving/uploads/2017/10/Happy-small-dog.
jpg",
  @type="Dog">
```

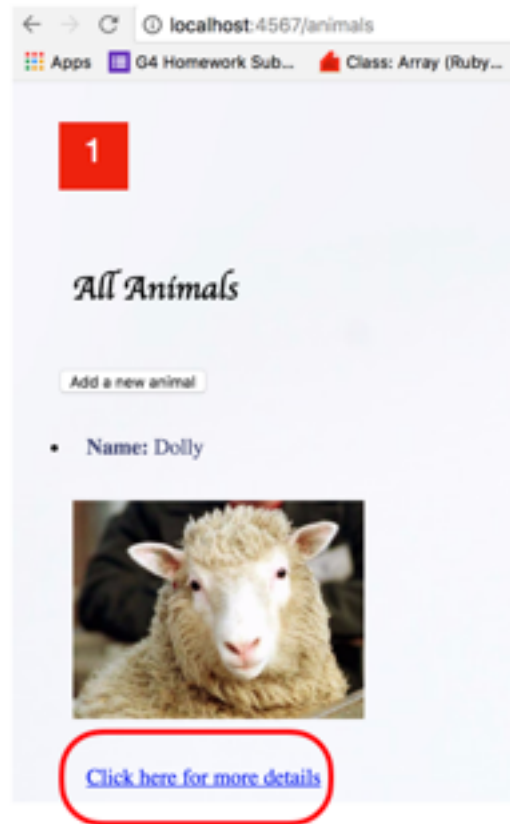


P

P 15

Show the correct output of results and feedback to user. Take a screenshot of:

- * The user requesting information or an action to be performed
- * The user request being processed correctly and demonstrated in the program



P

P 18

Demonstrate testing in your program. Take screenshots of:

- * Example of test code
- * The test code failing to pass
- * Example of the test code once errors have been corrected
- * The test code passing

```
public class Test {  
    private Stock stock;  
    private Basket basket;  
    private Customer customer;  
  
    @Before  
    public void before(){  
        stock = new Stock(200, 18.99, "/images/earth.jpg", Brand.Inika, ProductType.Mascara);  
        customer = new Customer("Marie");  
        basket = new Basket(customer);  
    }  
  
    @org.junit.Test  
    public void checkStockQuantity(){  
        assertEquals(200, stock.getQuantity());  
    }  
  
    @org.junit.Test  
    public void checkStockPrice(){  
        assertEquals(11.99, stock.getPrice(), 0.01);  
    }  
}
```

Test - checkStockQuantity()

4 tests done, 1 failed - 35ms

Test

- checkStockQuantity
- checkStockPrice
- checkStockBrand
- checkStockType

java.lang.AssertionError:
Expected :11.99
Actual :18.99
Click to see difference

<1 internal call
at org.junit.Assert.failNotEquals(Assert.java:645) <2 internal call
at Test.checkStockPrice[Test.java:29] <3 internal call

```
public class Test {  
    private Stock stock;  
    private Basket basket;  
    private Customer customer;  
  
    @Before  
    public void before(){  
        stock = new Stock(200, 18.99, "/images/earth.jpg", Brand.Inika, ProductType.Mascara);  
        customer = new Customer("Marie");  
        basket = new Basket(customer);  
    }  
  
    @org.junit.Test  
    public void checkStockQuantity(){  
        assertEquals(200, stock.getQuantity());  
    }  
  
    @org.junit.Test  
    public void checkStockPrice(){  
        assertEquals(18.99, stock.getPrice(), 0.01);  
    }  
}
```

Test - checkStockPrice()

All 4 tests passed - 35ms

Test

- checkStockQuantity
- checkStockPrice
- checkStockBrand
- checkStockType

Process finished with exit code 0

Unit	Ref.	Evidence	Done
I & T	I.T 7	<p>Demonstrate the use of Polymorphism in a program.</p> <pre> public class Developer extends Employee { public Developer(String name, String niNumber, double salary){ super(name, niNumber, salary); } } public abstract class Employee { public String name; public String niNumber; public double salary; public Employee(String name, String niNumber, double salary){ this.name = name; this.niNumber = niNumber; this.salary = salary; } } </pre>	
A & D	A.D 5	An Inheritance Diagram	

I & T

I.T 1

Take a screenshot of an example of encapsulation in a program.

```
public class Director extends Manager {  
  
    private double budget;  
  
    public Director(String name, String niNumber, double salary, String deptName, double budget){  
        super(name, niNumber, salary, deptName);  
        this.budget = budget;  
    }  
  
    public double getBudget() {  
        return budget;  
    }  
}
```

I & T

I.T 2

Take a screenshot of the use of Inheritance in a program. Take screenshots of:

- *A Class
- *A Class that inherits from the previous class
- *An Object in the inherited class
- *A Method that uses the information inherited from another class

```
@Entity
@Inheritance(strategy = InheritanceType.JOINED)
public abstract class Consumable implements Item {
    private int id;
    private String name;
    private NutritionalRating nutritionalRating;
    private int calories;
    private int quantity;

    @Override
    public void setName(String name, NutritionalRating nutritionalRating, int calories,
        int quantity) {
        this.name = name;
        this.nutritionalRating = nutritionalRating;
        this.calories = calories;
        this.quantity = quantity;
    }

    @Override
    public Consumable() {
    }

    @Override
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "id")
    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    @Column(name = "name")
    public String getName() {
        return name;
    }
}
```

```
package models;

import javax.persistence.*;
import java.util.Set;

@Entity
@Inheritance(strategy = InheritanceType.JOINED)
public class Food extends Consumable {

    private String mealType;
    private FoodCategory foodCategory;
    private Meal meal;
}
```

```
public class TestFood {

    Food food;
    Meal meal;

    @Before
    public void before() {
        food = new Food("Bread", NutritionalRating.Yellow, 100, 2, "Side",
            FoodCategory.Carbohydrate, meal);
    }

    @Test
    public void checkName() {
        assertEquals("Bread", food.getName());
    }
}
```

Week 7

P

P 11

Take a screenshot of one of your projects where you have worked alone and attach the Github link.

<https://github.com/emrob/Project-1---Animal-Sanctuary>

The screenshot shows the GitHub interface for the repository 'emrob / Project-1---Animal-Sanctuary'. The repository has 54 commits, 1 branch, 0 releases, and 1 contributor. The 'Code' tab is selected, showing a list of files: controllers, db, models, public, views, and shelter_controller.rb. Each file has a commit message 'final touches' and a timestamp '2 months ago'. The repository description is 'No description, website, or topics provided.' and there is a button to 'Add a README'.

enrob / Project-1---Animal-Sanctuary

Watch 0 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

No description, website, or topics provided. Edit

Add topics

54 commits 1 branch 0 releases 1 contributor

Branch: master New pull request Create new file Upload files Find file Clone or download

emrob final touches Latest commit 12874c9 on 21 Feb

controllers	final touches	2 months ago
db	final touches	2 months ago
models	final touches	2 months ago
public	final touches	2 months ago
views	final touches	2 months ago
shelter_controller.rb	final touches	2 months ago

Help people interested in this repository understand your project by adding a README. Add a README

	Unit	Ref.	Evidence	Done
	I & T		Unit, integration and acceptance testing task B https://github.com/emrob/JavaScript-Testing	

Week
11

P

P 16

Show an API being used within your program. Take a screenshot of:

- * The code that uses or implements the API
- * The API being used by the program whilst running

```

app.js — day2/Homework/temp_start_point
app.js — Homework/Harry Potter/public

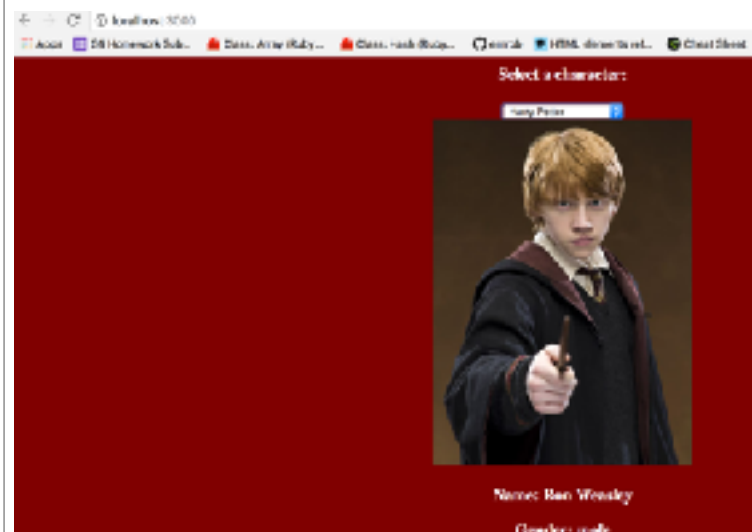
1  const app = function(){
2  const url = 'https://hp-api.herokuapp.com/api/characters'
3  makeRequest(url, requestComplete)
4  let jsonString = localStorage.getItem('currentChar');
5  let saveChar = JSON.parse(jsonString)
6  charDetails(saveChar)
7  }
8
9  const makeRequest = function(url, callback){
10   const request = new XMLHttpRequest();
11   request.open("GET", url);
12   request.addEventListener("load", callback);
13   request.send();
14   request.addEventListener("load", function() {
15     loadCharacter(request.responseText);
16   });
17 }
18
19 const requestComplete = function(){
20   if(this.status !== 200) return;
21   const jsonString = this.responseText;
22   const chars = JSON.parse(jsonString);
23   populateSelect(chars);
24   getChar(chars)
25 }

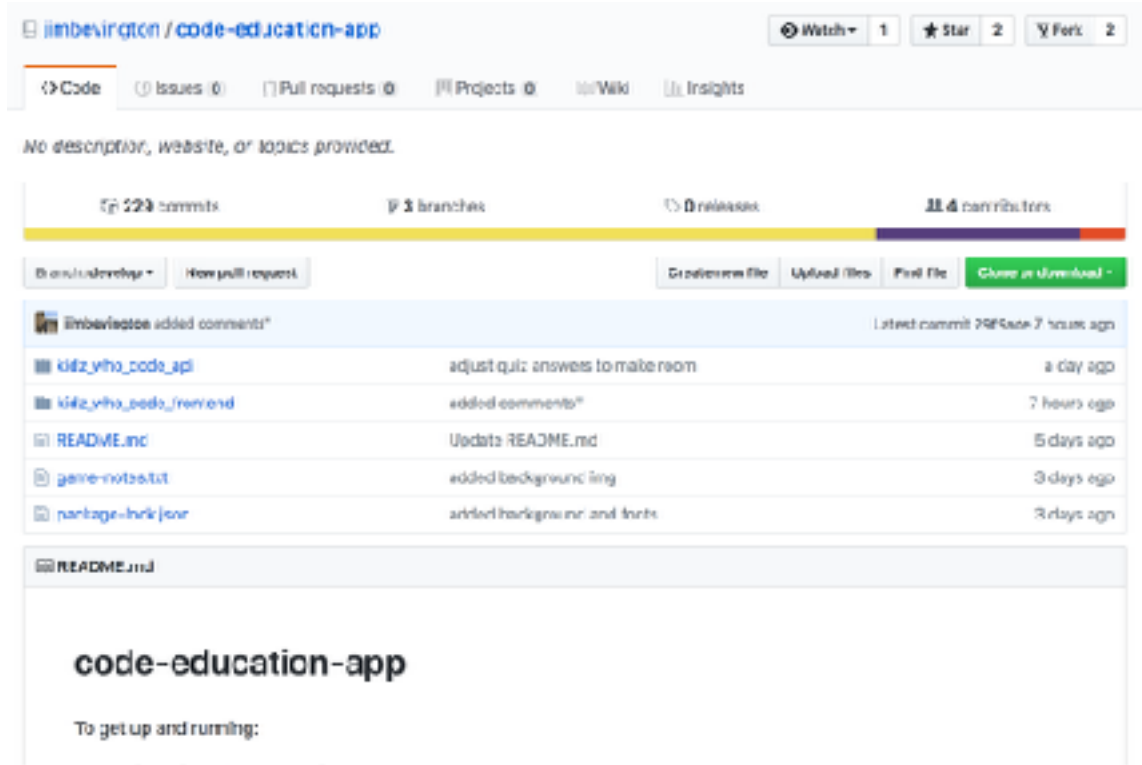
const requestComplete = function(){
  if(this.status !== 200) return;
  const jsonString = this.responseText;
  const chars = JSON.parse(jsonString);
  populateSelect(chars);
  getChar(chars)
}

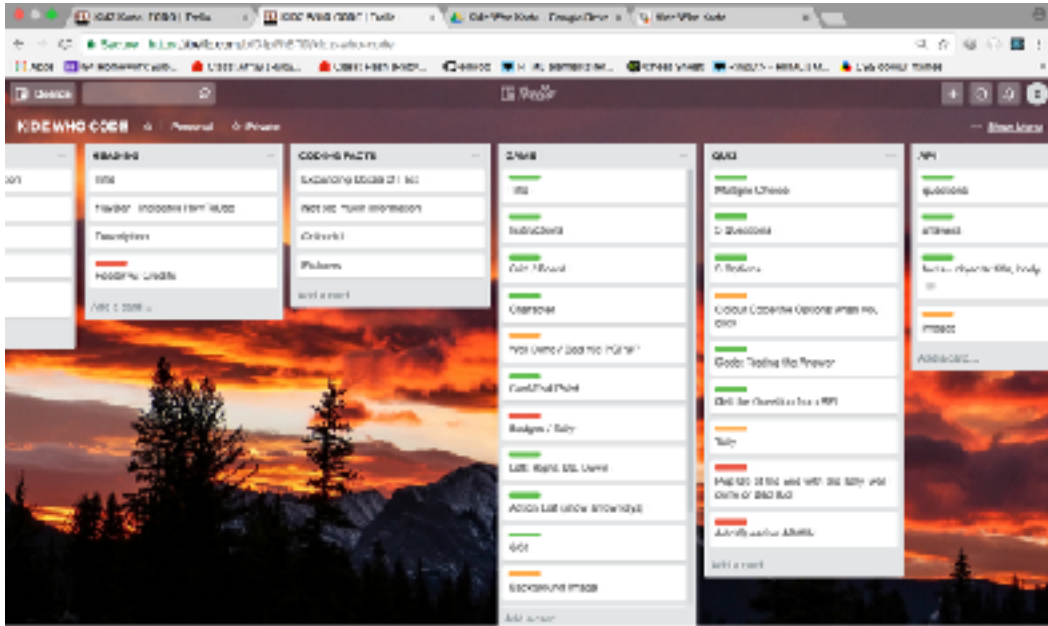
const populateSelect = function(chars) {
  const select = document.getElementById('character');
  const options = document.createElement('ul');
  let option = document.createElement('li');
  option.innerHTML = char.name;
  option.value = char.name;
  select.appendChild(option);
}

const getChar = function(chars) {
  const selectedChar = document.getElementById('selectedChar');
  selectedChar.addEventListener('change', function() {
    let char = char[this.value];
    saveChar(char);
    charDetails(char);
  });
}

```



Unit	Ref.	Evidence	Done												
P	P 1	<p>Take a screenshot of the contributor's page on Github from your group project to show the team you worked with.</p>  <p>The screenshot displays the GitHub interface for the repository 'jimbevington / code-education-app'. At the top, there are buttons for 'Watch', 'Star', and 'Fork'. Below this is a navigation bar with links to 'Code', 'Issues (0)', 'Pull requests (0)', 'Projects (0)', 'Wiki', and 'Insights'. A message states 'No description, website, or topics provided.' Below this is a progress bar showing repository statistics: 123 commits, 3 branches, 0 releases, and 4 contributors. There are buttons for 'Browse codebase', 'New pull request', 'Create new file', 'Upload files', 'Find file', and a green 'Clone or download' button. A section titled 'jimbevington added commits*' shows a list of recent commits with their messages and timestamps. The bottom part of the screenshot shows the 'README.md' file content, which includes the repository name 'code-education-app' and the text 'To get up and running:'.</p> <table><tr><th>Commit Message</th><th>Time Ago</th></tr><tr><td>adjust quiz answers to make room</td><td>a day ago</td></tr><tr><td>added comments*</td><td>7 hours ago</td></tr><tr><td>Update README.md</td><td>5 days ago</td></tr><tr><td>added background img</td><td>3 days ago</td></tr><tr><td>added background and fonts</td><td>3 days ago</td></tr></table> <p>code-education-app</p> <p>To get up and running:</p>	Commit Message	Time Ago	adjust quiz answers to make room	a day ago	added comments*	7 hours ago	Update README.md	5 days ago	added background img	3 days ago	added background and fonts	3 days ago	
Commit Message	Time Ago														
adjust quiz answers to make room	a day ago														
added comments*	7 hours ago														
Update README.md	5 days ago														
added background img	3 days ago														
added background and fonts	3 days ago														

P	P 2	<p>Take a screenshot of the project brief from your group project.</p> <h2>Educational App</h2> <p>The BBC are looking to improve their online offering of educational content: by developing some interactive apps that display information in a fun and interesting way.</p> <p>Your task is to make an MVP to put forward to them - this may only be for a small set of information, and may only showcase some of the features to be included in the final app. You might use an API to bring in content or a database to store facts. The topic of the app is your choice, but here are some suggestions you could look into:</p> <ul style="list-style-type: none"> • Interactive timeline, e.g. of the history of computer programming • Interactive map of a historical event - e.g. World War 1, the travels of Christopher Columbus <h2>MVP</h2> <ul style="list-style-type: none"> • Display some information about a particular topic in an interesting way • Have some user interactivity using event listeners, e.g. to move through different sections of content 	
P	P 3	<p>Provide a screenshot of the planning you completed during your group project, e.g. Trello MOSCOW board.</p> 	

P

P 4

Write an acceptance criteria and test plan.

Acceptance Test Plan

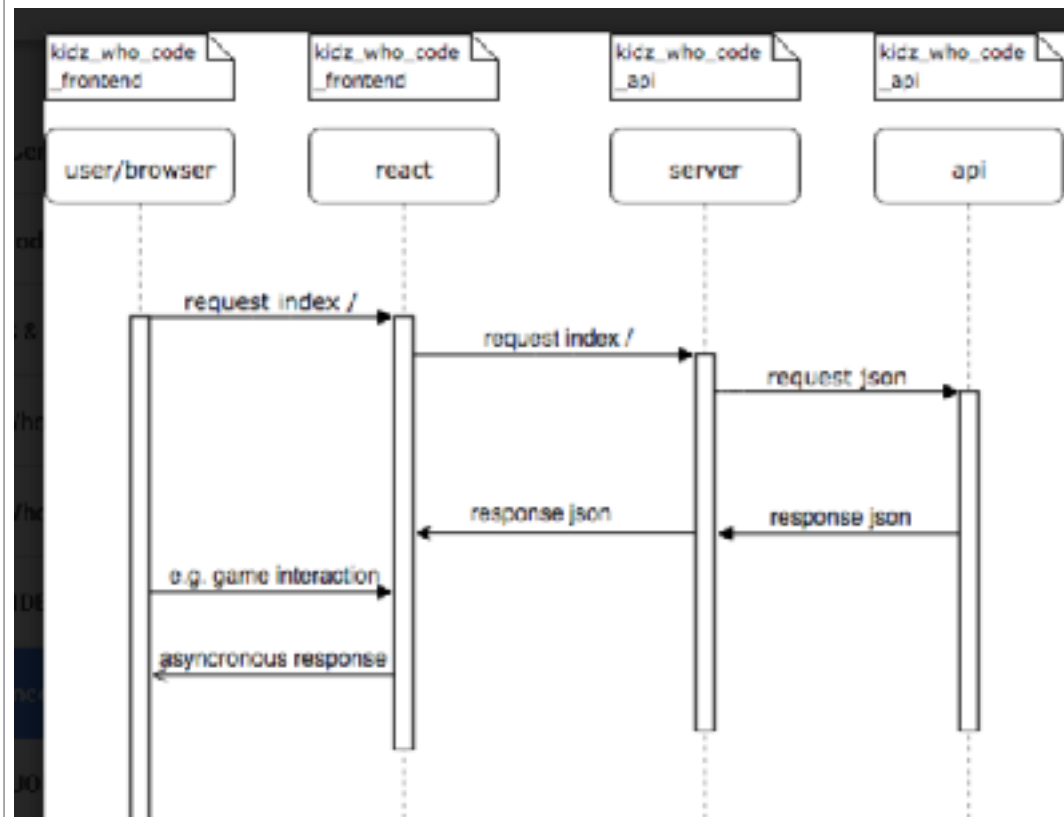
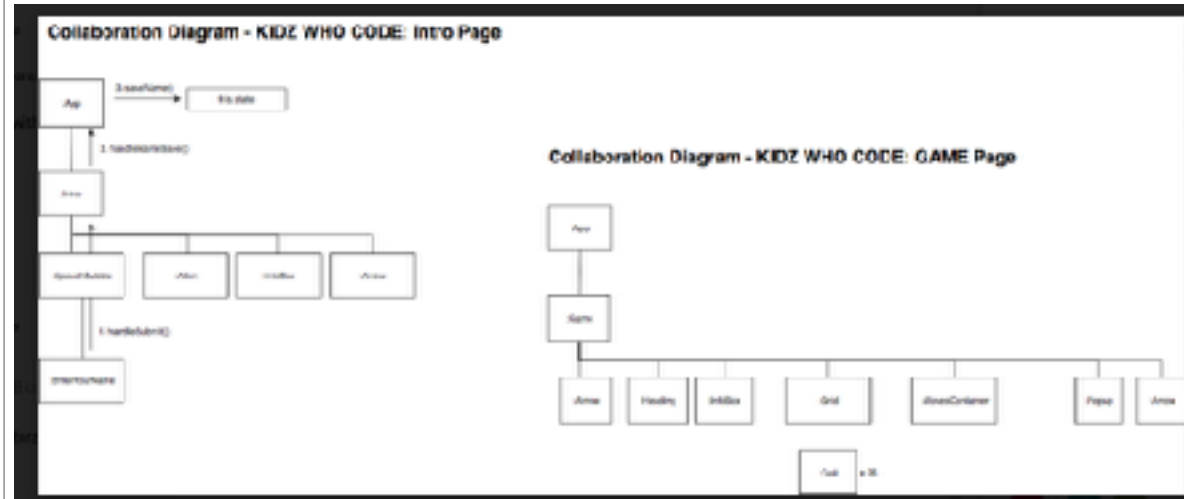
File Edit View Insert Format Data Tools Add-ons Help Last edited: 2025-01-01 10:00

	A	B	C	D
1				
2		Acceptance Criteria	Expected Result/Output	Pass / Fail
3		A user is able to read each fact	When a user clicks on a question, a related fact is shown within a pop up	Pass
4		A user is able to navigate to each page	When a user clicks on a down arrow, they should be taken to the next page.	Pass
5		On the game page, navigation buttons are displayed for the user to see	User should see the navigation buttons they've pressed before they click on	Pass
6		A user navigates the rocket to the moon on the game page	Rocket should move according to the action buttons pressed by the user - once the go button is selected	Pass
7		A user should receive confirmation after playing the game	If the user has played correctly they will be told so and prompted to take the quiz. Otherwise they will be given the option to try again.	Pass
8		One question is shown at a time on the quiz page	User sees one question at a time, with 3 answer choices	Pass
9		User is told whether they have answered correctly or not	Confirmation will show if the correct answer is chosen, along with a next question button. Otherwise the user will be prompted to try again	Pass
10		Confirmation is received once the user has completed the quiz	A message displays once all five questions have been answered	Pass

P

P 7

Produce two system interaction diagrams (sequence and/or collaboration diagrams).



P	P 8	Produce two object diagrams.	
P	P 9	<p>Select two algorithms you have written (NOT the group project). Take a screenshot of each and write a short statement on why you have chosen to use those algorithms.</p> <pre> <label for="adoption_status">Adoption Status:</label> <select name="adoption_status" id="adoption_status"> <% for adoption_status in @adoption_status %> <option value="<%= adoption_status %>" <%= "selected" if adoption_status == @animal.adoption_status %> ><%= adoption_status %></option> <% end %> </select> </pre> <pre> <label> Select an animal: <select name="animal_id"> <% for animal in @animals %> <% if animal.adoption_status == "Ready for adoption" %> <option value="<%= animal.id %>"><%= animal.name %> </option> <% end %> <% end %> </select> </label> </pre> <p>I have chosen the above because they transformed my app from just displaying data, to showing only relevant data. So if an animal was adopted or needing to be trained, it would no longer show on the drop down list - the drop down list would only show those ready for adoption</p>	

P

P 17

Produce a bug tracking report



BUG TRACKING REPORT

File Edit View Insert Format Data Tools Add-ons Help [Last edit was made 2 days a](#)
 100% - \$ % 123 - Arial - 10 - **B** *I*


REQUIREMENT

	A	B	C	D
1	REQUIREMENT	FAILED Log	Bug Fix	PASSED Log
2	<u>describe task</u>	<u>mark if Failed</u>	<u>describe action taken to fix bug</u>	<u>mark Passed</u>
3	Game: cellStates state var should store move value when Move button clicked. Failed when Move changed to img rather than button		Refactored addMove to use getAttribute('value') from Moving object.	
4	Game: Rocket Ship should move around whole grid. Failing to land in last cell.		Refactored bounds check to use >= rather than > gridSize	
5	Game: Rocket should stop at Grid left/right boundaries.		added further checks in evaluateMoves to stop evaluation of Left/Right moves when at grid bounds	
6	SpeechBubble should be able to contain an EnterYourName form alongside p tags		refactored SpeechBubble to put strings in p tags and other elements in article tags	
7	EnterYourName form should pass userName to App state		made EnterYourName a container with state of name, updating when text input changes	