# **Phase 2:**

## **Sprint 1**

During the sprint the main task was to identify two features that we wanted to add to the ganttproject. The **Scrum master** of this week was Ricardo Gonaçalo.

### **Sprint Backlog**

|  |  |  |  |
| --- | --- | --- | --- |
| Todo | In Progress | Reviewing | Done |
|  |  |  | Sugerir 2 Features (Francisco) |
|  |  |  | Sugerir 2 Features (Iago) |
|  |  |  | Sugerir 2 Features (James) |
|  |  |  | Sugerir 2 Features (Joao) |
|  |  |  | Sugerir 2 Features (Ricardo) |
|  |  |  | Criar User Story Primeira Feature |
|  |  |  | Criar User Story Segunda Feature |
|  |  |  | Descrever Totalmente Primeita Feature |
|  |  |  | Descrever Totalmente Segunda Feature |

### **Burndown chart**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint 2 Burndown Chart | | | | | | | | | |
|  | | | | | | | | | |
| **Task ID** | **Task Description** | **Initial Estimate** | **7/Nov/22** | **8/Nov/22** | **9/Nov/22** | **10/Nov/22** | **11/Nov/22** | **11/Nov/22** | **13/Nov/22** |
| **Day 0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 1 | Sugerir 2 Features (Francisco) | 1 | 1 |  |  |  |  |  |  |
| 2 | Sugerir 2 Features (Iago) | 1 | 1 |  |  |  |  |  |  |
| 3 | Sugerir 2 Features (James) | 1 | 1 |  |  |  |  |  |  |
| 4 | Sugerir 2 Features (Joao) | 1 | 1 |  |  |  |  |  |  |
| 5 | Sugerir 2 Features (Ricardo) | 1 | 1 |  |  |  |  |  |  |
| 6 | Criar User Story Primeira Feature | 1 |  | 1 |  |  |  |  |  |
| 7 | Criar User Story Segunda Feature | 1 |  | 1 |  |  |  |  |  |
| 8 | Descrever Totalmente Primeita Feature | 2 |  |  | 1 | 1 |  |  |  |
| 9 | Descrever Totalmente Segunda Feature | 2 |  |  | 1 | 1 |  |  |  |
| **Completed Effort** | | 0 | 5 | 2 | 2 | 2 | 0 | 0 | 0 |
| **Remaining Effort** | | 11 | 6.0 | 4.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Ideal Burndown** | | 11 | 9.4 | 7.9 | 6.3 | 4.7 | 3.1 | 1.6 | 0.0 |

### **Produced content**

After a bit of discussion in the end we choose these two features. We list below the features and their respective user story.

## **Sprint 2**

In this sprint we produced the use cases diagrams asked for the whole project. The **Scrum master** of this week was Francisco Vasco.

### **Sprint Backlog**

|  |  |  |  |
| --- | --- | --- | --- |
| Todo | In Progress | Reviewing | Done |
|  |  |  | Find/discribe related use cases (Francisco) |
|  |  |  | Find/discribe related use cases (Iago) |
|  |  |  | Find/discribe related use cases (James) |
|  |  |  | Find/discribe related use cases (Joaoa) |
|  |  |  | Find/discribe related use cases (Ricardo) |
|  |  |  | Develop an use case sub-diagram (Francisco) |
|  |  |  | Develop an use case sub-diagram (Iago) |
|  |  |  | Develop an use case sub-diagram (James) |
|  |  |  | Develop an use case sub-diagram (Joao) |
|  |  |  | Develop an use case sub-diagram (Ricardo) |

### **Burndown chart**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint 3 Burndown Chart | | | | | | | | | |
|  | | | | | | | | | |
| **Task ID** | **Task Description** | **Initial Estimate** | **14/Nov/22** | **15/Nov/22** | **16/Nov/22** | **17/Nov/22** | **18/Nov/22** | **19/Nov/22** | **20/Nov/22** |
| **Day 0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 1 | Find/discribe related use cases (Francisco) | 2 |  |  | 1 | 1 |  |  |  |
| 2 | Find/discribe related use cases (Iago) | 2 |  | 1 | 1 |  |  |  |  |
| 3 | Find/discribe related use cases (James) | 2 |  | 1 | 1 |  |  |  |  |
| 4 | Find/discribe related use cases (Joaoa) | 2 |  |  | 2 |  |  |  |  |
| 5 | Find/discribe related use cases (Ricardo) | 2 |  |  | 1 | 1 |  |  |  |
| 6 | Develop an use case sub-diagram (Francisco) | 1 |  |  |  | 1 |  |  |  |
| 7 | Develop an use case sub-diagram (Iago) | 1 |  |  | 1 |  |  |  |  |
| 8 | Develop an use case sub-diagram (James) | 1 |  |  | 1 |  |  |  |  |
| 9 | Develop an use case sub-diagram (Joao) | 1 |  |  |  | 1 |  |  |  |
| 10 | Develop an use case sub-diagram (Ricardo) | 1 |  |  |  | 1 |  |  |  |
| **Completed Effort** | | 0 | 0 | 2 | 8 | 5 | 0 | 0 | 0 |
| **Remaining Effort** | | 15 | 15.0 | 13.0 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Ideal Burndown** | | 15 | 12.9 | 10.7 | 8.6 | 6.4 | 4.3 | 2.1 | 0.0 |

### **Produced content**

Here below are the diagram produced along with its author and the reviewer comments.

#### **Task manager**

Diagram

Description automatically generated

**Author:** Francisco Vasco

**Description:**

Name: Create task

Description: Create a new task on the chart

Actors: User

Name: Edit task

Description: Edit an existing task's properties

Actors: User

Name: Move up or down

Description: Moves the task on the chart, relative to other tasks

Actors: User

Name: Create dependency

Description: creates a dependency between 2 tasks

Actors: User

Name: Make child of another task

Description: the selected task becomes a requirement for another task

Actors: User

**Review:**  The overall idea and the manipulation of the task was well captured **by** Ricardo Gonçalo.

#### **Properties manager**

**Diagram

Description automatically generated**

**Author:** Iago Paulo

**Description:**

The only actor is the user, which can do all this use cases.

Name: Change project info

desc: User can change/add things like the name of the project, Organization, Web Link and description.

Name: Add Roles

desc: User can add custom roles that are not on the default roles yet.

Name: Remove Roles

desc: User can remove those custom roles.

Name: Manage days off

desc: User can use this to set the days that he will have a break.

Name: Add custom day-off

desc: User can add a specific day off, no holiday and no weekend day, just an arbitrary day off.

Name: Choose weekend days

desc: User can set the weekend days instead of the default Saturday and Sunday

(Example: Some companies also work on Saturday, so Sunday is the only Weekend Day)

Name: Choose holiday calendar

desc: User can choose his holidays on this calendar from several countries, making it easy to put the custom days-off from each country.

**Review:** He diagram seems to encapsulate all the functionalities associated with the project properties. The usage of the «extends» keyword between "Manages days off" and its related use cases seems correct as it is not required to use any of these use cases, they are optional **by** Francisco Vasco.

**Project manager**

Diagram

Description automatically generated

**Author:** James Furtado

**Description:**

Name: Create new Project

Description: The actor can create a new project that will hold a set of tasks. The actor will have to give some information in order to do so, such as the project name.

Actors: User

Name: Save Project

Description: The actor can save the project (with all its tasks) in a file that can later be opened.

Actors: User

## Name: Open Project

## Description: The actor selects a project (from a file or an url - webserver). The system closes the current opened project (if any) and loads the selected project's (tasks, resources, etc...) so the project can be edited.

## Actors: User

## Name: Export

## Description: The actor can export (save to a file) the project to a format other the default ganttproject.

## Actors: User

## Name: Import

## Description: The actor chooses a file (or an url) that was previously export as a project and the system adds the task (resources, etc...) of such project to the current opened project.

## Actors: User

## **Review:** Everything is correct. Contains the name, the description and the actor **by** João Oliveira.

#### **Timeline manager**

Diagram

Description automatically generated

**Author:** João Oliveira

**Description:**

## Use case referring to the timeline manager.

## Has two actors, one primary and one secondary.

## The primary is the user that interacts with the system

## The secondary is the time.

## Name: Do Zoom

## Description: Action that allows the user to zoom in and out.

## Name: Navigate to specific day

## Description: The user can navigate in the timeline to select the date range he want to see. Can be done by dragging the timeline or by selecting some options, like "Past", "Future", "Project Start", "Today", "Project End" or "Selection".

## Name: See critical path:

## Description: The user can choose an option to see the critical path.

## Name: Change current day

## Description: The secondary actor, the time, updates the day to the current one.

**Review:** I agree, but we can also say that the Time updates de current day \*every day\*, although it is self-explanatory **by** Iago Paulo

#### **Timeline manager**

## Diagram Description automatically generated

## **Author:** Ricardo Gonçalo

**Description:**

Name:Resource Manager

## desc: The actor responsible for the management of the human resources, **being the principal actor of all the actions.**

## Name: Edit Resource:

## desc: User can remove those custom roles. Which is inherited by: Add Resource and extended by: Set Personal Info, Set Role, Set Standard Rate and Edit Days Off.

## Name: Delete resource:

## desc: The user can delete a resource from the system

## Name: Add Resource:

## desc: The user can add a resource to the system, setting its values (Edit Resource)

## Name: Set Personal Info:

## desc: The user can set the name, phone number and mail of the Resource

## Name: Set Role

## desc: The user can set the role of the resource, choosing from available values

## Name: Set Standart (standard) Rate:

## desc: The user can set the standart rate of the resource

## Name: Edit Days Off:

## desc: The user can add or remove intervals of days off

## Name: Send Email:

## desc: The user can send an email to the resource

## Name: Manage columns:

## desc: The user can show, hide, create columns, delete created columns and set values in the columns of the Resources Chart.

## **Review:**

When looking at the use case diagram I agree with what was done regarding

the use case "Delete Resource" and "Send email".

Regarding "Manage columns" I don't think it's even a use case, I think that the column is a way

to access others, use cases.

My major critic is regarding the use case "Edit resource" which seems to be an empty

use case where everything that makes the use case extends it.

What I think is that probably it should've been inherited by the uses cases that extends it (since these use cases have one thing in common - they change some properties of a resource). I also think that it's a bit weird to make the use case add resource inherit from "Edit resource"

**by** James Furtado.

**Sprint 3**

In this sprint we spent some time exploring the ganttproject and trying to fix some bugs. The **Scrum master** of this week was Iago Paulo.

### **Sprint Backlog**

|  |  |  |  |
| --- | --- | --- | --- |
| Todo | In Progress | Reviewing | Done |
|  |  |  | Debugs (Iago) |
|  |  |  | Correct bugs (Iago) |
|  |  |  | Analyse how to implement features 1 (Ricardo) |
|  |  |  | Analyse how to implement features 2 (Iago,James,Joao,Francisco) |
|  |  |  | Make java program to encapsulate tasks (Iago) |

### **Burndown chart**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint 4 Burndown Chart | | | | | | | | | |
|  | | | | | | | | | |
| **Task ID** | **Task Description** | **Initial Estimate** | **21/Nov/22** | **22/Nov/22** | **23/Nov/22** | **24/Nov/22** | **25/Nov/22** | **26/Nov/22** | **27/Nov/22** |
| **Day 0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 1 | Debug the code to know how it works | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 2 | Find and correct possible bugs (It had one) | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 3 | See how to implement feature 1 (Ricardo) and 2 (James,Iago,Francisco,Joao) | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 4 | Create a java program to encapsulate tasks so James can use in the ganttproject | 1 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 |
| **Completed Effort** | | 0 | 1 | 1 | 2 | 1 | 1 | 0.5 | 0.5 |
| **Remaining Effort** | | 7 | 6.0 | 5.0 | 3.0 | 2.0 | 1.0 | 0.5 | 0.0 |
| **Ideal Burndown** | | 7 | 6.0 | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0.0 |

### **Produced content**

We didn’t do nothing more than exploring the code and think discussing about it. During this our dear college **Iago Paulo** found a bug and fixed it. Whenever we moved a task a count that is supposed to increase only when we create a new task would increase so if we moved a task **x** times the next task would appear with a counter of the + (**x + 1)** of the last task created.

**Sprint 4**

In this sprint we implemented the features, the unit test for the features and we did the metrics report.

### **Sprint Backlog**

|  |  |  |  |
| --- | --- | --- | --- |
| Todo | In Progress | Reviewing | Done |
|  |  |  | Implement feature 1 (Ricardo) |
|  |  |  | Implement feature 2 (James, João, Francisco, Iago) |
|  |  |  | Upload sprints to github (Todo agente) |
|  |  |  | Take metrics (Todo agente) |

### **Burndown chart**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint 4 Burndown Chart | | | | | | | | | |
|  | | | | | | | | | |
| **Task ID** | **Task Description** | **Initial Estimate** | **28/Nov/22** | **29/Nov/22** | **30/Nov/22** | **1/Dec/22** | **2/Dec/22** | **3/Dec/22** | **4/Dec/22** |
| **Day 0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 1 | Implement feature 1 (Ricardo) | 5 | 2 | 2 | 1 |  |  |  |  |
| 2 | Implement feature 2 (James, João, Francisco, Iago) | 5 | 1 | 2 | 2 |  |  |  |  |
| 3 | Upload sprints to github (Todo agente) | 2 |  |  |  | 0.5 | 0.5 | 0.5 | 0.5 |
| 4 | Take metrics (Toda agente) | 1 |  |  |  |  | 0.25 | 0.5 | 0.25 |
| **Completed Effort** | | 0 | 3 | 4 | 3 | 0.5 | 0.75 | 1 | 0.75 |
| **Remaining Effort** | | 13 | 10.0 | 6.0 | 3.0 | 2.5 | 1.8 | 0.8 | 0.0 |
| **Ideal Burndown** | | 13 | 11.1 | 9.3 | 7.4 | 5.6 | 3.7 | 1.9 | 0.0 |

### **Produced content**

Each one of us did a report about the metrics that is in the folder Phase2/Sprint4/<member\_name>. Since it’s too big and it would mess up with our document format, we decided not to include such reports in this final report. We will only include the reviews the name of the metrics each one of us chose to do.

**Metric:** Mood Metrics Review

**Responsible:** Francisco Vasco

**Review:** This evaluation makes it seem like the project is acceptable in the metrics regarded, being the worst score by far the 75.5% in the AIF.

This doesn’t really make the project harder to understand, harder to change or any less performant **by** Ricardo Goncalo.

**Metric:** Line of code

**Responsible:** Iago Paulo

**Review:** The conclusions Iago has reached from the collected metrics agree with the consensus of the team over the development period of the project,

that is the project has a severe lack of comments which makes it more challenging to understand and improve **by** Francisco Vasco.

**Metric:** Dependency

**Responsible:** James Furtado

**Review:** There are classes that are really accoupled and this makes it hard to extend the project with new features. (Which means that we had some troubles trying to implement the new features) **by** Iago Paulo.

**Metric:** Chidamber and Kemerer

**Responsible:** João Oliveira

**Review:** I could see that he did some research and I agree with him that there is some values that are a bit high **by** James Furtado.

**Metric:** Complexity

**Responsible:** Ricardo Gonçalo

**Review:** The report is complete. Contains the average, sum, maximum and minimum.

Each metric is well explained **by** João Oliveira.