

## PDA Kyle Miller

### Week 2

#### I.T 5

```
[week_02 git:(master) ✘ ruby array.rb
the lion the wizard and the cupboard
movie2
movie3
→ week_02 git:(master) ✘ ]
```

---

```
array.rb
1
2 def add_to_array(*favourite_movie)
3   array_of_favourite_movies = []
4   array_of_favourite_movies << favourite_movie
5   puts array_of_favourite_movies
6 end
7
8
9 add_to_array("the lion the wizard and the cupboard", "movie2", "movie3")
10
```

## I.T 6

```
week_02 — kylemiller@Kyles-MacBook-Pro-2 — ..k/PDA/week_02 — -zsh — 8...
→ week_02 git:(master) ✘ ruby hash.rb
pedro jackson
→ week_02 git:(master) ✘
```

```
1 favourite_movie = [
2   {
3     director: "pedro jackson",
4     run_time_minutes: 215,
5     title: "lotr"
6   },
7   {
8     director: "",
9     run_time_minutes: 215,
10    title: ""
11  },
12  {
13    director: "pedro jackson",
14    run_time_minutes: 215,
15    title: "lotr"
16  },
17 ]
18
19
20 def return_director(favourite_movie)
21   puts favourite_movie[0][:director]
22 end
23
24 return_director(favourite_movie)
25
```

## Week 3

### I.T 3

```
week_03 — kylemiller@Kyles-MacBook-Pro-2 — ..k/PDA/week_03 — -zsh — 8...
[+ week_03 git:(master) ✘ ruby seeds.rb
#<Kyle:0x007ffd87a8c398>
→ week_03 git:(master) ✘ ]
```

```
def self.find(id)
  sql = "SELECT * FROM kyle WHERE id = $1"
  values = [id]
  result = SqlRunner.run(sql, values).first
  kyle = Kyle.new(result)
  return kyle
end
```

### I.T 4

SortBySkill.java - Olympics - ~/Codeclan\_Work/week\_07/weekend\_homework/Olympics

```
SortBySkill.java
package com.example.kylemiller.olympics;

import java.util.Comparator;

/**
 * Created by kylemiller on 17/09/2017.
 */
public class SortBySkill implements Comparator<Competeable> {

    @Override
    public int compare(Competeable a, Competeable b) {
        return a.getSkillLevel() - b.getSkillLevel();
    }
}
```

Run CompetitionTest

All 5 tests passed - 4ms

```
CompetitionTest (com.example.olympics) PASSED 4ms
awardMedals 3ms
CanAddMoreThan3 1ms
addCompetitor 0ms
getMaxNumOfCompetitors 0ms
getEvent 0ms
```

Process finished with exit code 0

Build Variants

Event Log

17:42 Executing tasks: [app]

17:42 Gradle build finished v

17:42 Executing tasks: [app]

17:42 Gradle build finished i

17:42 Tests Passed: 5 passed

17:42 Executing tasks: [app]

17:42 Gradle build finished i

17:42 Tests Passed: 5 passed

10 chars 9:47 LF: UTF-8 Context: <no context>

Tests Passed: 5 passed (2 minutes ago)

CompetitionTest.java - Olympics - ~/Codeclan\_Work/week\_07/weekend\_homework/Olympics

```
CompetitionTest.java
import ...

/**
 * Created by kylemiller on 17/09/2017.
 */
public class CompetitionTest {

    Athlete athlete;
    Athlete athlete2;
    Athlete athlete3;
    Athlete athlete4;
    Competition competition;

    @Before
    public void setup() {
        athlete = new Athlete("Kyle", "Scottish", 5);
        athlete2 = new Athlete("b", "b", 2);
        athlete3 = new Athlete("c", "c", 3);
        athlete4 = new Athlete("d", "d", 4);
        competition = new Competition(3);
    }

    @Test
    public void awardMedals() {
        competition.addCompetitor(athlete);
        competition.addCompetitor(athletes);
        competition.addCompetitor(athlete2);
        competition.awardMedals();
        assertEquals(athlete.getAccolades().get(0), MedalType.GOLD);
    }
}
```

Run CompetitionTest

All 5 tests passed - 4ms

```
CompetitionTest (com.example.olympics) PASSED 4ms
awardMedals 3ms
CanAddMoreThan3 1ms
addCompetitor 0ms
getMaxNumOfCompetitors 0ms
getEvent 0ms
```

Process finished with exit code 0

Build Variants

Event Log

17:42 Executing tasks: [app]

17:42 Gradle build finished v

17:42 Executing tasks: [app]

17:42 Gradle build finished i

17:42 Tests Passed: 5 passed

17:42 Executing tasks: [app]

17:42 Gradle build finished i

17:42 Tests Passed: 5 passed

1 Event Log 1 Grade Console

63.6 LF: UTF-8 Context: <no context>

Tests Passed: 5 passed (a minute ago)

The screenshot shows the Android Studio interface with the following details:

- Project Structure:** Shows the project structure under the `app` folder, including `manifests`, `java`, and `res` directories.
- Code Editor:** Displays the `Competition.java` file with the following code:

```

public class Competition {
    public ArrayList<Competeable> event;
    private int maxNumOfCompetitors;

    public Competition(int maxNumOfCompetitors) {
        this.maxNumOfCompetitors = maxNumOfCompetitors;
        this.event = new ArrayList<>();
    }

    public void awardMedals() {
        Collections.sort(event, new SortBySkill());
        event.get(0).addMedal(MedalType.GOLD);
        event.get(1).addMedal(MedalType.SILVER);
        event.get(2).addMedal(MedalType.BRONZE);
        ArrayList<Competeable> podium = new ArrayList<>();
        Competeable winningAthletes = event.get(0);
        while (podium.size() < 3) {
            for (Competeable competitor : event) {
                if (competitor.getSkillLevel() > winningAthletes.getSkillLevel())
                    winningAthletes = competitor;
            }
            podium.add(winningAthletes);
            event.remove(winningAthletes);
        }
        podium.get(0).addMedal(MedalType.GOLD);
        podium.get(1).addMedal(MedalType.SILVER);
        podium.get(2).addMedal(MedalType.BRONZE);
    }

    public void addCompetitor(Competeable competitor) {
    }
}

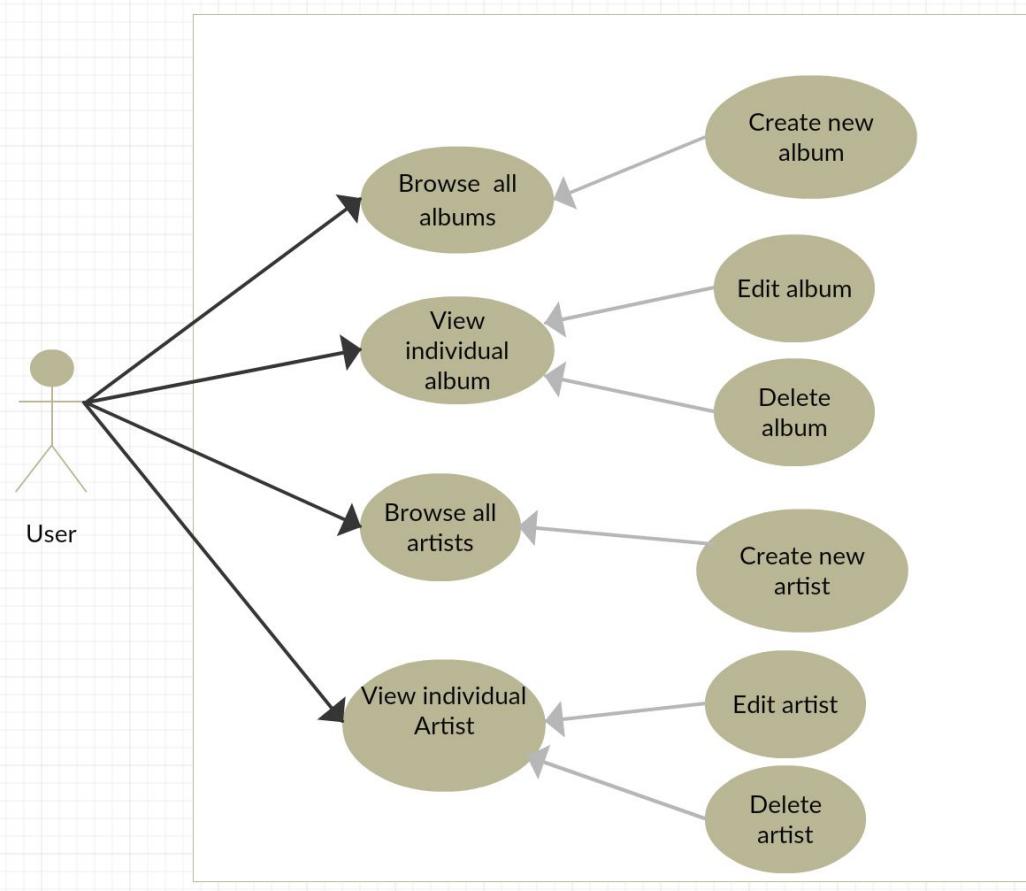
```

- Run Tab:** Shows the `CompetitionTest` run configuration and its results: "All 5 tests passed - 4ms".
- Event Log:** Shows log entries from 17:42, including "Gradle build finished" and "Tests Passed: 5 passed".
- Bottom Status Bar:** Shows "Tests Passed: 5 passed (moments ago)".

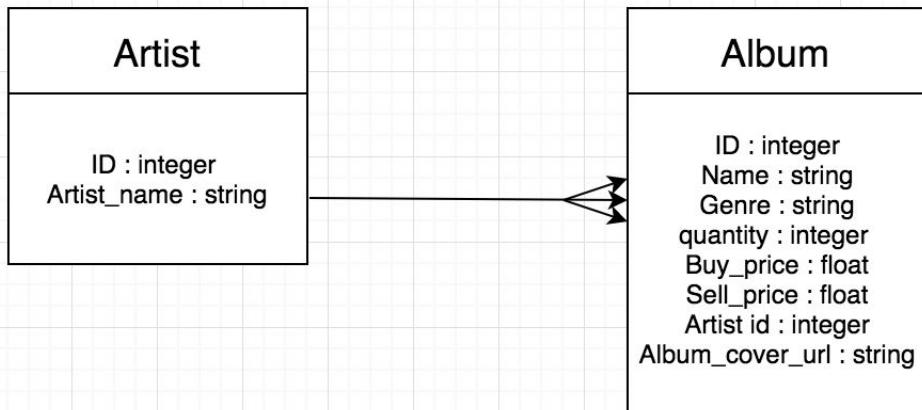
## Week 5

A.D 1

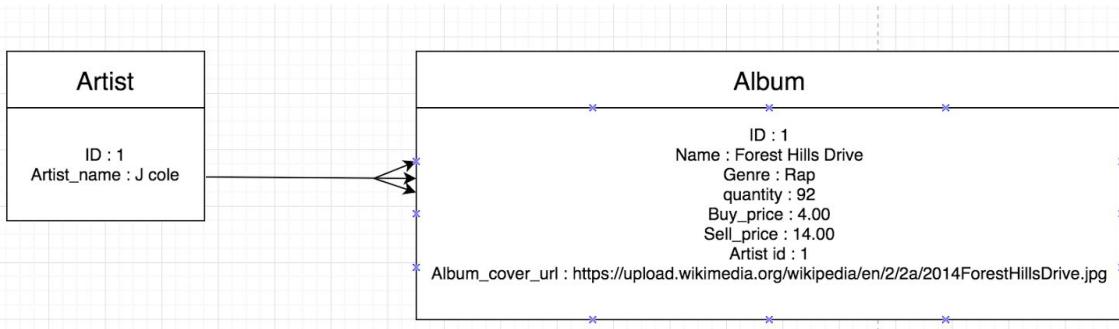
## Keith's record Store



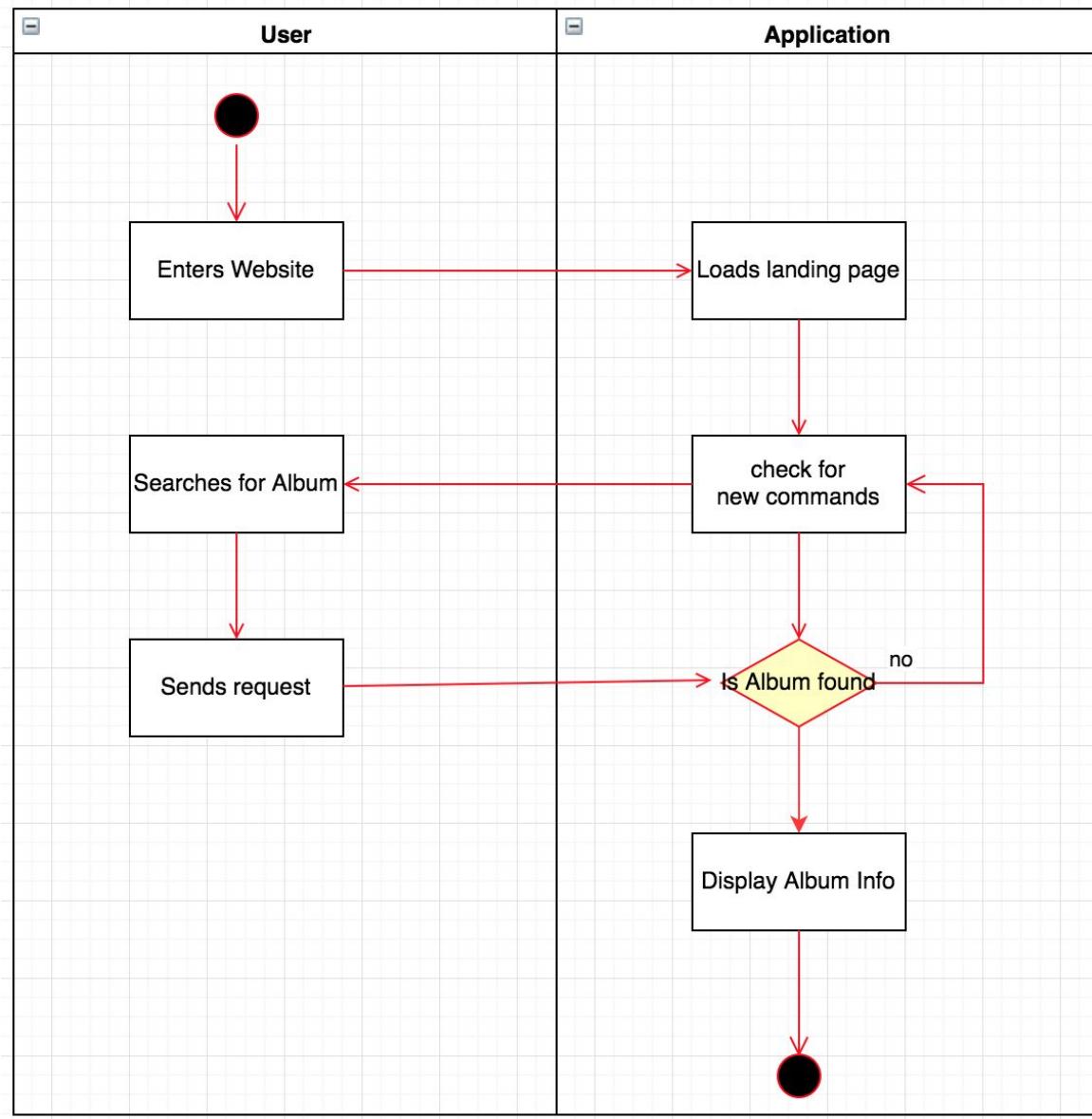
A.D 2



A.D 3



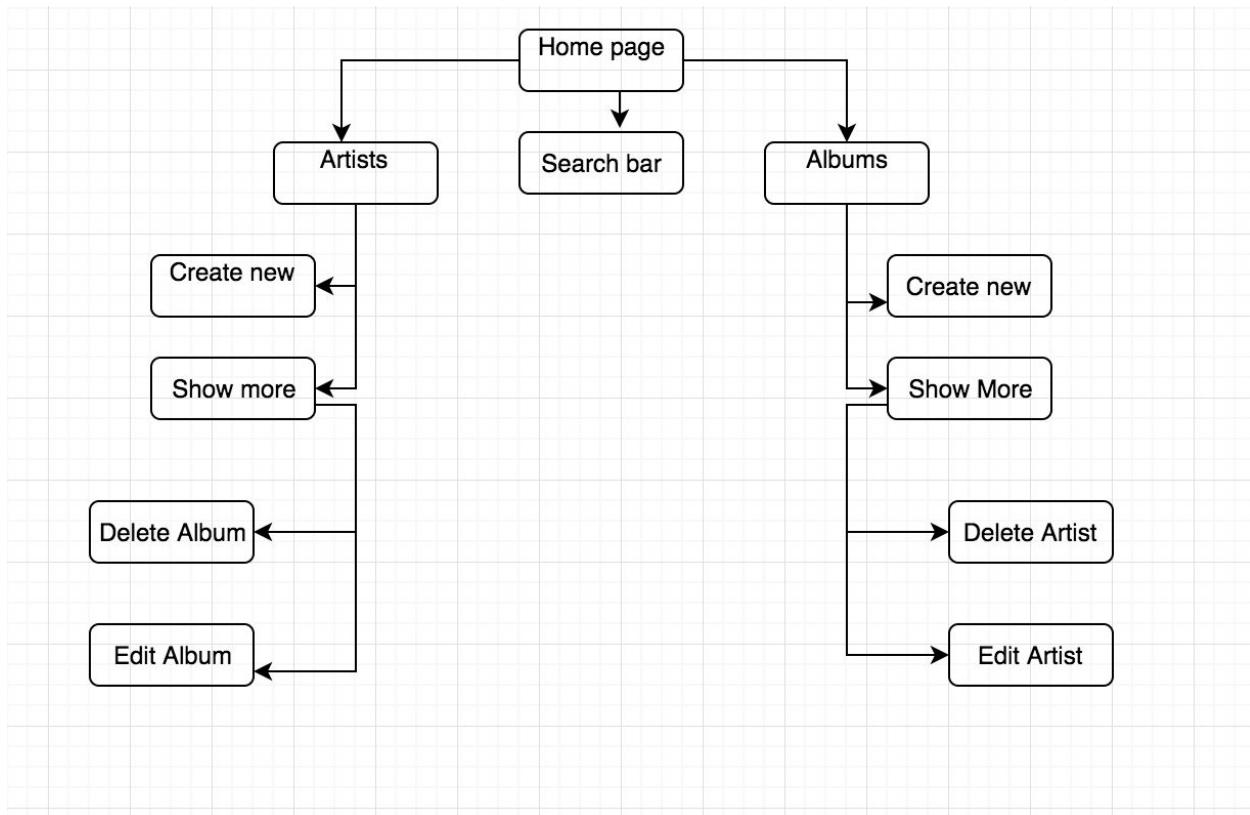
A.D 4



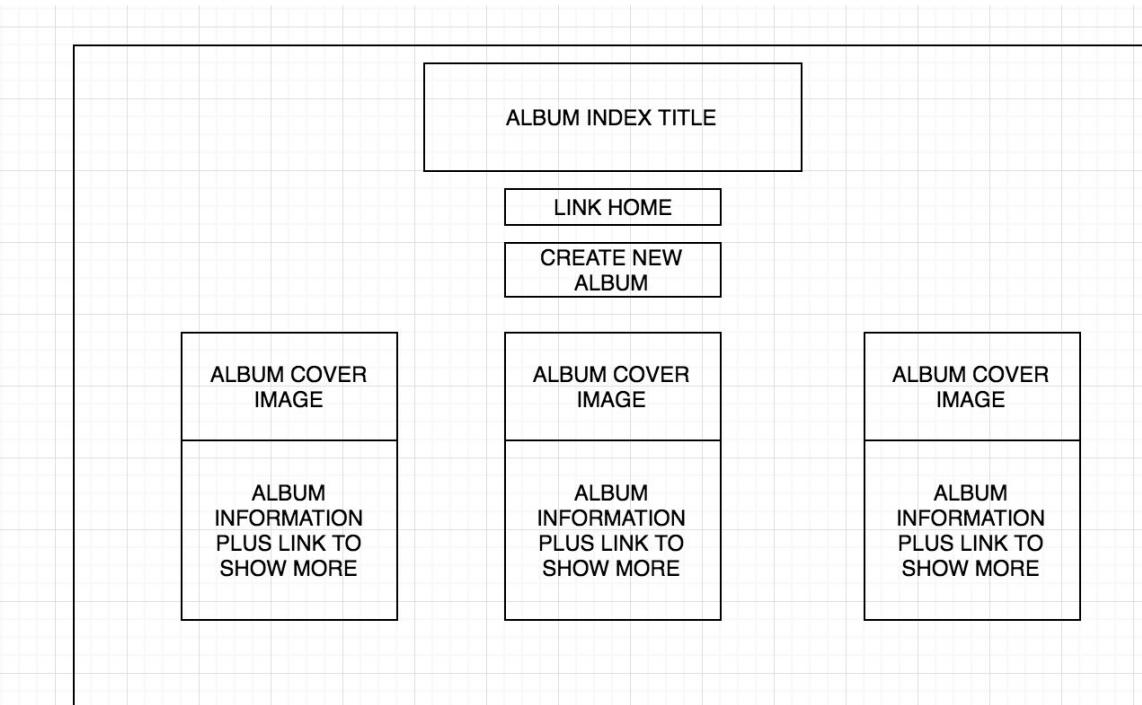
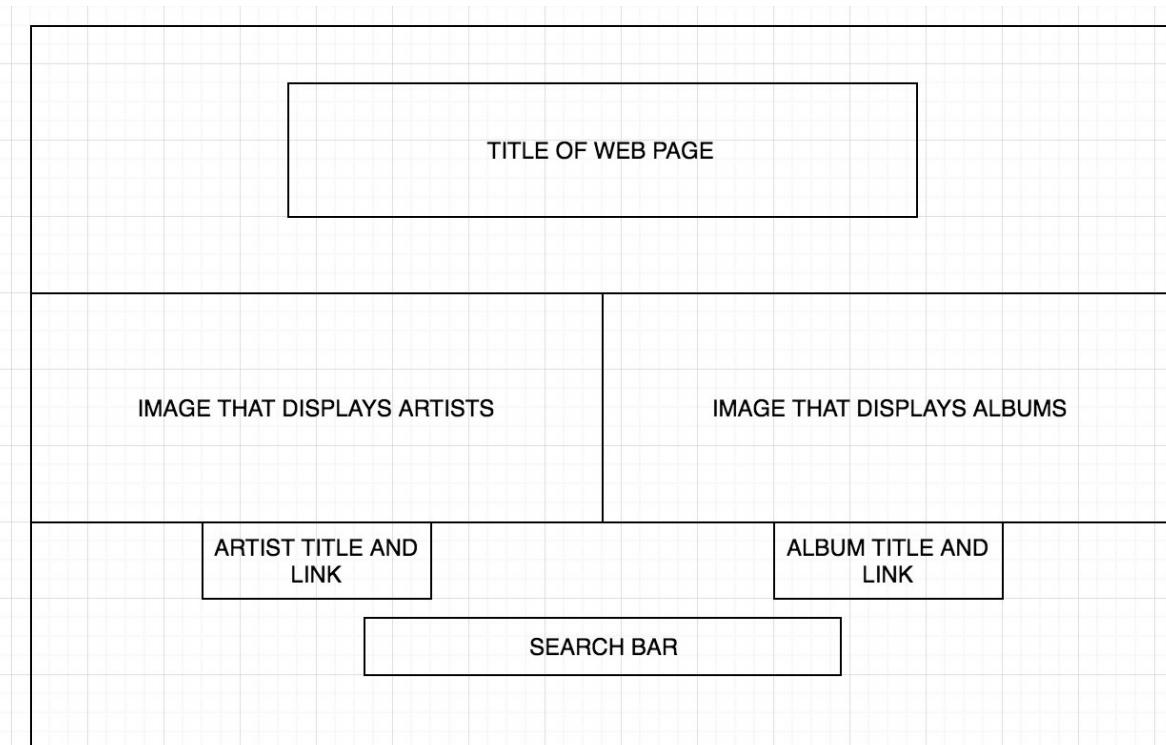
## A.D 6

Constraints	Possible effect of constraint	Details
Hardware and software platforms	Website design is not responsive. Only usable on a desktop. This will hinder the amount of devices that can run the website as intended and ergo contract the user base due to users expecting the website to be used cross platform	Time constraints did not allow for a resign of the CSS to make it functional on devices other than a desktop.
Performance requirements	The search bar requires you to enter the name perfectly (case sensitive), offering no suggestions if you get it close/wrong. This limits the usefulness of the search bar to the point where it's not usable by someone who doesn't know the data	Time constraints limited the ability to go and refactor and improve the search function however, it will be a quick fix. The app is also only in use by the owner of the record store meaning good knowledge of the data stored.
Persistent storage and transactions	The database is not run externally therefore this could lead to issues with data corruption with undedicated machines taking care of storing the data. This could lead to having to recover data and therefore significantly increase costs instead of only minorly increasing costs by implementing an external database	No budget to rent a server.
Budgets	There was no budget used in this project	Personal project for the course of codeclan.
Time	Time was a limiting factor with this project as there was only 6 days to complete it. Advanced functionality suffered from this. The lack of functionality could cause a domino effect and the product will have less user uptake due to competing inventory management apps. More time would allow for more time for development therefore a better product and more profit	Advanced functionality is not needed for the app to still be useful and the advanced functions may end up making the app heavier and cluttered.

P 5



P 6



P 10

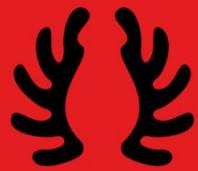
```
Def calculate_stock_level(album_quantity)
    If the album_quantity is lower than 9 then output low
    Else if the album quantity is equal to or more than 10 output high
    End
End
```

P 13



# HOME

# ALBUMS



qwerty

kyle

Buy price £1.0

Sell price £1.5

Stock Quantity 1

Markup percentage 50.0%

[Edit Album Details](#)

[Delete Album](#)

# NEW ALBUM

## HOME

## ALBUMS

Album Title  
qwerty

Album Artist  
kyle

Genre  
music

Quantity  
1

Album Buy Price  
1.00

Album Sell Price  
1.50

Album cover URL  
[imgur.com/Rf7b9FJ.png](https://imgur.com/Rf7b9FJ.png)

[Add New Album](#)



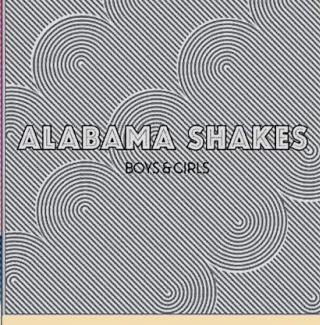
YESTERDAY'S GONE

AN ALBUM BY  
LOYLE CARNER

Yesterdays Gone  
Loyle Carner  
Rap

Stock level: Medium

[Show More](#)



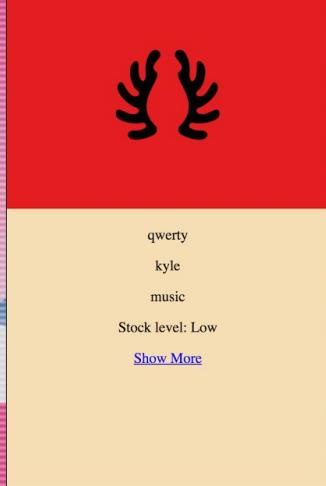
ALABAMA SHAKES

BOYS & GIRLS

Boys and Girls  
Alabama Shakes  
Alternate Rock

Stock level: Medium

[Show More](#)



qwert

kyle

music

Stock level: Low

[Show More](#)

# Keith's Record Store

The homepage features a large banner at the top with the store's name in red and blue. Below the banner are two images: one of a person performing on stage in front of a large crowd, and another showing rows of vinyl records on shelves. A portrait of a smiling man is in the top right corner. The background has a pink and white striped pattern.

Artists

Albums

Forest Hills Drive|

## ALBUMS

The album page has a pink and white striped background. It features a central image of a man sitting on a ledge, with the text "2014 FOREST HILLS DRIVE" above him. Below the image is a yellow box containing album details.

Forest Hills Drive  
J cole  
Buy price £4.0  
Sell price £14.0  
Stock Quantity 92  
Markup percentage 250.0%

[Edit Album Details](#) [Delete Album](#)

## CODING EXERCISE TESTING TASK A

### Week 6

#### I.T 7

The screenshot shows the Android Studio interface with the code editor open to `Martian.java`. The code implements the `Walkable` interface with a name of "Martian".

```
1 package com.example.kylemiller.poly;
2
3 /**
4  * Created by kylemiller on 18/09/2017.
5 */
6
7 public class Martian implements Walkable {
8     private String name;
9     private int age;
10
11     public Martian(String name, int age) {
12         this.name = name;
13         this.age = age;
14     }
15
16     public String getName() { return name; }
17
18     public int getAge() { return age; }
19
20     public String walk() { return "wow look at me, walking with 10 legs"; }
21
22 }
23
24
25
26
27
28 }
```

The code editor has syntax highlighting and code completion suggestions visible. The project structure on the left shows the package `com.example.kylemiller.poly` containing `Human`, `Martian`, `UniversalGames`, and `Walkable`.

The screenshot shows the Java code for the `UniversalGames` class in the `com.example.kylemiller.poly` package. The code includes a constructor, a getter method, and an add method. A Javadoc-style comment is present at the top. The code editor has syntax highlighting and code completion suggestions visible.

```
1 package com.example.kylemiller.poly;
2
3 import java.util.ArrayList;
4
5 /**
6  * Created by kylemiller on 18/09/2017.
7 */
8
9 public class UniversalGames {
10
11     private ArrayList<Walkable> walkers;
12
13     public UniversalGames(ArrayList<Walkable> walkers) {
14         this.walkers = walkers;
15     }
16
17     public ArrayList<Walkable> getWalkers() {
18         return walkers;
19     }
20
21     public void addWalkers(Walkable thing){
22         walkers.add(thing);
23     }
24 }
25
```

The interface bar at the bottom shows tabs for Monitor, TODO, Event Log, Gradle Console, and other developer tools. The Gradle and Android Model tabs are also visible on the right side of the interface.

```
Walkable
1 package com.example.kylemiller.poly;
2
3 /**
4 * Created by kylemiller on 18/09/2017.
5 */
6
7 public interface Walkable {
8     String walk();
9 }
10
```

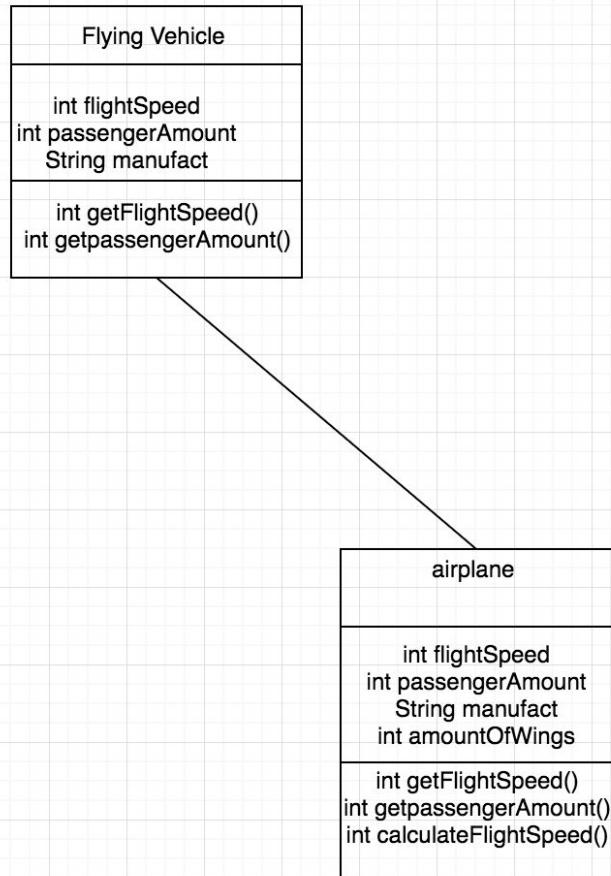
onitor TODO Event Log Gradle Console  
7:18 LF UTF-8 Context: <no context>

```
Human
1 package com.example.kylemiller.poly;
2
3 /**
4 * Created by kylemiller on 18/09/2017.
5 */
6
6 public class Human implements Walkable {
7     private String name;
8     private int hairFollicles;
9     private int numberOfFingers;
10
11    public Human(String name, int hairFollicles, int numberOfFingers) {
12        this.name = name;
13        this.hairFollicles = hairFollicles;
14        this.numberOfFingers = numberOfFingers;
15    }
16
17    public String getName() {
18        return name;
19    }
20
21    public int getHairFollicles() {
22        return hairFollicles;
23    }
24
25    public int getNumberOfFingers() {
26        return numberOfFingers;
27    }
28
29    public String walk(){
30        return "wowee look at me, walking... with no hands!";
31    }
32
33}
34
35
```

Monitor TODO Event Log Gradle Console  
33:5 LF UTF-8 Context: <no context>

Week 7

A.D 5



I.T 1

Project SDK is not defined Setup SDK

```
1 package com.example.kylemiller.myapplication;
2
3 /**
4 * Created by kylemiller on 18/09/2017.
5 */
6
7 public class FlyingVehicle {
8     public int flightSpeed;
9     public int passengerAmount;
10    private String manufacturer;
11
12    public FlyingVehicle(int flightSpeed, int passengerAmount, String manufacturer) {
13        this.flightSpeed = flightSpeed;
14        this.passengerAmount = passengerAmount;
15        this.manufacturer = manufacturer;
16    }
17
18    public int getFlightSpeed() { return flightSpeed; }
19
20    public int getPassengerAmount() { return passengerAmount; }
21
22    public String getManufacturer() { return manufacturer; }
23
24    public void setManufacturer(String manufacturer) { this.manufacturer = manufacturer; }
25
26
27
28
29
30
31
32
33
34
35
36 }
```

Work/PDA is under Git, but is not registered in the Settings. // Add root. Configure Ignore (a minute ago)

1:1 LF# UTF-8# Context: <no context>

Event Log

## I.T 2

```
/*
 * Created by kylemiller on 18/09/2017.
 */

public class FlyingVehicle {
    public int flightSpeed;
    public int passengerAmount;
    private String manufacturer;

    public FlyingVehicle(int flightSpeed, int passengerAmount, String manufacturer) {
        this.flightSpeed = flightSpeed;
        this.passengerAmount = passengerAmount;
        this.manufacturer = manufacturer;
    }

    public int getFlightSpeed() {
        return flightSpeed;
    }

    public int getPassengerAmount() {
        return passengerAmount;
    }

    public String getManufacturer() {
        return manufacturer;
    }

    public void setManufacturer(String manufacturer) {
        this.manufacturer = manufacturer;
    }
}

public class Airplane extends FlyingVehicle {

    int amountOfWings;

    public Airplane(int flightSpeed, int passengerAmount, String manufacturer, int amountOfWings) {
        super(flightSpeed, passengerAmount, manufacturer);
        this.amountOfWings = amountOfWings;
    }

    public int calculateFlightSpeedWithPassengers() {
        int flightspeed = this.flightSpeed / this.getPassengerAmount();
        return flightspeed;
    }
}
```

```

public class AirplaneTest {
    Airplane airplane;

    @Before
    public void setup(){
        airplane = new Airplane(2, 3 , "bob", 10);
    }

    @Test
    public void testCalculatethingy(){
        assertEquals(airplane.calculateFlightSpeedWithPassengers(), 3);
    }
}

```

The screenshot shows an IDE interface with a code editor window titled "Airplane.java x". The code is as follows:

```

1 package com.example.kylemiller.myapplication;
2
3 /**
4 * Created by kylemiller on 18/09/2017.
5 */
6
6 public class Airplane extends FlyingVehicle {
7
8     int amountOfWings;
9
10
11     public Airplane(int flightSpeed, int passengerAmount, String manufacturer, int amountOfWings) {
12         super(flightSpeed, passengerAmount, manufacturer);
13         this.amountOfWings = amountOfWings;
14     }
15
16     public int calculateFlightSpeedWithPassengers() {
17         int flightspeed = this.flightSpeed / this.getPassengerAmount();
18         return flightspeed;
19     }
20
21 }
22
23
24
25
26

```

The IDE interface includes a toolbar at the top, a status bar at the bottom, and several toolbars and panes on the right side.

## P 11

The screenshot shows a GitHub repository page for 'Kylemiller995 / AndroidCardGame'. The page includes a header with tabs for Pull requests, Issues, Marketplace, and Explore. Below the header, there's a section for 'Code' with links for Issues (0), Pull requests (0), Projects (0), Wiki, Settings, and Insights. A note says 'No description, website, or topics provided.' There's a 'Edit' button and a 'Add topics' link. Below this, there's a summary bar showing 22 commits, 1 branch, 0 releases, and 1 contributor. A dropdown menu for the branch 'master' is open, showing 'New pull request'. A commit history lists one commit from 'Kylemiller995' changing a win game checker, made 6 days ago. At the bottom, there's a button to 'Add a README'.

No description, website, or topics provided.

Code Issues 0 Pull requests 0 Projects 0 Wiki Settings Insights

22 commits 1 branch 0 releases 1 contributor

Branch: master New pull request

Kylemiller995 change win game checker Latest commit 6257b88 6 days ago

App/MyApplication change win game checker 6 days ago

Add a README

P 12

# CardGame

BLACK *JACK*



PLAY GAME

PROFILES

HIGHSCORES



LTE



3:34



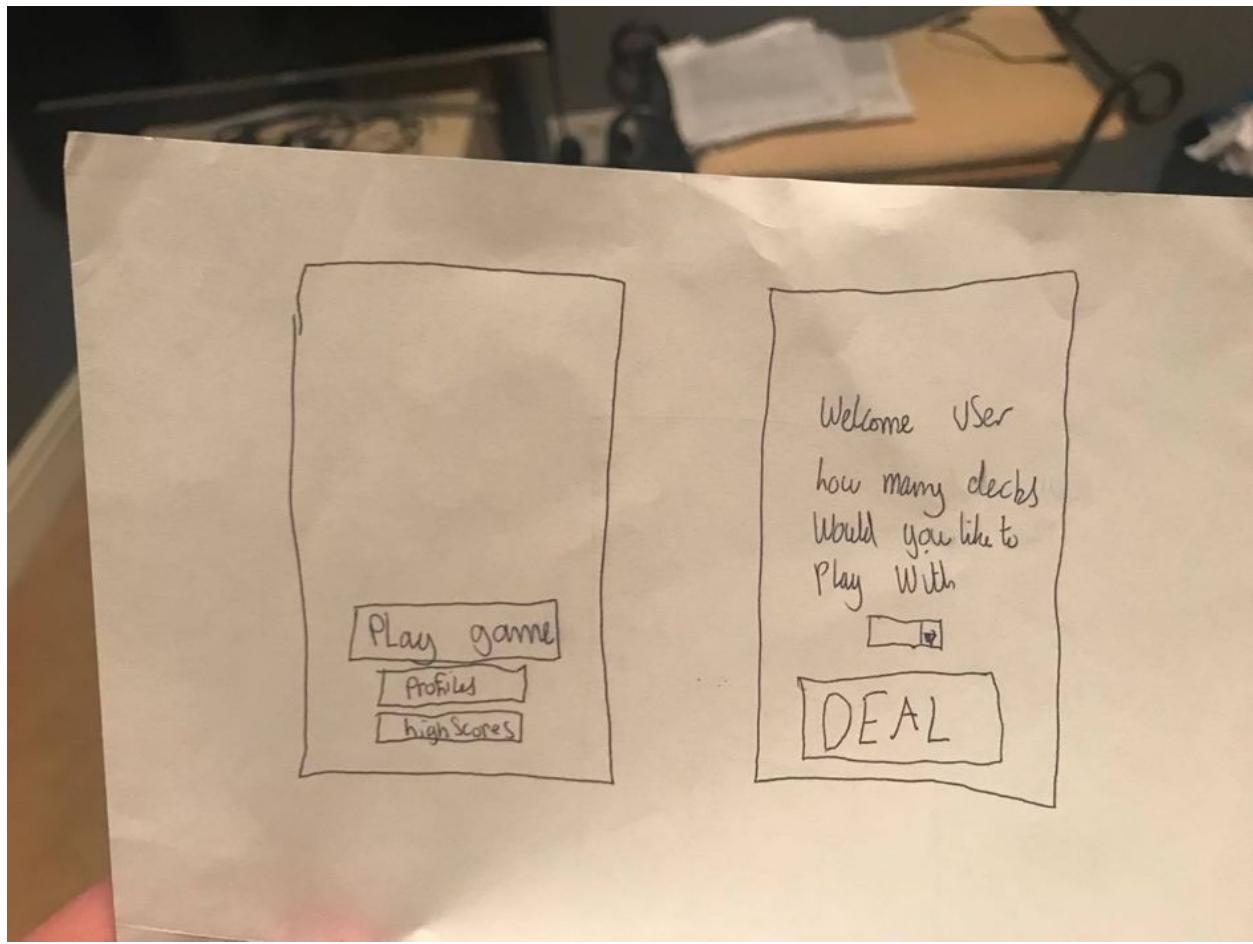
CardGame

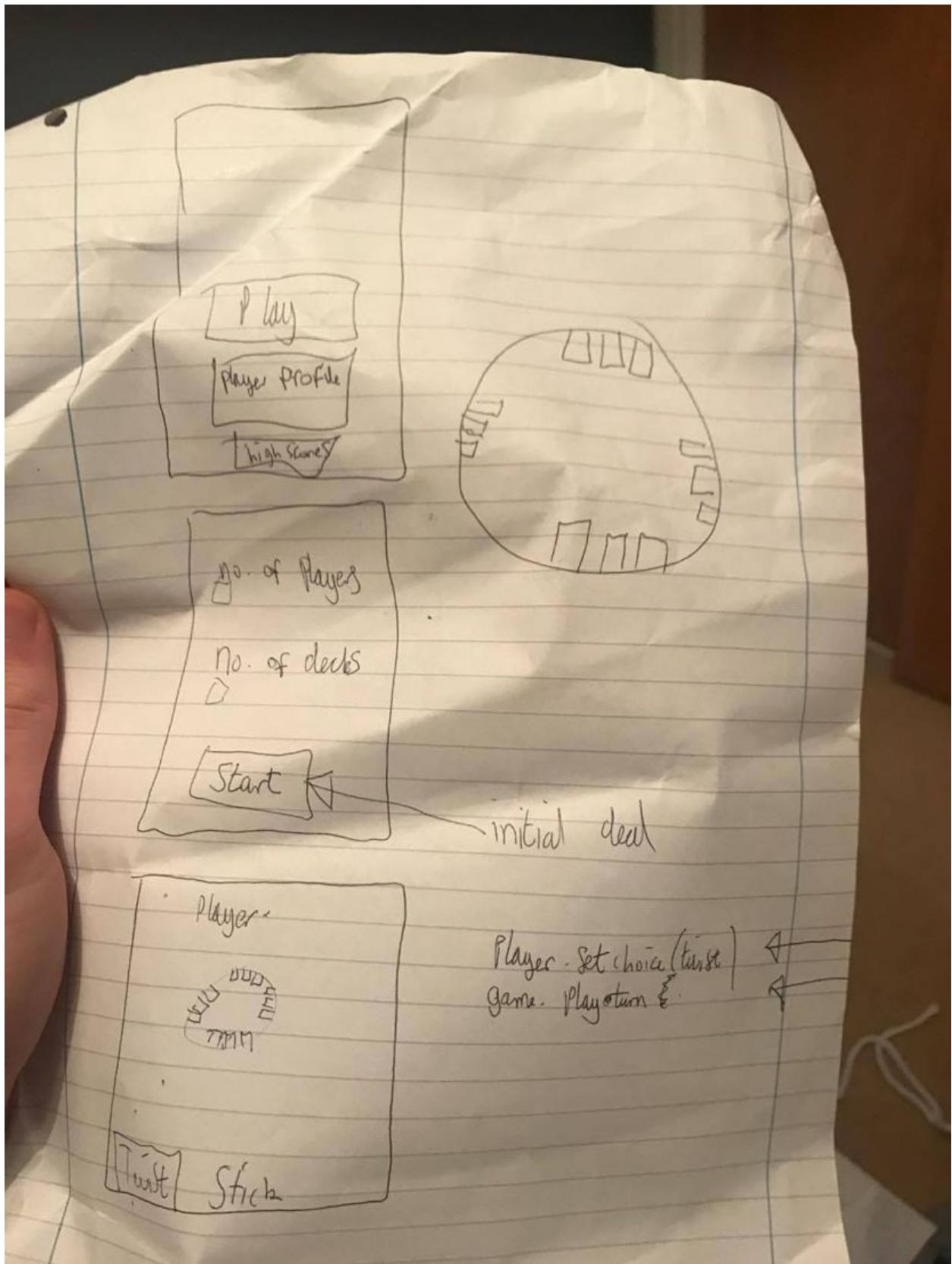


choose amount of  
decks to play with

|1

DEAL CARDS





## Week 10

### P 18

BlackjackGame.java - MyApplication - [~/Codeclan\_Work/project\_2/App/MyApplication]

```

public void dealerTurn() {
    Participant dealer = gameTable.get(1);
    int handValue = sumHand(dealer);
    while (handValue < 14) {
        blackjackDealer.deal(dealer);
        handValue += sumHand(dealer);
    }
    //Bug where if dealer has two aces he can be below 14 hand value and stick
    public int sumHand(Participant player) {
        ArrayList<Card> hand = player.getHand();
        int sum = 0;
        int aceCounter = 0;
        for (Card card : hand) {
            sum += card.getCardValue().getNumericValue();
            if(card.getCardValue() == CardValue.ACE){
                aceCounter++;
            }
        }
        if(aceCounter > 1){
            return sum - 10;
        }
        return sum;
    }
}

```

Run: app BlackjackGameTest

13 tests done: 1 failed - 54ms

```

"Applications/Android Studio.app/Contents/jre/jdk/Contents/Home/bin/java" ...
junit.framework.AssertionFailedError:
Expected :22
Actual   :12
<Click to see differences>

at junit.framework.Assert.fail(Assert.java:57)
at junit.framework.Assert.failNotEquals(Assert.java:329)
at junit.framework.Assert.assertEquals(Assert.java:78)
at junit.framework.Assert.assertEquals(Assert.java:234)
at junit.framework.Assert.assertEquals(Assert.java:241)
at com.example.kylemiller.cardgame.BlackjackGameTest.checkAceCheker(BlackjackGameTest.java:151) <28 internal calls>

Process finished with exit code 255

```

Tests Failed: 12 passed, 1 failed (2 minutes ago)

Event Log Gradle Console

52.2 LF: UTF-8 Context: <no context>

BlackjackGameTest (com.example.kyle 54ms)

```

@Test
public void checkAceCheker() {
    Card card1 = new Card(CardSuit.CLUBS,CardValue.ACE);
    Card card2 = new Card(CardSuit.CLUBS,CardValue.ACE);
    HumanPlayer humanPlayer = new HumanPlayer();
    humanPlayer.addCard(card1);
    humanPlayer.addCard(card2);
    assertEquals(blackjack.sumHand(humanPlayer), 12);
}
}


```

Run: app BlackjackGameTest

13 tests done: 1 failed - 54ms

```

"Applications/Android Studio.app/Contents/jre/jdk/Contents/Home/bin/java" ...
junit.framework.AssertionFailedError:
Expected :22
Actual   :12
<Click to see differences>

at junit.framework.Assert.fail(Assert.java:57)
at junit.framework.Assert.failNotEquals(Assert.java:329)
at junit.framework.Assert.assertEquals(Assert.java:78)
at junit.framework.Assert.assertEquals(Assert.java:234)
at junit.framework.Assert.assertEquals(Assert.java:241)
at com.example.kylemiller.cardgame.BlackjackGameTest.checkAceCheker(BlackjackGameTest.java:151) <28 internal calls>

Process finished with exit code 255

```

Tests Failed: 12 passed, 1 failed (moments ago)

Event Log Gradle Console

175.1 LF: UTF-8 Context: <no context>

BlackjackGameTest.java - MyApplication - [~/Codeclan\_Work/project\_2/App/MyApplication]

```

    public void checkAceCheker(){
        Card card1 = new Card(CardSuit.CLUBS,CardValue.ACE);
        Card card2 = new Card(CardSuit.CLUBS,CardValue.ACE);
        humanPlayer.addCard(card1);
        humanPlayer.addCard(card2);
        assertEquals(blackJack.sumHand(humanPlayer), 12);
    }
}

```

All 13 tests passed - 6ms

Process finished with exit code 0

Help improve Android Studio by sending us: Please click I agree if you want to help make Android Studio better or I don't agree otherwise... ↴

BlackjackGameTest.java - MyApplication - [~/Codeclan\_Work/project\_2/App/MyApplication]

```

    public void checkAceCheker(){
        Card card1 = new Card(CardSuit.CLUBS,CardValue.ACE);
        Card card2 = new Card(CardSuit.CLUBS,CardValue.ACE);
        humanPlayer.addCard(card1);
        humanPlayer.addCard(card2);
        assertEquals(blackJack.sumHand(humanPlayer), 12);
    }
}

```

All 13 tests passed - 7ms

Process finished with exit code 0

Help improve Android Studio by sending us: Please click I agree if you want to help make Android Studio better or I don't agree otherwise... ↴

## Week 11

P16



localhost:3000/

Apps

Gmail

Messages

Clothes

Cooking

Bl

Electric India



## Electric India

### MALTS

- Extra Pale
- Munich
- Wheat

### HOPS

- Amarillo
- Nelson Sauvin
- Amarillo
- Peppercorns

```

var app = function(){
  var url = "https://api.punkapi.com/v2/beers"
  makeRequest(url);
}

var makeRequest = function (url) {
  var request = new XMLHttpRequest();
  request.open("GET", url)
  request.addEventListener("load", function(){
    var beers = JSON.parse(this.responseText)
    // handleBeers(beers)
    handleBeerDrop(beers)
  })
  request.send()
}

// var handleBeers = function (beers) {
//   var ulElement = document.getElementById('list')
//   beers.forEach(function(beer){
//     var listItem = document.createElement('li')
//     listItem.innerText = beer.name
//     list.appendChild(listItem)
//     var image = document.createElement('img')
//     image.src = beer.image_url
//     image.classList.add('img');
//     listItem.appendChild(image)
//   })
// }

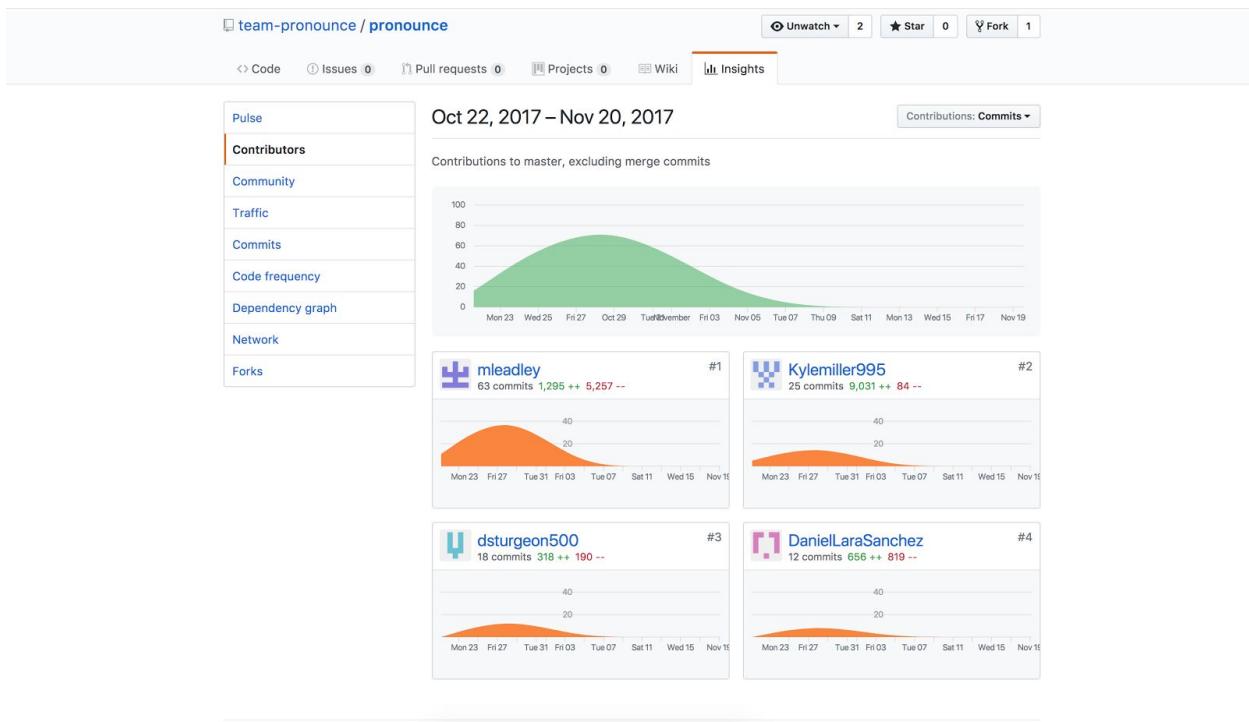
var handleBeerDrop = function (beers) {
  addToDrop(beers)
}

var addToDrop = function (beers) {
  var beerDrop = document.getElementById('beer-drop')
  handleBeerDropChange(beerDrop, beers)
  beers.forEach (function (beer) {
    var option = document.createElement('option')
    option.innerText = beer.name
    option.value = beer
    beerDrop.appendChild(option)
  })
}

```

Week 13

P 1



P 2

## Educational App

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.

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:

- 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

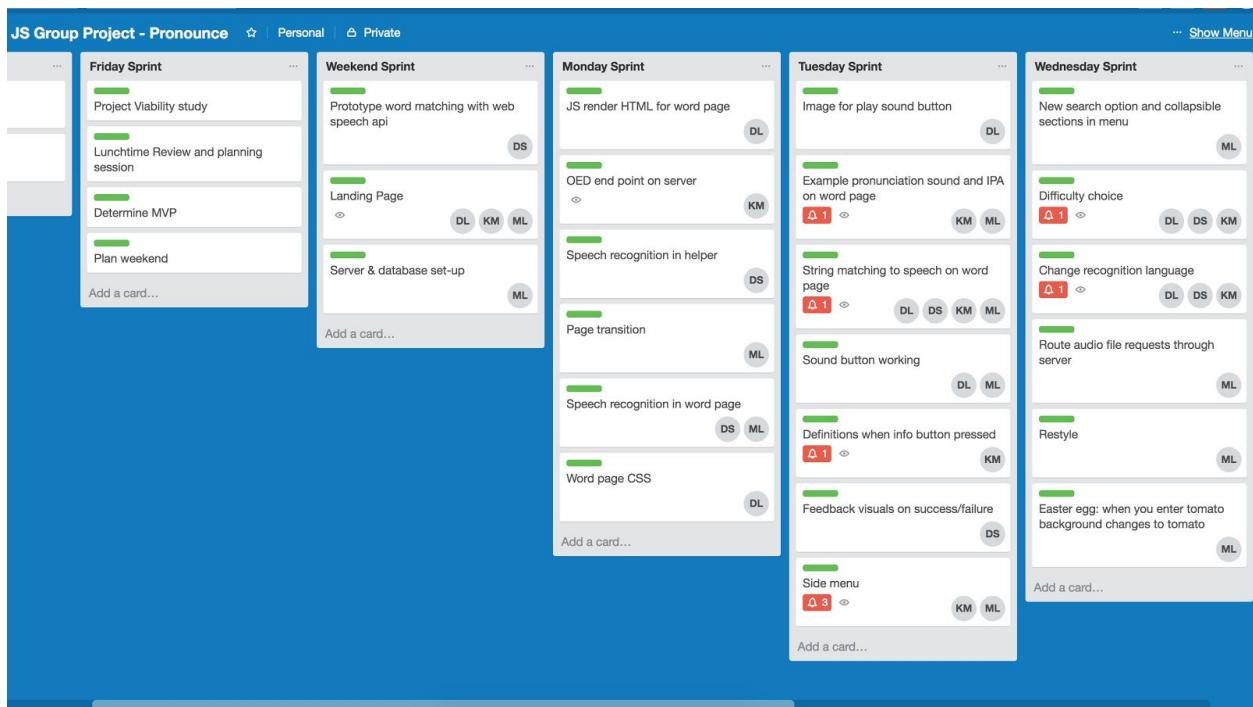
## MVP

- 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

Some samples of existing apps for inspiration:

- <http://chemistryset.chemheritage.org/#/>
- <http://www.royalmailheritage.com/main.php>
- <http://education.iceandsky.com/>
- <http://histography.io> - may only work in Safari
- <http://worldpopulationhistory.org/map/1838/mercator/1/0/24/>

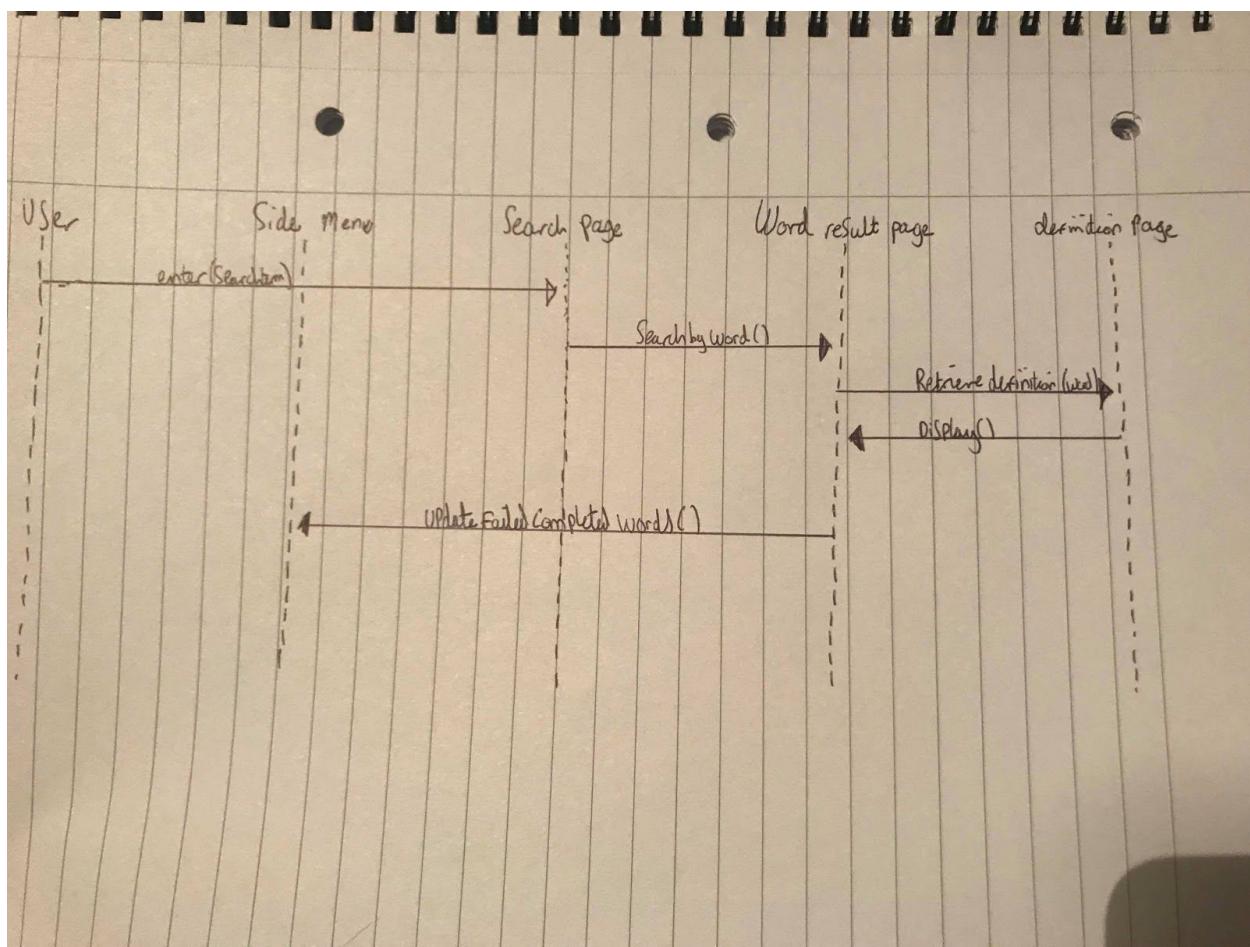
## P 3



## P 4

Acceptance Criteria	Expected output	pass/fail
User can access side menu of words	List of words and settings are displayed once hamburger button is pressed	Pass
User can pass and fail words.	If a user fails a word it should go into failed words and if passed go into passed words and should be able to swap between after passing/failing	Pass
User can train words	Confidence level of how correct the word a user has inputted should display different levels of correctness depending on confidence level	Pass
User can get definitions of words	User should be able to press a definition button which queries oxford dictionary api to display definition of selected word	Pass

P 7



Initialization

: USER

  |  
  1: Send Word()

: Main Search

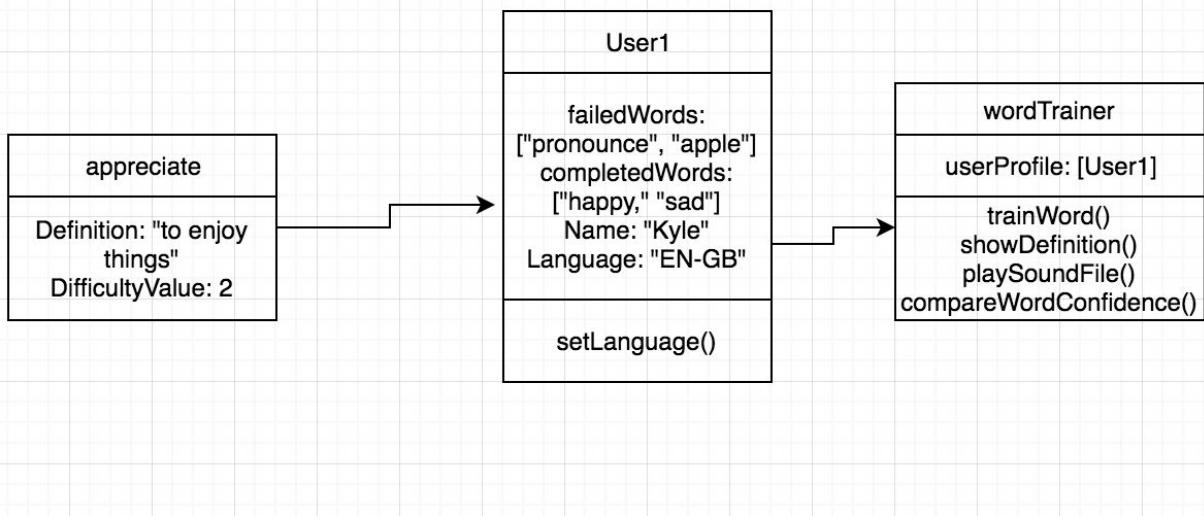
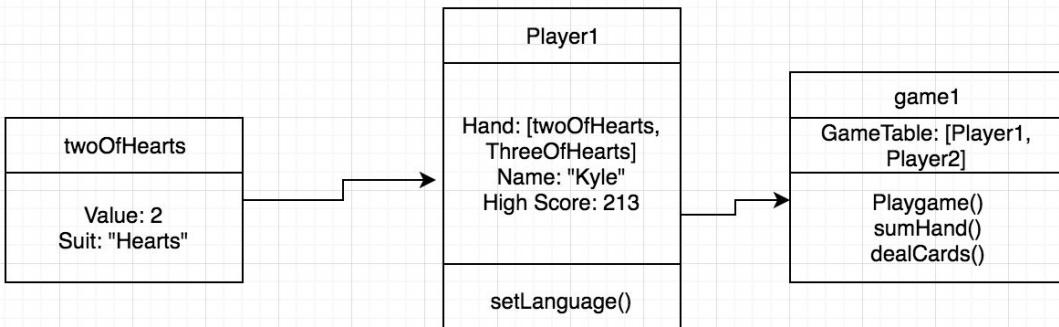
  |  
  2: Validate Search()

: Results

  |  
  3: Update View With Results()

End process

P 8



P 9

```

public Participant checkBlackjack() {
    for (Participant player : gameTable) {
        int handValueSum = sumHand(player);
        if (handValueSum == 21 || player.getHand().size() >= 5) {
            return player;
        }
    }
    return null;
}

```

Used This algorithm to determine if a players hand had a int value of over 21 or whether they had 5 cards in hands. Both of these are win conditions and is used to end a game early if either are reached.

```

public int sumHand(Participant player) {
    ArrayList<Card> hand = player.getHand();
    int sum = 0;
    int aceCounter = 0;
    for (Card card : hand) {
        sum += card.getCardValue().getNumericValue();
        if(card.getCardValue() == CardValue.ACE){
            aceCounter += 1;
        }
    }
    if(aceCounter > 1){
        return sum - 10;
    }
    return sum;
}

```

Used this algorithm to determine a winner for the game. This algorithm would sum the hand of a player and make sure if there was two aces in a player's hand, one would default to 1 int value, as aces at 11 int value would obviously always bust a player.

Word must switch from failed to passed	Failed	Rendered page again after the word passed	Passed
User must be able to search for words	Failed	OED API queried from server side instead of from client	Passed
User must be able to swap background colours at specific words	Failed	Overwrote CSS through giving elements Individual ID's	Passed
Changing difficulty settings must change confidence level pass rate	Failed	Changed confidence level before passing it into the confidence rate handler into a switch statement	Passed
Definitions should be able to be hidden after opening again	Failed	Used a boolean to handle state changes	Passed
Sound file should play for targeted word.	Failed	Used Web Audio API to output sound instead of trying to interact with sound through own code.	Passed