## Sprint Retrospective Iteration #3

Issue	Task	Task Assigned to	Estimated Effort per Task	Actual Effort per task	Done	Notes
41	Additional Tests for Management class	Kiril	6 hours	4 hours	Yes	
39	Candidate TA deadline check	Jeff	1 hour	1.5 hour	Yes	
40	Add quarter field to course	Eames	0.5 hours	0.5 hours	Yes	
42	TA candidating 3 course per quarter validation	Eames	2 hours	1.5 hours	Yes	
43	Test Existing Course Logic	Eames	4 hours	3.5 hours	Yes	
44	Test Inter-Microservice Logic	Eames	3 hours	1 hours	No	It is very difficult to do this as a testing database must first be created.
45	testing Repository Functionality	Jeff	2 hour	6 hours	yes	Extended into testing Coures service, repo and controller. Only Patch endpoint not tested yet, ran into troubles with it
49	HiringLecturerValidation	Jeff	0.5 hour	0.5 hour	yes	
51	getAverageWorkedHours endpoint	Eames	1.5 hours	1.5 hours	yes	
9	Restrict courses per quarter	Oisín	2 hours	2 hours	yes/no	The logic on both sides is present, it only needs to be connected during next sprint
56	Add getMultiple endpoint for Student	Oisín	0.5 hours	0.5 hours	yes	
57	Test all student functionality	Oisín	n/a	4 hours	no	This issue didn't have to be finished completely yet, but most work for it is done
58	Add logic for applying, by sending request from student to course	Oisín	2 hours	1 hour	yes	
55	refactor the whole lecturer microservice	Anna	4 hours	4 hours	yes	
53	test the service as well as repository	Anna	5 hours	4 hours	yes	
54	add endpoint so that lecturer can approve hours	Anna	0.5 hour	0.5 hour	yes	
59	convert calendar to local date to simplify serializing	Anna	2 hours	1.5 hour	yes	
50	have request bodies sent from authentication and api gateway	Efe	2 hours		yes	
47	add chain of responsibility design pattern	Efe	3 hours	3 hours	yes	
0	testing	Efe	4 hours	4 hours	yes	

## Main Problems Encountered - Efe

Problem: Dependency issues with tests

Description: Some sort of version difference in a couple of microservices has caused the development cycle to slow down. Took a while to solve the issue and move on.

Reaction: Read about the dependencies and how they are used, utilized information to further solve the problem.

# Adjustments for new sprints - Efe

I should pay more attention to test driven design and plan ahead more tests than I usually do.

## Main Problems Encountered - Kiril

Problem: PMD Avoid Duplicate Literals

Description: I was getting this exception in my controller, because I was using "studentId" in many path parameters

Reaction: I made a helper Annotation class that contains the duplicated string literal.

## Adjustments for new sprints - Kiril

I need to figure out how to unit test System.out.println

# Main Problems Encountered - Oisín

Problem: Refactoring of nl.tudelft.sem.student package to student caused issues

Description: Trying to refactor this broke everything in the module, and because of not committing before that, I lost some work

Reaction: Since this happened at the start of the sprint, I decided to push it back a week, since it's not a priority at all and caused a lot of problems

### Adjustments for new sprints - Oisín

Ask someone for help with the problem above during the thursday meeting

# Main Problems Encountered - Eames

Problem: Difficult to test code

Description: All of our inter-microservice communication was buried away in static classes making it difficult to mock

Reaction: Refactored code into a CommunicationService class which is now passed into functions (and can now be mocked)

# Adjustments for new sprints - Eames

Don't take on more work than I am able to

## Main Problems Encountered - Jeff

Problem: Unfamiliarity with testing controllers and difficult to test code

Description: The main controller had some dependencies such as Calendar current date that were not injected making it impossible to mock and test for example date related logic. Furthermore, a learning curve when it comes to framework used to test controllers and end point logic

Reaction: Main solutions to the issues were to refactor dependencies of the Controller class to be injected and to simply work with / explore the MockMVC to familiarize myself.

# Adjustments for new sprints - Jeff

This week went relatively smoothly compared to others since I started work early on in the sprint. So planning on doing roughly the same next sprint and continuing testing the last parts of the microservice

#### Main Problems Encountered - Ana

Problem: I did not know how to properly work with mvc tests, refactoring was a bit difficult, also when testing system as the whole, some things were not working, so I spent some time fixing them

Description: Now as microservices are almost ready, I need to make sure that they are correct, so now testing it and combining is difficult as working with services is quite new for me

Reaction: Familirizing myself with tests, refactoring code

# Adjustments for new sprints - Ana

The main goal - combine microservices, so communicate the teammates who are responsibel for forwarded endpoints and, if not working, together see where is the mistake