PDA: Software Development Level 8 Student Evidence Checklist

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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
	1 & 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	
			<pre>const RecordCollector = function(name, cash){ this.name = name; this.collection = [] this.cash = cash; }</pre>	
Week 2			<pre>RecordCollector.prototype.buy = function (record) { if(this.cash > record.price){ this.cash -= record.price; this.collection.push(record) } </pre>	

		<pre>it('record collector can buy a record', function(){ recordCollector.buy(record1); assert.strictEqual(recordCollector.cash, 61); assert.deepStrictEqual(recordCollector.collection, [record1]); })</pre>	<pre></pre>
1 & T	I.T 6		
1 & T		Static and Dynamic testing task A	

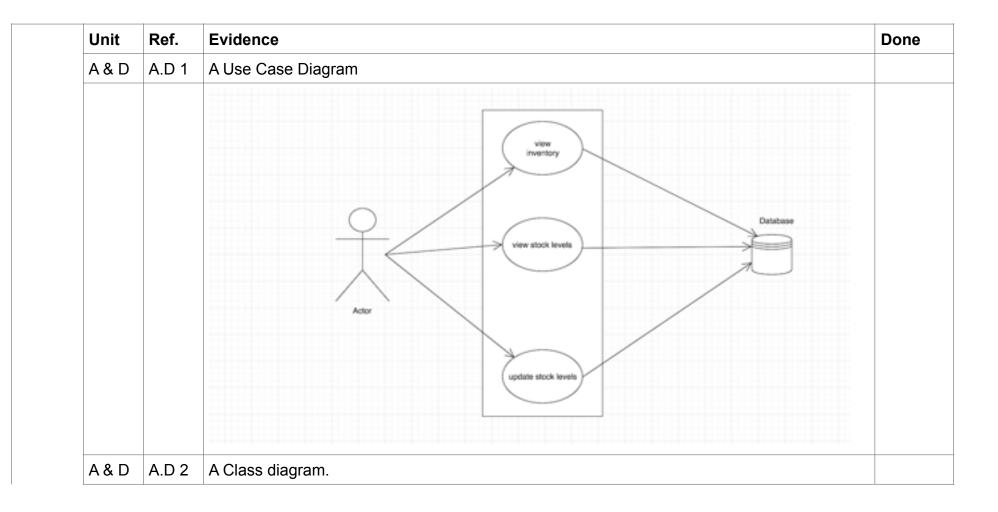
ι	Unit	Ref.	Evidence	Done
I	I & T	I.T 3	Demonstrate searching data in a program. Take screenshots of: *Function that searches data *The result of the function running	

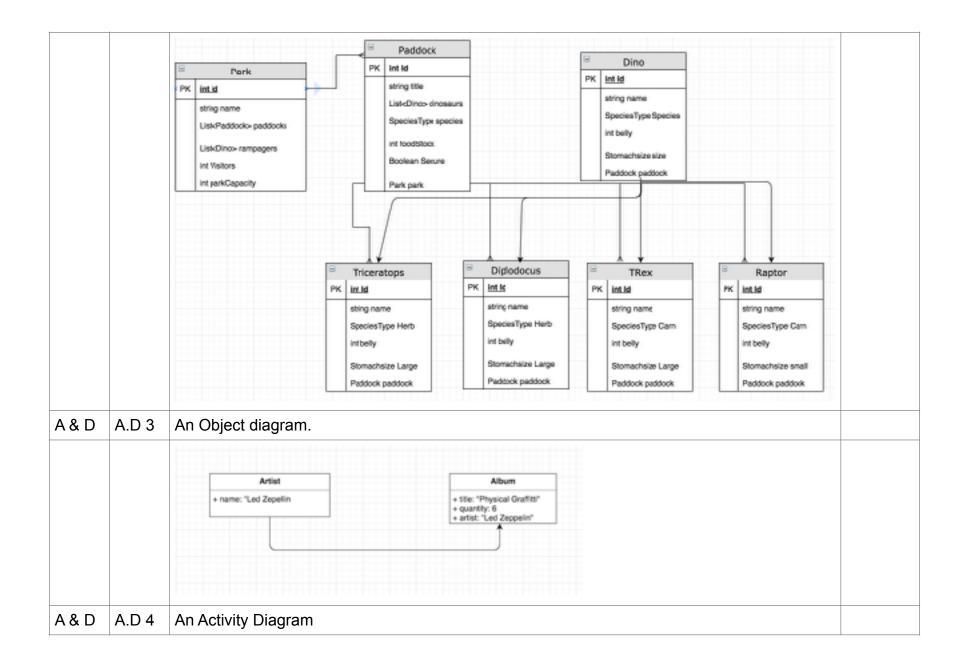
```
public static <T> List<T> getAll(Class classType){
                          session = HibernateUtil.getSessionFactory().openSession();
                          List<T> results = null;
                          Criteria criteria = session.createCriteria(classType);
                          results = getList(criteria);
                          return results;
Week 3
                    List<Team> foundTeams = DBHelper.getAll(Team.class);
                         foundTeams = {ArrayList@2167} size = 5
                         0 = {Team@2175}
                         1 = {Team@2176}
                         2 = {Team@2177}
                         3 = {Team@2178}
                         4 = {Team@2179}
             I.T 4
                    Demonstrate sorting data in a program. Take screenshots of:
       1 & T
                    *Function that sorts data
                    *The result of the function running
```

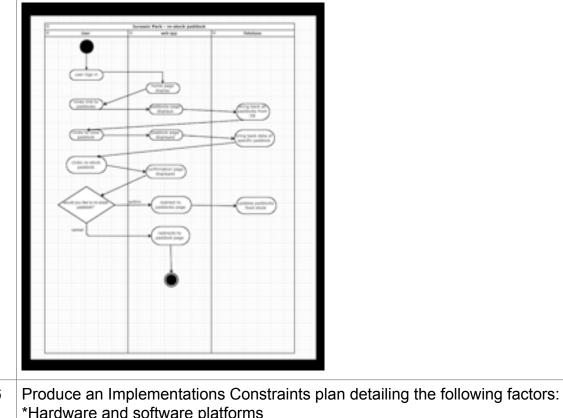
```
public static List<Team> getTeamsInLeague(League league){
    session = HibernateUtil.getSessionFactory().openSession();
    List<Team> results = null;
    Criteria criteria = session.createCriteria(Team.class);
    criteria.add(Restrictions.eq("league", league));
    criteria.addOrder(Order.desc("points"));
    results = getList(criteria);
    return results;
}

List<Team> teamsfoundInPointsOrder = DBHelper.getTeamsInLeague(league);
```

```
teamsfoundInPointsOrder = {ArrayList@2170} size = 5
  O = {Team@2183}
     (id = 5
   • Barcelona"
     points = 20
     manager = nul
   league = {League@2189}
▼ = 1 = {Team@2184}
     name = "Newcastle"
     points = 19
     manager = null
   • • league = {League@2189}
▼ = 2 = {Team@2185}
     id = 1
     name = "soccer united"
     points = 12
      n manager = null
   • (a) league = {League@2189}.
▼ = 3 = {Team@2186}
     \bigcirc id = 3
  • name = "Man blues"
     points = 7
     manager = null
   • (f) league = {League@2189}
▼ = 4 = {Team@2187}
     6 id = 2
     name = "Man reds"
     points = 3
     🍘 manager = null
     (a) league = {League@2189}
```







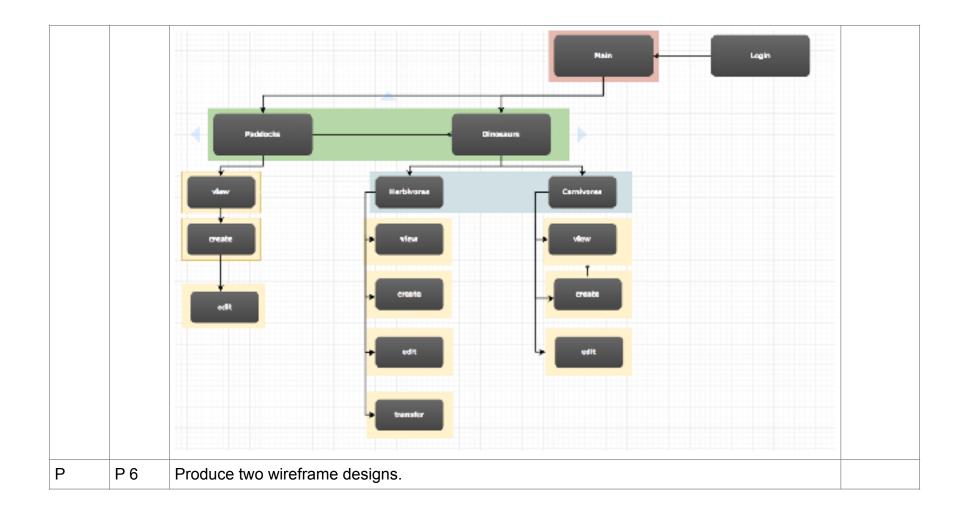
A & D A.D 6

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

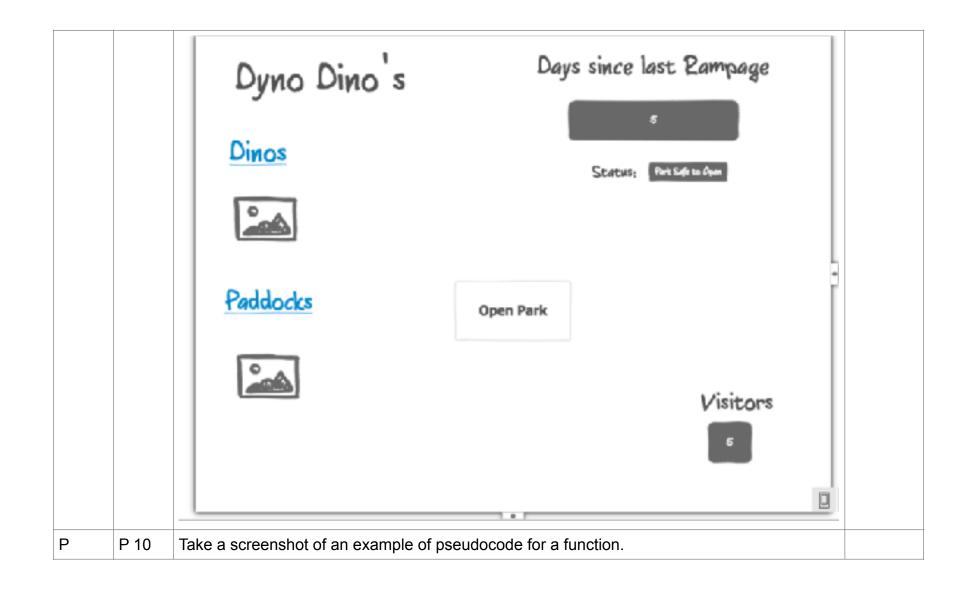
Implementation	Constraints
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Topic	Possible effect	Solution
Hardware/Software Platforms	No Constraints on hardware or software platforms at this stage	n/a
Performance Requirements	Application can only be accessed via localhost	Gateway can be set-up to be hosted on another port.
Persistent Storage And transactions	No storage issues as application does not require large amounts of data to be stored	r/a
Usability	Application is being developed for one user at a time	Could add a login/admin to allow for multiple users to access the app.
Budgets	Budget could be set on applications design	More developers could be brought in to add further functionality
Time Limitations	Project Submission Deadline	Post submission, further functionality can be added to the application

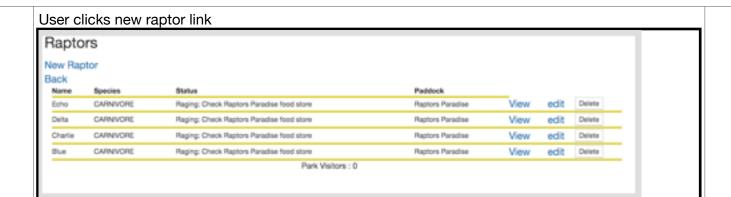
P P 5 Create a user sitemap.



Paddocks paddock Status view update Type Paddock 1 Herbivore Food Stock Low! new update paddock 2 Carnivore Safe. view update paddock 3 Carnivore No Stock! Re-stock immediately view update Add Paddock Week 5



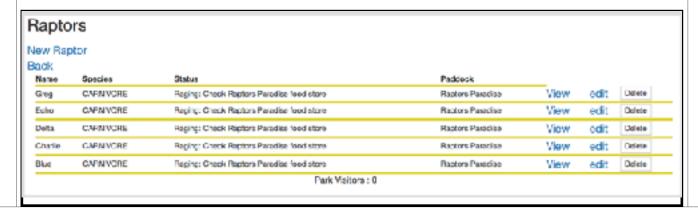
```
let newArray = [];
               // for each index position in arr.
                 for(let i in arr){
                   1f(1 < index){
                     // push those elements into the newArray.
                     newArray.push(arr[i]);
                   }else{
                     // then push itemToAdd to the end of the newArray.
                     newArray.push(itemToAdd);
                     //then push the remaining elements to the end of newArray.
                      newArray.push(arr[i]);
Р
      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
```

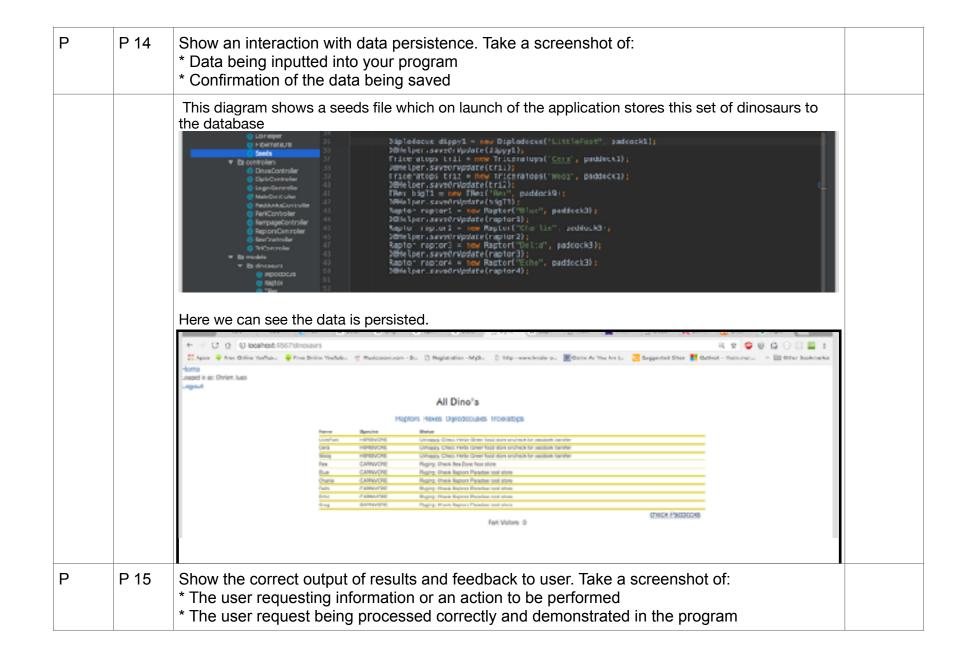


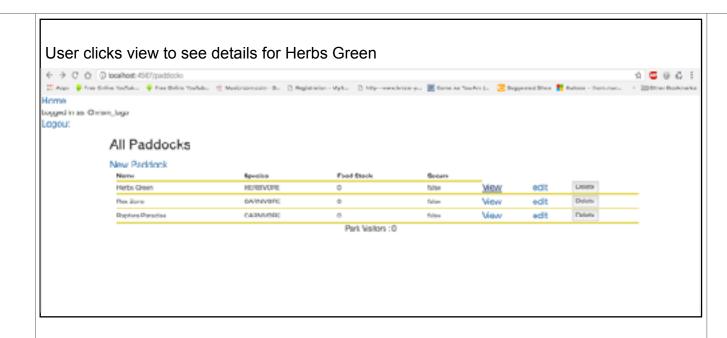
Inputs the name of the new raptor and paddock and clicks save



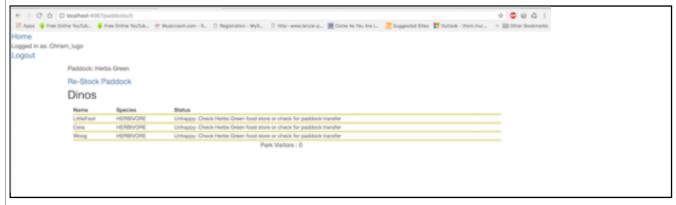
The input is saved to the database which is confirmed when viewed on raptors page.



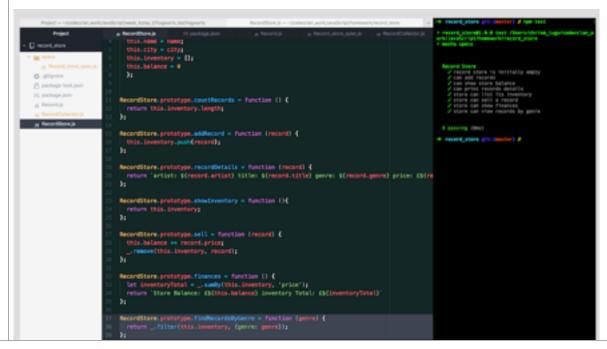




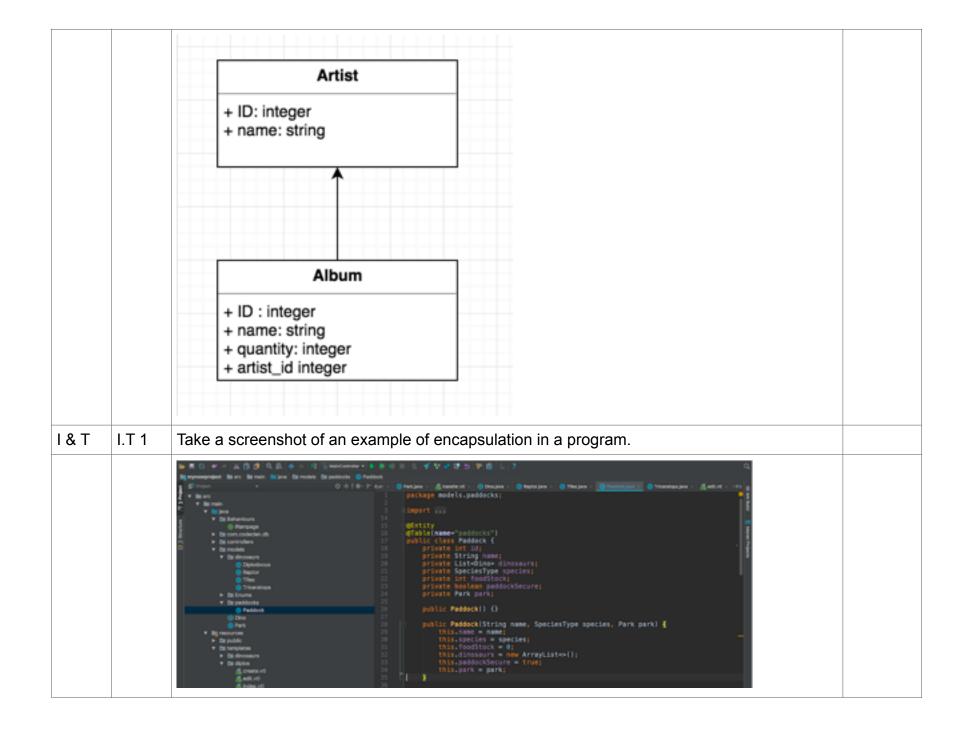
Link Navigates to paddock page for Herb's Green



Р	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



Unit	Ref.	Evidence	Done
1 & T	I.T 7	Demonstrate the use of Polymorphism in a program.	
		Description Compared Compare	
A & D	A.D 5	An Inheritance Diagram	



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.	

Week 7

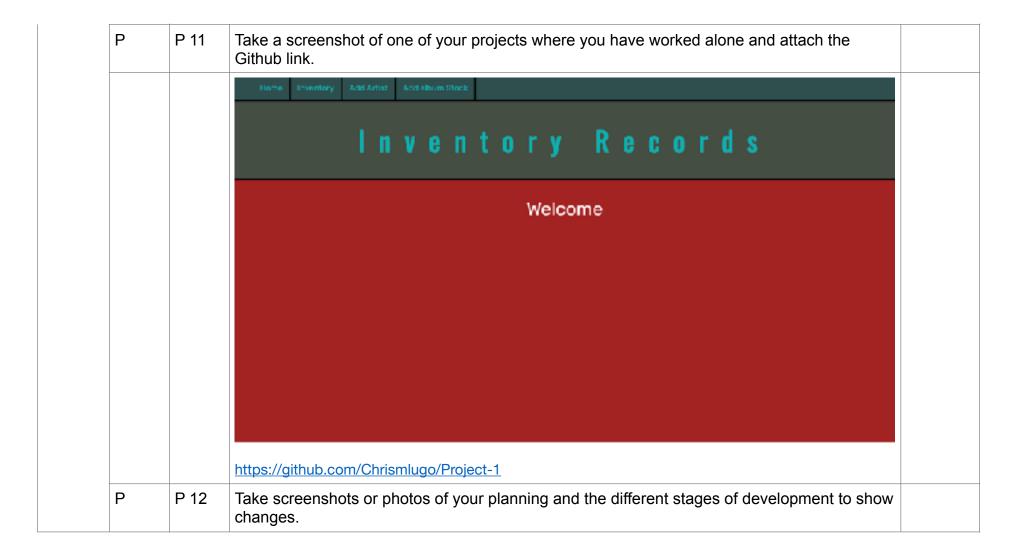
This Employee Class contains all the functionality for all types of employee

The Manager class shown here inherits from the Employee class.

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

The test file here demonstrates the manager Class has inherited the methods of its parent class.

```
| Business | Section | Sec
```

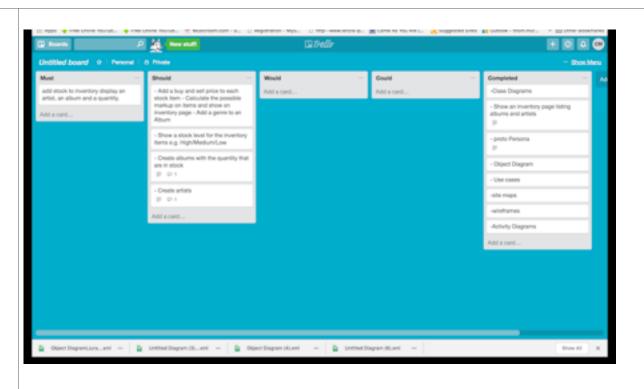


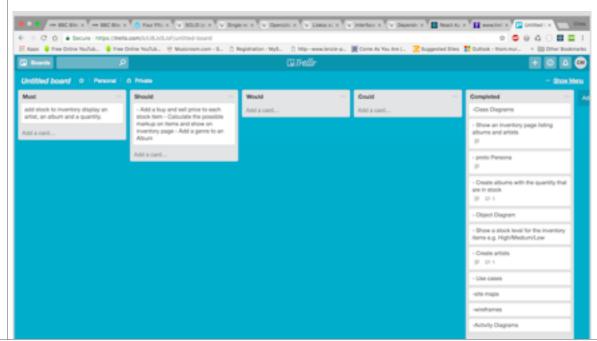
User Needs

As a	I want to	So that
Business owner	Have a stock management app	I can view, update and add stock.
Person who isn't Too familiar with the latest tech	Have a straightforward Layout that's familiar.	Be able to easily understand and use the app.
Manager of a team	Have an app which is easy to use	My staff can easily use it.

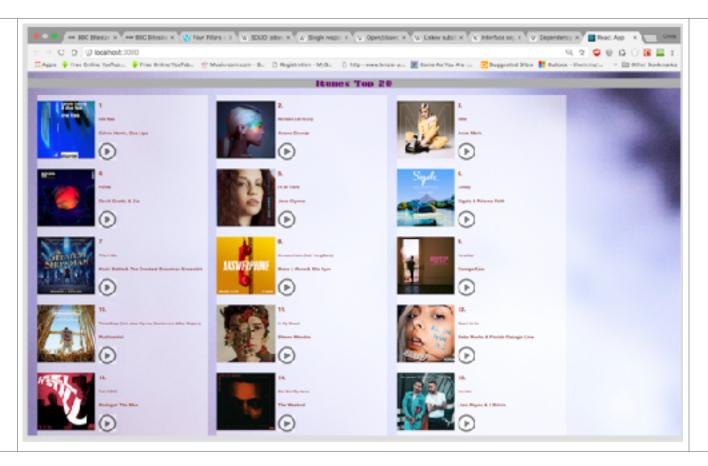
User Journey

Action 1	Action 2	Action 3	Action 4	Action 5	Action 8
George views the home screen and would like to check the stores current inventory	He clicks link to inventory and views current stock	Gaorge wants to know the availability of a particular album	The album is showing low stock availability. He would like to update the inventory with new stock	George adds the new stock to the system and would like to confirm the update.	George submits the form and would like to view the inventory to confirm stock has been updated
System 1	System 2	System 3	System 4	System 5	System 6
Home page should have a link to navigate to the inventory page	Searches artists database and albums dallabase and displays all details on screen.	Albums have a quantity. Can cell a method with logic to determine high/ med/low/out of stock.	link next to each entry will navigate to an edit screen with a pre-populated form.	Form will include a quantity bar which will be a number input.	The submit button will update the album quantity and redirect to the inventory page.

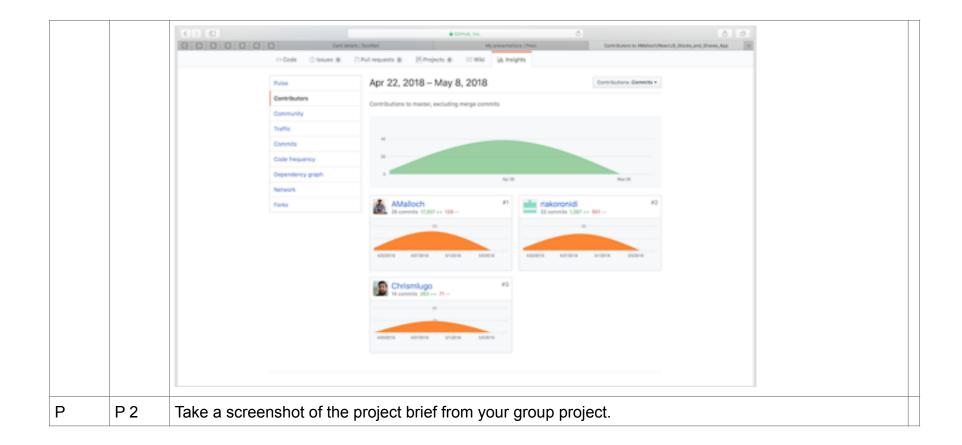




		Unit	Ref.	Evidence	Done
	1 & T		Unit, integration and acceptance testing task B		
Week 11	https://github.com/Chrismlugo/calculator_unit_and_integration_testing_mocha_selenium				
	Р	P 16 Show an API being used within your program. Take a screenshot of: * The code that uses or implements the API * The API being used by the program whilst running			
			<pre>componentDidHount(){ fetch("https://itunes.apple.com/gb/rss/topsongs/limit=20/json") .then(response => response.json()) .then(json => this.setState({songs: json.feed.entry})); } handlePlayPause(audio){ audio.paused ? audio.play() : audio.pause(); audio.classList.toggle('playing'); } render(){ return (</pre>		



	Unit	Ref.	Evidence	D
				0
				n
				е
	Р	P1	Take a screenshot of the contributor's page on Github from your group project to show the team you worked with.	



[∞] Shares App

More and more people are playing the stock market. A local trader has come to you with a portoflio 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 of the portfolio
- · View information for individual shares held
- Ability to 'buy'/add more stocks to the portfolio and 'sell'/remove them and update total value.
- · View performance trends for individual stocks and the portfolio as a whole

Stock api's can be found here - https://github.com/toddmotto/public-apis#finance

If you want to make your own api an object may look something like this:

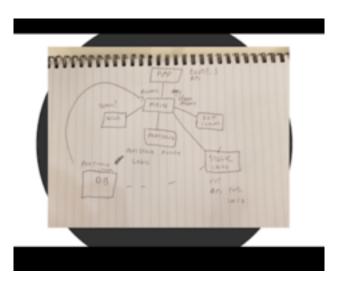
```
{
    "name": "Fusionex",
    "epic":"FXI",
    "price": 120.00,
    "quantity": 2000,
    "buyPrice": 80.00,
    "pastCloseOfDayPrices": [92.00, 89.00, 103.00, 125.00, 108.00, 98.00, 110.00],
    "buyDate":"2014-11-15"
}
```

P 3

Provide a screenshot of the planning you completed during your group project, e.g. Trello MOSCOW board.

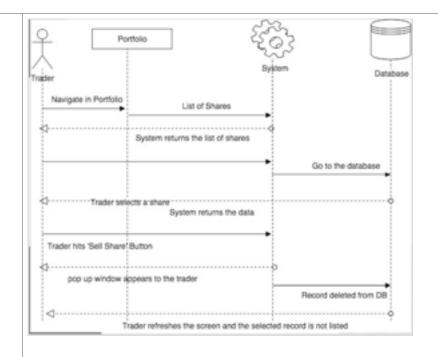


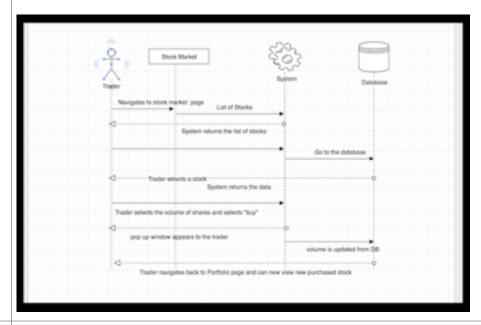




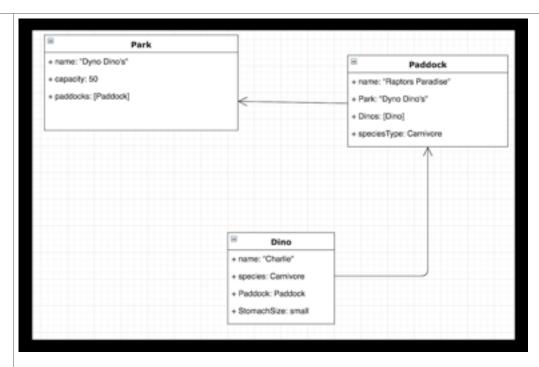
Р	P 4	Vrite an acceptance criteria and test plan.			
		Acceptance Criteria			
		Acceptance Criteria	Expected Result/Output	Pass/Fail	
		User is able to view the total value their portfolio	When link to portfolio is clicked, user is navigated to new page which displays total value of the portfolio on the page	Pass	
		User is able to view an individual sh that they own	On the Portfolio page, the user will select from a dropdown the desired share they want to view details of that share on screen	Pass	
		User can view the performance of the portfolio against the current marks		Pass	
		User can buy an amount of share from the stock market	On the stock market page, the user can select the chosen company, Select a quantity they'd like to buy and hit submit which adds to user's portfolio	Pass	
Р	P 7	Produce two system interac	tion diagrams (sequence and/or	collaboration diagrams)	

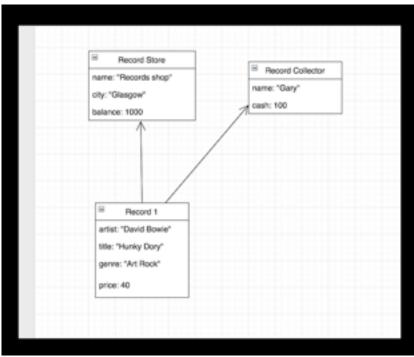
Week 13





P P8 Produce two object diagrams.





Р	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.	

```
RecordCollector.prototype.genreValue = function (genre) {
   let filteredRecords = _.filter(this.collection, {genre: genre});
   return _.sumBy(filteredRecords, 'price');
};
```

I'd chosen to use this algorithm to calculate the total value of a record collectors collection of a particular genre.

Using Lodashes filter method the algorithm filters out the collection array and creates a new filtered array of records of the same genre.

The algorithm then returns the sum of all the filtered records prices using Lodashes sumBy method.

```
public void feedDinos(){
   for(Dino dino: this.dinosaurs){
     Random ran = new Random();
     int foodAmount = ran.nextInt((5) + 1);
     if(this.foodStock >= foodAmount) {
        dino.feed(foodAmount);
        this.foodStock -= foodAmount;
        DBHelper.saveOrUpdate(dino);
   }
}
```

This algorithm was chosen to feed dinosaurs contained in a particular paddocks dinosaurs array.

The algorithm loops through the paddocks array of dinosaurs and then generates a random integer value between 1 and 5 which is set to the variable foodAmount.

It then checks if the foodAmount value is greater than the paddocks foodStock value, which is set at 0 initially, and if true the dinosaur will feed from the paddocks foodStock. The foodStock value will then be subtracted from the variable foodAmount, and then update the dinosaurs stomach value in the database.

F)	P 17	Produce a bug tracking report			
			Bug Tracking			
			Deleting all portfolio shares should return an empty drop down list but instead the screen would go blank		Added an if statement to check if array is empty	Passed
			Values returned from buying/ selling should be return upto 2 decimal places		Adds code to round results to 2 decimals	Passed
			Bootstrap table data should be accessed from props.		Data passed through render in route	Passed
			Balance should persist throughout application after buy or sell	Failed		
			Must re-render page after share has been sold	Failed		