DNA is Not an Acronym

Sprint Retrospective, Iteration #1

User Story	Task	Member responsible for the task	Task Assigned To	Estimated Effort per Task *(in time units)*	Actual Effort per Task *(in time units)*	Done *(yes / no)*	Notes
As a user, I want the application to **parse GFA** files and build a corresponding internal **datastructure** *End responsibility: Georgios*	Parse a GFA file into an internal datastructure	Felix	Felix	5	5	Yes	
	Implement the sequence alignment graph datastructure	Georgios	Georgios	2	3	Yes	
	Design an internal structural representation of parsed GFA sequence alignment graphs	Georgios	Georgios Casper	5	5	Yes	
As a user, I want the application to **display the GFA files in a visual manner**, in the form of a graph *End responsibility: Joël*	Implement simple DAG visualization in graph viewport	Niels	Niels Joel	8	9	Yes	
	Visualize a graph represented by the sequence alignment graph datastructure in the UI	Niels	Niels Joel	8	8	Yes	
	Create simple UI wrapper around graph library viewport	Joel	Joel	5	5	Yes	

As a product owner, I want to have a first draft of the **Product Vision** document to verify that the development team has the right vision for my product *End responsibility: Felix*	Write Introduction of Product Vision document	Georgios	Georgios	2	2	Yes	
	Write Stakeholders section of Product Vision document	Niels	Niels	3	3	Yes	
	Write Functional Requirements section of Product Vision document	Joël	Joël	3	2	Yes	
	Write Non-Functional Requirements section of Product Vision document	Casper	Casper	3	2	Yes	
	Write Related Work section of Product Vision document	Felix	Felix	3	2	Yes	
	Write Timeframe section of Product Vision document	Georgios	Georgios	1	1	Yes	
As a product owner, I want to have a first draft of the **Product Planning** document to verify that the development team has the right planning for the development of my product *End responsibility: Niels*	Write Introduction of Product Planning document	Joël	Joël	1	1	Yes	
	Write Product Roadmap of Product Planning document	Georgios	Georgios	1	1	Yes	
	Write High Level Product Backlog of Product Planning document	Niels	Niels	2	1	No	Was not as applicable as already devised by product owner
	User stories of features of Product Planning document	Casper	Casper	2	2	Yes	
	Write User stories of know-how acquisition of Product Planning document	Joël	Joël	2	1	Yes	

	Write Definitions of Done (backlog items, sprints, releases) of Product Planning document	Felix	Felix	2	3	Yes	
	Write Glossary of Product Planning document	Georgios	Georgios	2	2		
As a product owner, I want to have a first draft of the **Architecture Design** document to verify that the development team uses a properly functional structure *End responsibility: Niels*	Write architecture design introduction	Joël	Joël	1	2	Yes	
	Write architecture design subsystems	Niels	Niels Georgios	3	3	Yes	
	Write architecture design hardware/software mapping	Georgios	Georgios	1	1	Yes	
	Write architecture design persistent data management	Casper	Casper	1	1	Yes	
	Write architecture design concurrency	Felix	Felix	2	1	Yes	
	Write architecture design code quality and testing	Casper	Casper	2	2	Yes	
As a developer, I want to have proper **build tools and continuous integration**, in order to get confidence that the developed features actually work *End responsibility: Casper*	Set up CodeCov coverage service	Casper	Casper Niels	2	2	Yes	
	Set up Gradle	Felix	Felix	2	2	Yes	
	Set up CheckStyle, FindBugs and PMD	Casper	Casper	2	3	Yes	
	Set up SonarQube	Casper	Casper	2	3	Yes	
	Set up JUnit 5 and AssertJ	Casper	Casper	1	2	Yes	

	Set up a dependency injection framework	Casper	Casper	3	0	No	
	Add Checker Framework	Casper	Casper	1	1	Yes	
	Set up Travis CI	Casper	Casper	1	1	Yes	

Main Problems Encountered

Problem 1

Description: We spent quite a lot of time looking for a proper graph library. After deciding upon Graphstream we spent a lot of time learning how this library works, and implementing the capability to visualize the TB10 genome. Our context coordinator was not able meet with us until the second week. During the presentation, we were warned that third-party graph libraries generally are not capable of dealing with very large graphs. We then use some rough heuristic to compute the RAM usage of graphstream, without going into numerical details it turned out using Graphstream indeed was not possible unless a computer with hundreds of gigabytes of RAM was used.

Reaction: Our first prototype has a working visualization of TB10 implemented using Graphstream. However, in future releases we will create our own graph library based on primitives.

Problem 2

Description: We spent more time than anticipated on testing of the user interface, and as such the current coverage of the interface is quite low. We decided to use the TestFX framework for testing of JavaFX, but because the framework is not quite mature yet there was some conflicting information. This made it difficult to properly set the the framework. Furthermore, we also had to ensure that the UI tests were headless so they could run on travis.

Reaction: We properly set up TestFX and headless testing using trial and error.

Problem 3

Description: As mentioned in problem one, the meeting with our context coordinator which highlighted do and don't shed a lot of light on our understanding of the requirements and possible implementation issues. Due to this meeting taking place in week 2 we already made some mistakes which could have been avoided.

Reaction: Simply adjust any invalid requirement, particularly the graphstream mentioned in problem 1.

Problem 4

Description: More extensives issue and priorities. We originally assigned priorities based on the height of the issue in our Scrum Board (higher equals more important). Our TA notified us that issue should have priority label e.g. A-E.

Reaction: We started using priority labels.

Adjustments for the next Sprint

- Add description for issues where the title does not adequately describe the problem
- Add prioritization labels to issues to indicate the priority in a more clear way than ordering
- Link to do issues back to feature via description instead of title
- Update project board more often during the project board