

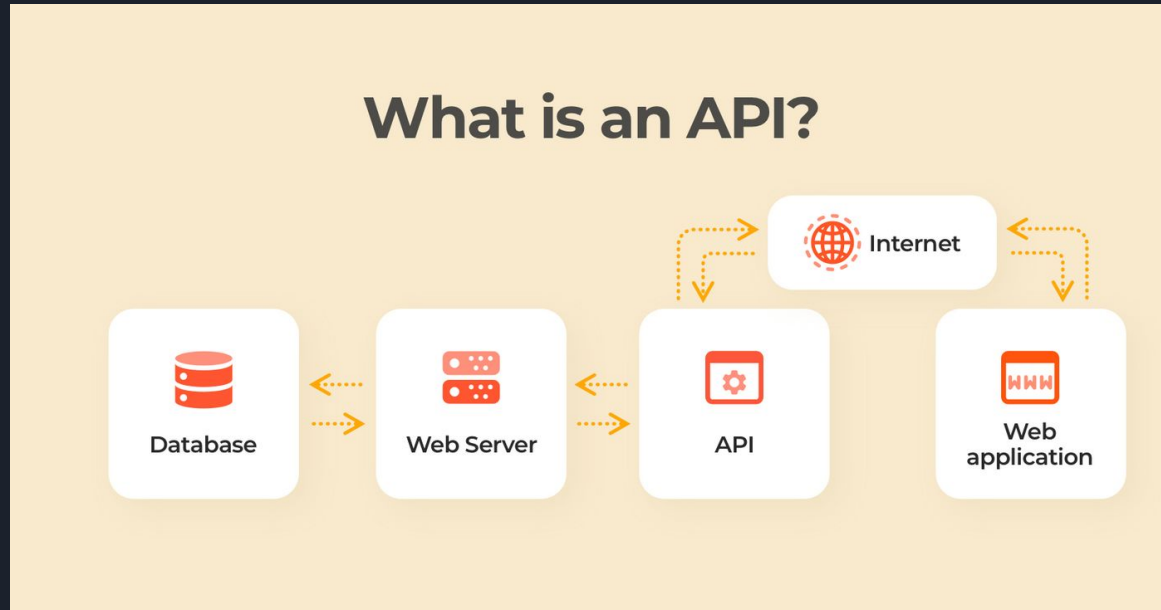
A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light green color. They are positioned diagonally, with the blue one partially covering the green one.

# Student Management API

Matthew Adejumo

# What is an API

- Application Programming Interface
- An intermediary between software that allows for communication between them





# Consultant Journey

## Technologies learned:

- Spring boot - API development framework used to create stand-alone production grade applications
- Jira - Agile project management which is an iterative approach to delivering a project through its life cycle
- Git/Github - Version control/Cloud based hosting platform
- MySQL Server - Database management system
- HTML/CSS/JavaScript - Structure/Design/Interaction
- JUnit/Mockito - Integration and unit testing

# Sprint Plan

What needed to be included?

User stories with acceptance criteria  
and tasks with clear descriptions.

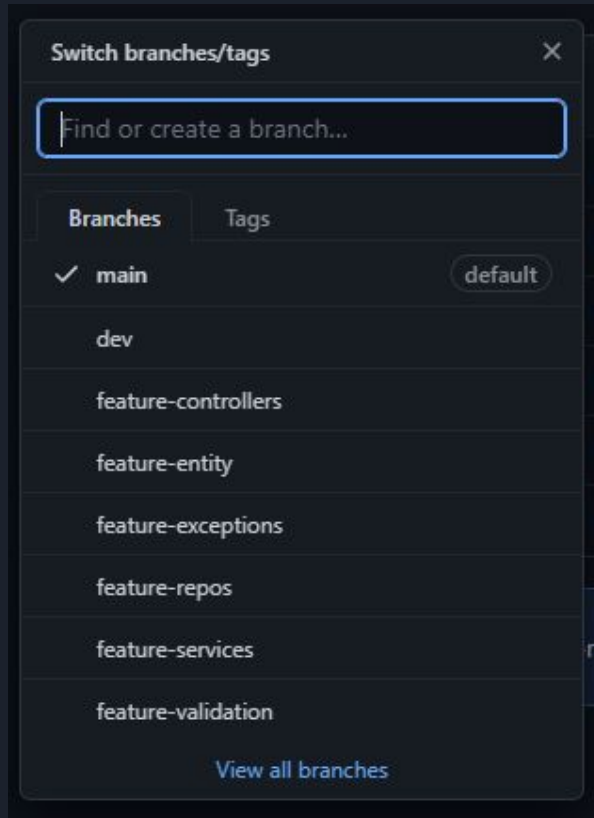
The screenshot shows a Jira Sprint Plan for 'SMA Sprint 1' (12 Sep – 16 Sep, 32 issues). The left sidebar lists categories: Issues without epic, User Stories, Backend Code, Testing, Frontend Code, and Documentation. The main area displays a list of issues with their status and category. Issues are color-coded: green for 'DONE', orange for 'IN PROGRESS', and blue for 'TODO'.

Issue ID	Description	Category	Status
SMA-2	As a teacher I want to be able to see all the students in the database, so I can decide if I want to add, delete or update a students information.	USER STORIES	DONE
SMA-3	As a teacher, I want to be able to add new students to the database, so that new students information can be recorded.	USER STORIES	DONE
SMA-4	As a teacher, I want to be able to delete students from the database, so that former students can be removed.	USER STORIES	DONE
SMA-5	As a teacher, I want to be able to update students in the database, so that I am able to change student information.	USER STORIES	DONE
SMA-6	As a teacher, I want to be able to see all students with a specific first name, second name and age, so that I can see how many of them there are.	USER STORIES	DONE
SMA-35	PowerPoint presentation in PDF format	DOCUMENTATION	IN PROGRESS
SMA-31	Complete README	DOCUMENTATION	IN PROGRESS
SMA-36	Create a jar file	BACKEND CODE	IN PROGRESS
SMA-19	Complete risk assessment	DOCUMENTATION	DONE
SMA-20	Complete MoSCoW assessment	DOCUMENTATION	DONE
SMA-11	Write entity classes.	BACKEND CODE	DONE
SMA-12	Write controller classes.	BACKEND CODE	DONE
SMA-13	Write service classes.	BACKEND CODE	DONE
SMA-14	Write repo classes.	BACKEND CODE	DONE
SMA-15	Write exception classes.	BACKEND CODE	DONE
SMA-16	Write properties files.	BACKEND CODE	DONE

The screenshot shows the detail view for issue 'SMA-12'. The title is 'Write controller classes.' and the description is 'Controllers allow for external access to a Spring application via HTTP requests.' The issue is assigned to 'Matthew Adejumo' and is in the 'SMA Sprint 1' sprint. A tooltip is visible over the 'Assignee' field, stating: 'On a free plan, you can't restrict who can view issues. Upgrade your plan to better control who can access your project's issues. Try it now • Learn more'. The 'Activity' section shows a comment from 'MA' (Matthew Adejumo) with the text 'Add a comment...'. The 'Labels' section shows 'MustHave'. The 'Sprint' section shows 'SMA Sprint 1'. The 'Story point estimate' is 'None'. The 'Reporter' is 'Matthew Adejumo'. The 'Created' date is '4 days ago', 'Updated' is '3 days ago', and 'Resolved' is '3 days ago'. There is a 'Configure' button in the bottom right.

The screenshot shows the detail view for issue 'SMA-7'. The title is 'As a teacher I want to be able to see all the students in the database, so I can decide if I want to add, delete or update a students information.' The issue is assigned to 'Matthew Adejumo' and is in the 'SMA Sprint 1' sprint. The 'Activity' section shows a comment from 'MA' (Matthew Adejumo) with the text 'Add a comment...'. The 'Labels' section shows 'MustHave'. The 'Sprint' section shows 'SMA Sprint 1'. The 'Story point estimate' is 'None'. The 'Reporter' is 'Matthew Adejumo'. The 'Created' date is '4 days ago', 'Updated' is '17 hours ago', and 'Resolved' is '17 hours ago'. There is a 'Configure' button in the bottom right.

# How I approached version control



# Testing

student_management (com.bae)	1 sec 139 ms
✓ StudentTest	238 ms
✓ allArgsConstructor()	228 ms
✓ noIdConstructor()	5 ms
✓ getAndSetTest()	5 ms
> ✓ StudentManagementApplicationTests	7 ms
✓ StudentControllerIntegrationTest	729 ms
✓ getBySecondNameTest()	451 ms
✓ getByIdTest()	39 ms
✓ updateTest()	94 ms
✓ getByAgeTest()	16 ms
✓ getAllTest()	17 ms
✓ getByFirstNameTest()	20 ms
✓ createTest()	31 ms
✓ deleteTest()	61 ms
✓ StudentServiceUnitTest	76 ms
✓ getByIdTest()	59 ms
✓ deleteTrueTest()	11 ms
✓ getAllTest()	6 ms
✓ StudentControllerUnitTest	89 ms
✓ getBySecondNameTest()	14 ms
✓ getByIdTest()	9 ms
✓ updateTest()	10 ms
✓ getByAgeTest()	8 ms
✓ getAllTest()	12 ms
✓ getByFirstNameTest()	12 ms
✓ createTest()	14 ms
✓ deleteTest()	10 ms

Coverage: All in student_management			
Element	Class, %	Method, %	Line, %
com	80% (4/5)	94% (34/36)	95% (60/63)
bae	80% (4/5)	94% (34/36)	95% (60/63)
student_management	80% (4/5)	94% (34/36)	95% (60/63)
controllers	100% (1/1)	100% (9/9)	90% (10/11)
StudentController	100% (1/1)	100% (9/9)	90% (10/11)
entities	100% (1/1)	94% (16/17)	96% (32/33)
Student	100% (1/1)	94% (16/17)	96% (32/33)
exceptions	0% (0/1)	100% (0/0)	100% (0/0)
StudentNotFoundException	0% (0/1)	100% (0/0)	100% (0/0)
repos	100% (0/0)	100% (0/0)	100% (0/0)
StudentRepo	100% (0/0)	100% (0/0)	100% (0/0)
services	100% (1/1)	100% (9/9)	100% (17/17)
StudentService	100% (1/1)	100% (9/9)	100% (17/17)
StudentManagementApplicatio	100% (1/1)	0% (0/1)	50% (1/2)



Demonstration Time



## What went well

- Managed to finish slightly ahead of time
- Managed to completely tick off the MVP checklist

## What I would add if i had more time

- Adding a login page for teacher
- Created a different database that stored teacher login information
- Made the page look better that it currently does
- Pushed for even higher test coverage