Triassic Park
Spring Boot API

Hello!

My name is Jools Arts, and I'm here to walk you through a demonstration of my paleontology themed Spring Boot API

I hope you enjoy the presentation!

You can find me at jools.arts@gmail.com


1. Introduction

Triassic Park

Welcome to Triassic Park!

A platform for documenting, sharing, and comparing dinosaur discoveries from around the world

MENU HOME CREATE READ UPDATE DELETE

Create a Paleontologist

Status:

Create a paleontologist

Paleontologist Information

Name:

Surname:

EmailAddress:

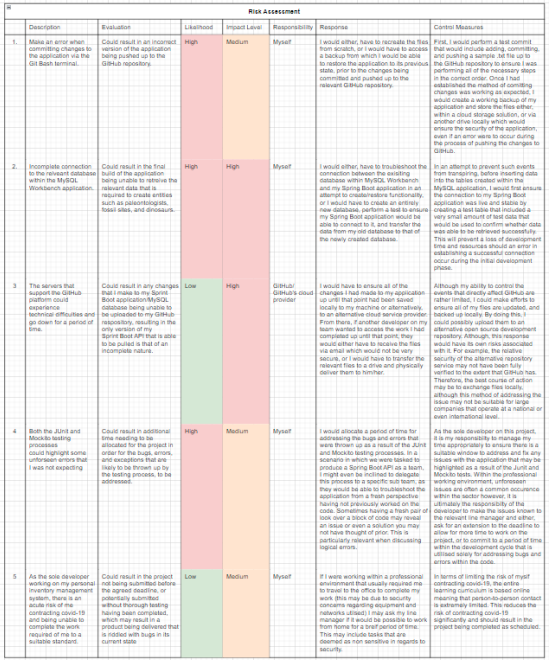
Specialism:

Institution:

Submit

2. Risk Assessment

- Here’s my completed risk assessment!



#	Risk Assessment						
	Description	Evaluation	Likelihood	Impact Level	Responsibility	Response	Control Measures
1.	Make an error when committing changes to the application via the Git Bash terminal.	Could result in an incorrect version of the application being pushed up to the GitHub repository.	High	Medium	Myself	I would either, have to recreate the files from scratch, or I would have to access a backup from which I would be able to restore the application to its previous state, prior to the changes being committed and pushed up to the relevant GitHub repository.	First, I would perform a test commit, that would include adding, committing, and pushing a sample .txt file up to the GitHub repository to ensure I was performing all of the necessary steps in the correct order. Once I had established the method of comitting changes was working as expected, I would create a working backup of my application and store the files either, within a cloud storage solution, or via another drive locally which would ensure the security of the application, even if an error were to occur during the process of pushing the changes to GitHub.
2.	Incomplete connection to the relevant database within the MySQL Workbench application.	Could result in the final build of the application being unable to retrieve the relevant data that is required to create entities such as paleontologists, fossil sites, and dinosaurs.	High	High	Myself	I would either, have to troubleshoot the connection between the existing database within MySQL Workbench and my Spring Boot application in an attempt to create/restore functionality, or I would have to create an entirely new database, perform a test to ensure my Spring Boot application would be able to connect to it, and transfer the data from my old database to that of the newly created database.	In an attempt to prevent such events from transpiring, before inserting data into the tables created within the MySQL application, I would first ensure the connection to my Spring Boot application was live and stable by creating a test table that included a very small amount of test data that would be used to confirm whether data was able to be retrieved successfully. This will prevent a loss of development time and resources should an error in establishing a successful connection occur during the initial development phase.
3	The servers that support the GitHub platform could experience technical difficulties and go down for a period of time.	Could result in any changes that I make to my Spring Boot application/MySQL database being unable to be uploaded to my GitHub repository, resulting in the only version of my Spring Boot API that is able to be pulled is that of an incomplete nature.	Low	High	GitHub/ GitHub’s cloud provider	I would have to ensure all of the changes I had made to my application up until that point had been saved locally to my machine or alternatively, to an alternative cloud service provider. From there, if another developer on my team wanted to access the work I had completed up until that point, they would either have to receive the files via email which would not be very secure, or I would have to transfer the relevant files to a drive and physically deliver them to him/her.	Although my ability to control the events that directly affect GitHub are rather limited, I could make efforts to ensure all of my files are updated, and backed up locally. By doing this, I could possibly upload them to an alternative open source development repository. Although, this response would have its own risks associated with it. For example, the relative security of the alternative repository service may not have been fully verified to the extent that GitHub has. Therefore, the best course of action may be to exchange files locally, although this method of addressing the issue may not be suitable for large companies that operate at a national or even international level.
4	Both the JUnit and Mockito testing processes could highlight some unforseen errors that I was not expecting	Could result in additional time needing to be allocated for the project in order for the bugs, errors, and exceptions that are likely to be thrown up by the testing process, to be addressed.	High	Medium	Myself	I would allocate a period of time for addressing the bugs and errors that were thrown up as a result of the JUnit and Mockito testing processes. In a scenario in which we were tasked to produce a Spring Boot API as a team, I might even be inclined to delegate this process to a specific sub team, as they would be able to troubleshoot the application from a fresh perspective having not previously worked on the code. Sometimes having a fresh pair of look over a block of code may reveal an issue or even a solution you may not have thought of prior. This is particularly relevant when discussing logical errors.	As the sole developer on this project, it is my responsibility to manage my time appropriately to ensure there is a suitable window to address and fix any issues with the application that may be highlighted as a result of the JUnit and Mockito tests. Within the professional working environment, unforeseen issues are often a common occurence within the sector however, it is ultimately the responsibility of the developer to make the issues known to the relevant line manager and either, ask for an extension to the deadline to allow for more time to work on the project, or to commit to a period of time within the development cycle that is utilised solely for addressing bugs and errors within the code.
5	As the sole developer working on my personal inventory management system, there is an acute risk of me contracting covid-19 and being unable to complete the work required of me to a suitable standard.	Could result in the project not being submitted before the agreed deadline, or potentially submitted without thorough testing having been completed, which may result in a product being delivered that is riddled with bugs in its current state	Low	Medium	Myself	If I were working within a professional environment that usually required me to travel to the office to complete my work (this may be due to security concerns regarding equipment and networks utilised) I may ask my line manager if it would be possible to work from home for a brief period of time. This may include tasks that are deemed as non sensitive in regards to security.	In terms of limiting the risk of myself contracting covid-19, the entire learning curriculum is based online meaning that person-to-person contact is extremely limited. This reduces the risk of contracting covid-19 significantly and should result in the project being completed as scheduled.

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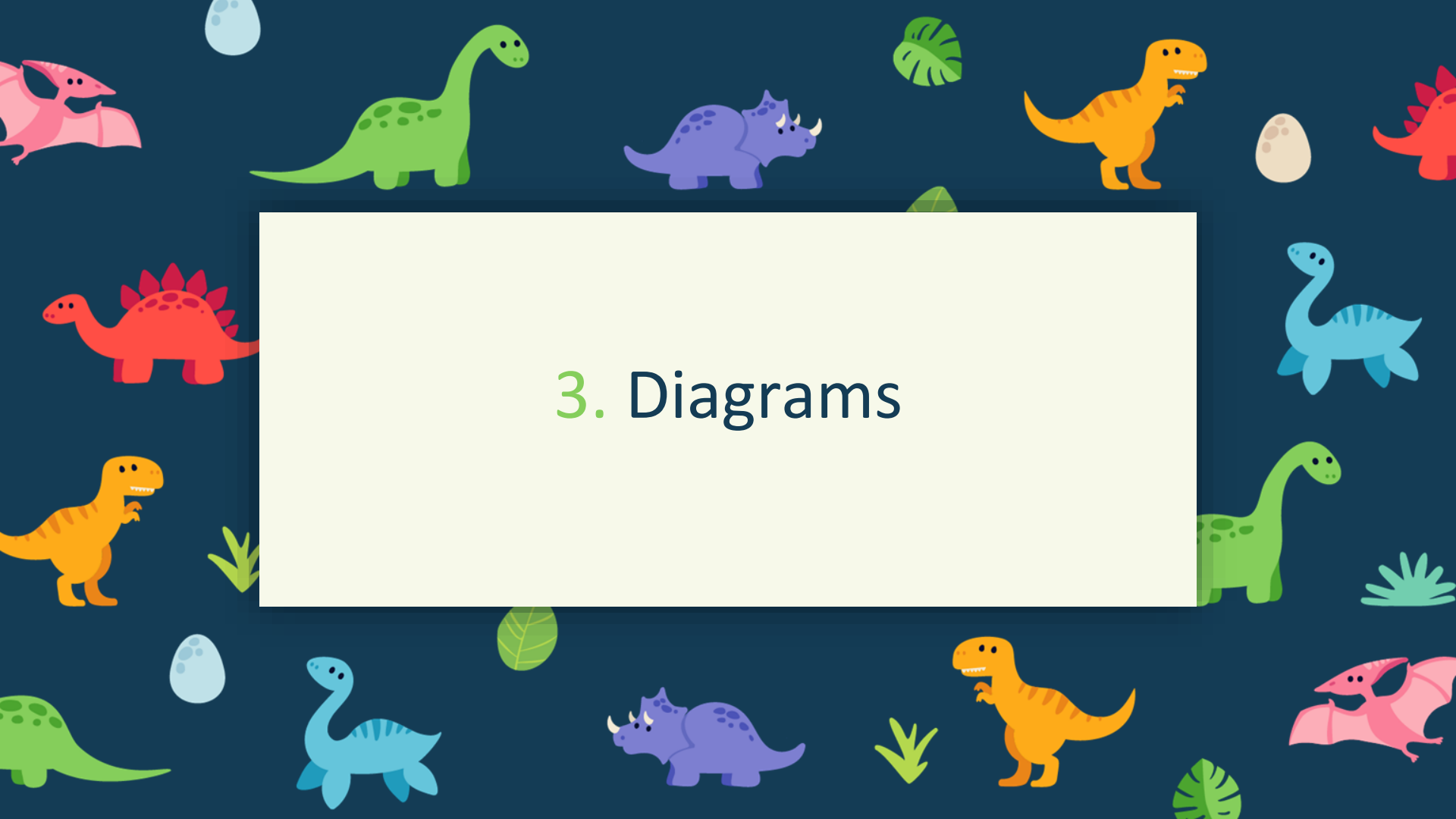
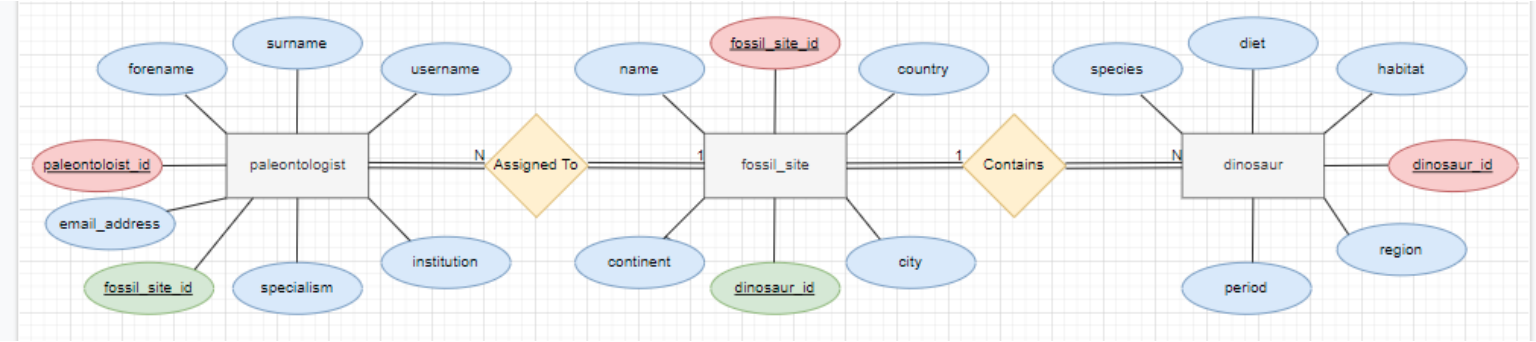
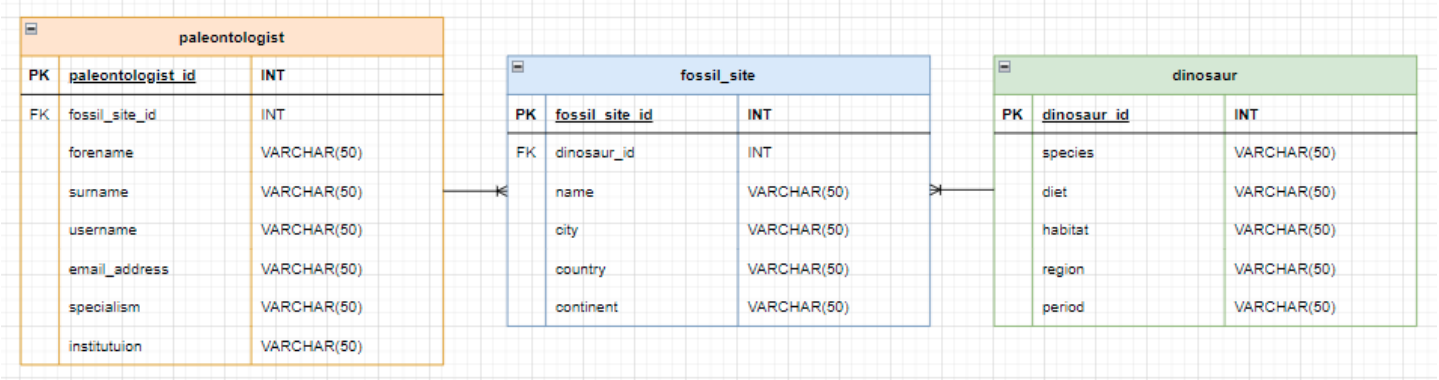
3	The servers that support the GitHub platform could experience technical difficulties and go down for a period of time.	Could result in any changes that I make to my Sprint Boot application/MySQL database being unable to be uploaded to my GitHub respository, resulting in the only version of my Sprint Boot API that is able to be pulled is that of an incomplete nature.	Low	High	GitHub/ GitHub's cloud provider	I would have to ensure all of the changes I had made to my application up until that point had been saved locally to my machine or alternatively, to an alternative cloud service provider. From there, if another developer on my team wanted to access the work I had completed up until that point, they would either have to receive the files via email which would not be very secure, or I would have to transfer the relevant files to a drive and physically deliver them to him/her.	Although my ability to control the events that directly affect GitHub are rather limited, I could make efforts to ensure all of my files are updated, and backed up locally. By doing this, I could possibly upload them to an alternative open source development repository. Although, this response would have its own risks associated with it. For example, the relative security of the alternative repository service may not have been fully verified to the extent that GitHub has. Therefore, the best course of action may be to exchange files locally, although this method of addressing the issue may not be suitable for large companies that operate at a national or even international level.


3. Diagrams


surname
forename
username
paleontoloist_id
paleontologist
email_address
fossil_site_id
specialism
institution
N
Assigned To
1
name
fossil_site_id
country
continent
fossil_site
dinosaur_id
city
1
Contains
N
species
diet
habitat
dinosaur
dinosaur_id
region
period


paleontologist
PK paleontologist_id INT
FK fossil_site_id INT
forename VARCHAR(50)
surname VARCHAR(50)
username VARCHAR(50)
email_address VARCHAR(50)
specialism VARCHAR(50)
institutuion VARCHAR(50)
fossil_site
PK fossil_site_id INT
FK dinosaur_id INT
name VARCHAR(50)
city VARCHAR(50)
country VARCHAR(50)
continent VARCHAR(50)
dinosaur
PK dinosaur_id INT
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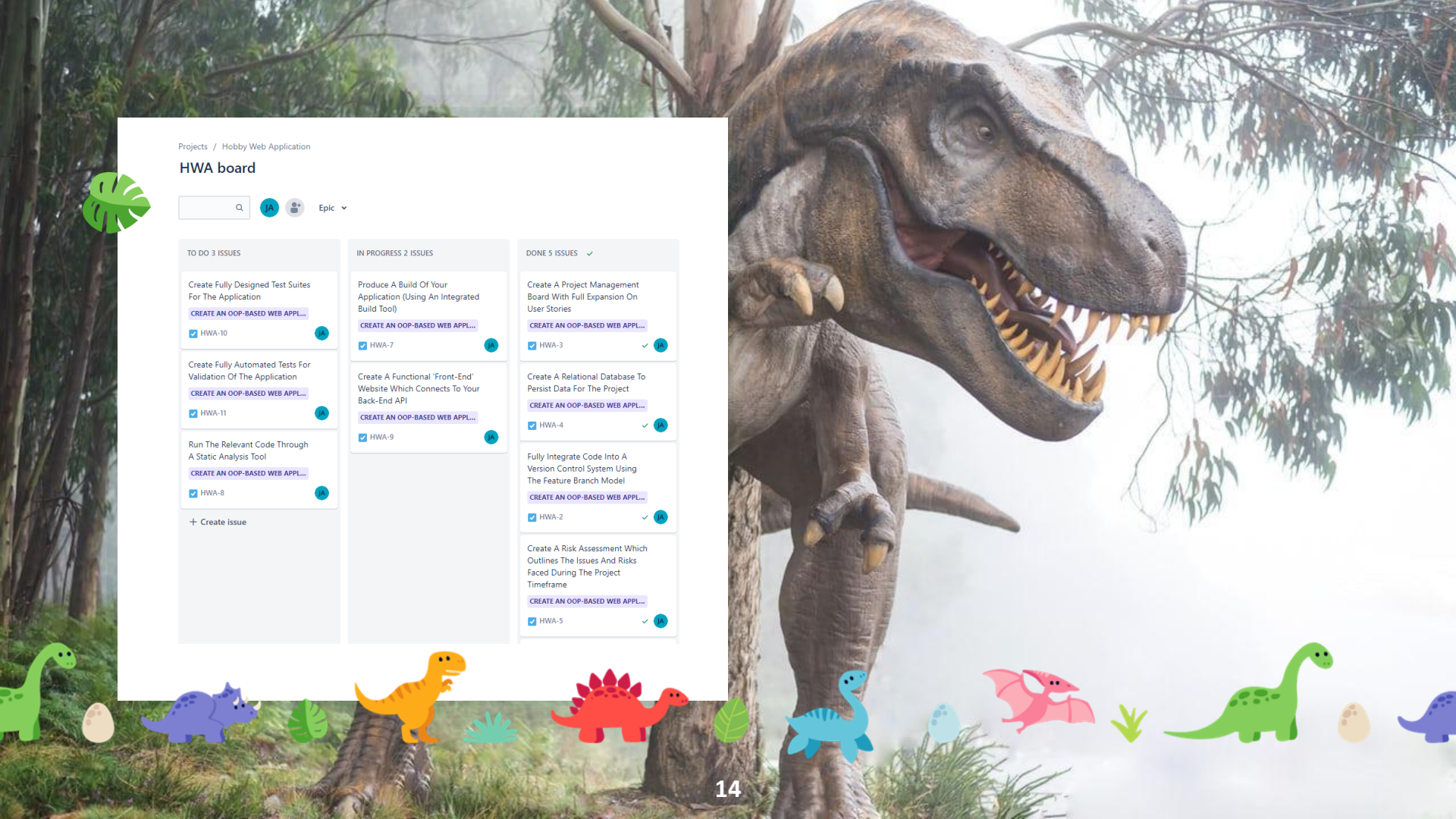
diet VARCHAR(50)
habitat VARCHAR(50)
region VARCHAR(50)
period VARCHAR(50)

4. Sprint Plan

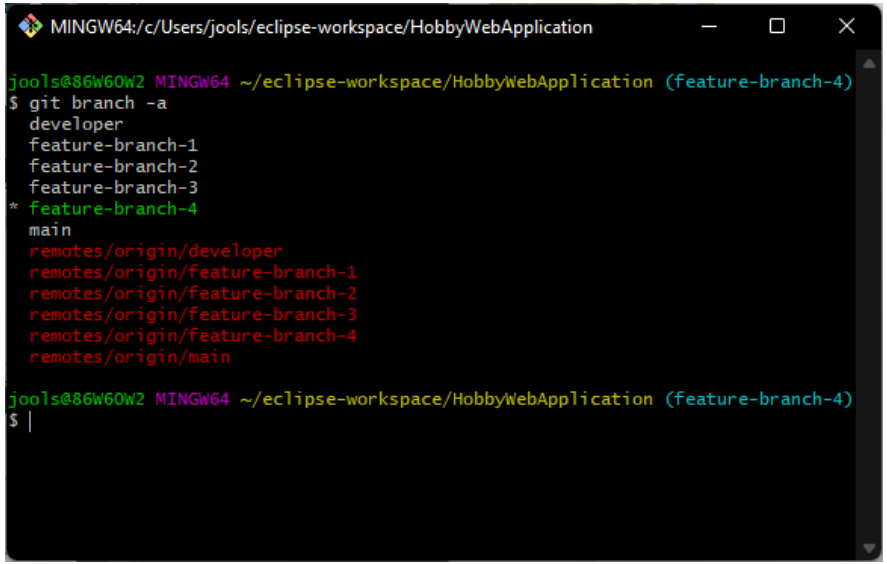

Projects / Hobby Web Application
HWA board
JA
Epic
TO DO 3 ISSUES
Create Fully Designed Test Suites For The Application
CREATE AN OOP-BASED WEB APPL...
HWA-10
JA
Create Fully Automated Tests For Validation Of The Application
CREATE AN OOP-BASED WEB APPL...
HWA-11
JA
Run The Relevant Code Through A Static Analysis Tool
CREATE AN OOP-BASED WEB APPL...
HWA-8
JA
Create issue
IN PROGRESS 2 ISSUES
Produce A Build Of Your Application (Using An Integrated Build Tool)
CREATE AN OOP-BASED WEB APPL...
HWA-7
JA
Create A Functional 'Front-End' Website Which Connects To Your Back-End API
CREATE AN OOP-BASED WEB APPL...
HWA-9
JA
DONE 5 ISSUES
Create A Project Management Board With Full Expansion On User Stories
CREATE AN OOP-BASED WEB APPL...
HWA-3
JA
Create A Relational Database To Persist Data For The Project
CREATE AN OOP-BASED WEB APPL...
HWA-4
JA
Fully Integrate Code Into A Version Control System Using The Feature Branch Model
CREATE AN OOP-BASED WEB APPL...
HWA-2
JA
Create A Risk Assessment Which Outlines The Issues And Risks Faced During The Project Timeframe
CREATE AN OOP-BASED WEB APPL...
HWA-5
JA

5. Consultant Journey

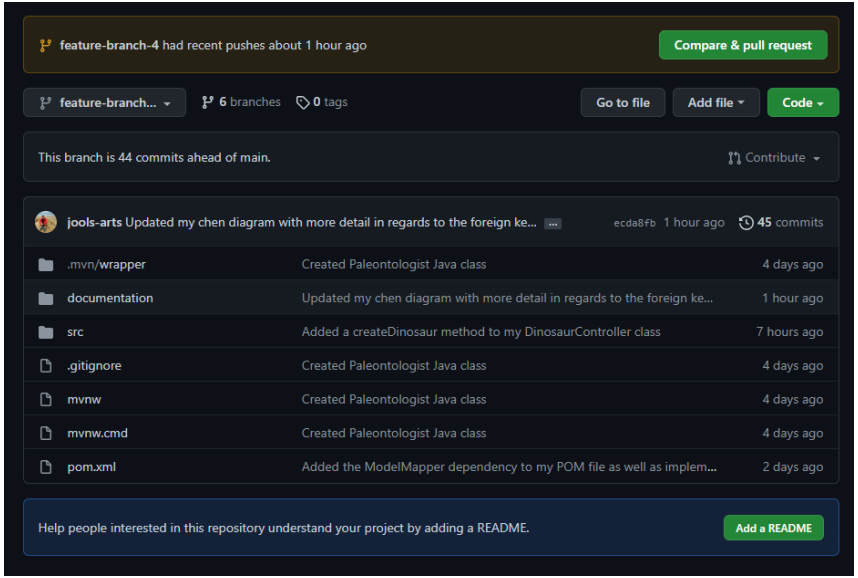

spring
JS
Technologies learned
for the project!
HTML
CSS
16


6. Continuous Integration

Use of Git and GitHub

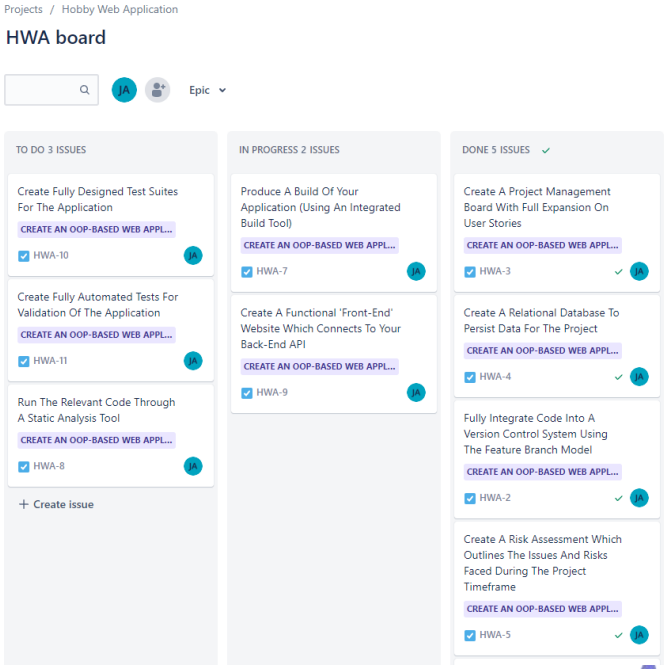


Use of Git and GitHub



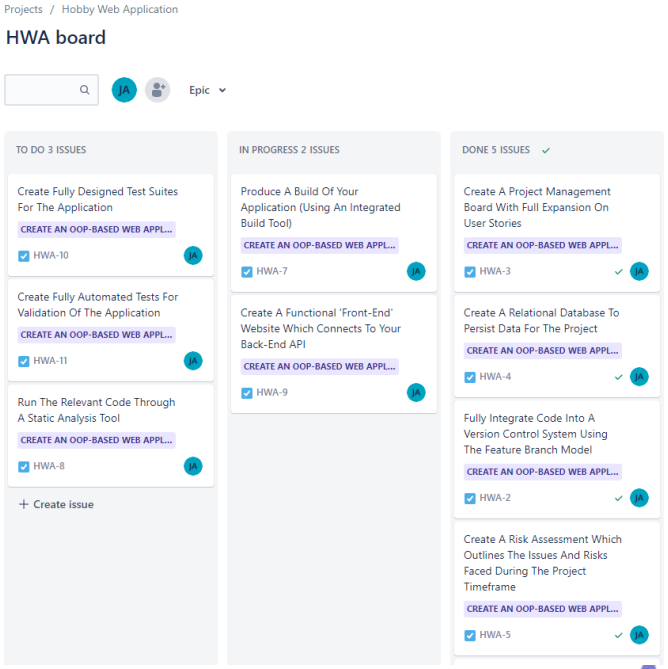
6. Demonstration

7. Sprint Review



- Majority of tasks completed bar testing


7. Sprint Retrospective



- Understanding and implementation of Java has definitely improved since undertaking the Inventory Management System project
- Need to find a better balance of time put into planning, and time put into developing the application

Thanks!

Any questions?

You can find me at
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