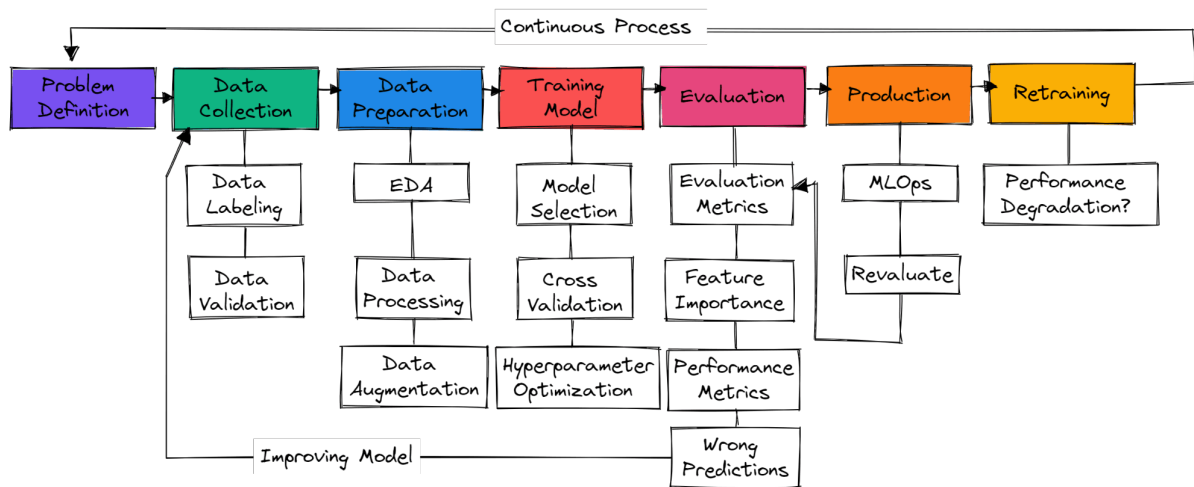


Planning and Coordination



Project Title: easyMoney Data Science Capstone Project
Project Team Members: Gonçalo, Seema, Chukwubuikem
Date: 06/04/2024

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Introduction

The project planning was performed using Trello and the structure was based on the 7 stages of a Data Science Project, plus three personalised phases. Table 1.1 shows the main information about each stage.

Table 1.1 - Stages of our DS Project Planning.

Stage	Schedule	No. Cards
Point of Situation*	01/Mar/24 - 05/Apr/24	4
Report and Dashboards**	02/Mar/24 - 05/Apr/24	5
Problem definition and Planning	03/Feb/24 - 17/Feb/24	6
Data Collection	18/Feb/24 - 21/Feb/24	1
Data Preparation	22/Feb/24 - 02/Mar/24	3
Data Analysis	04/Mar/24 - 13/Mar/24	5
Model Building	15/Mar/24 - 29/Mar/24	10
Model Evaluation	26/Mar/24 - 01/Apr/24	7
Model deployment	03/Apr/24 - 05/Apr/24	2
Monitoring***	25/Mar/24 - 02/Apr/24	2

* Used to plan meetings to discuss the points of the situation when needed.

** Define dates for writing the report and create dashboards.

*** Define the KPIs required to monitor the ML model.

The next chapters show some images as examples of each planning stage of the project.

Task 1 - Analysis

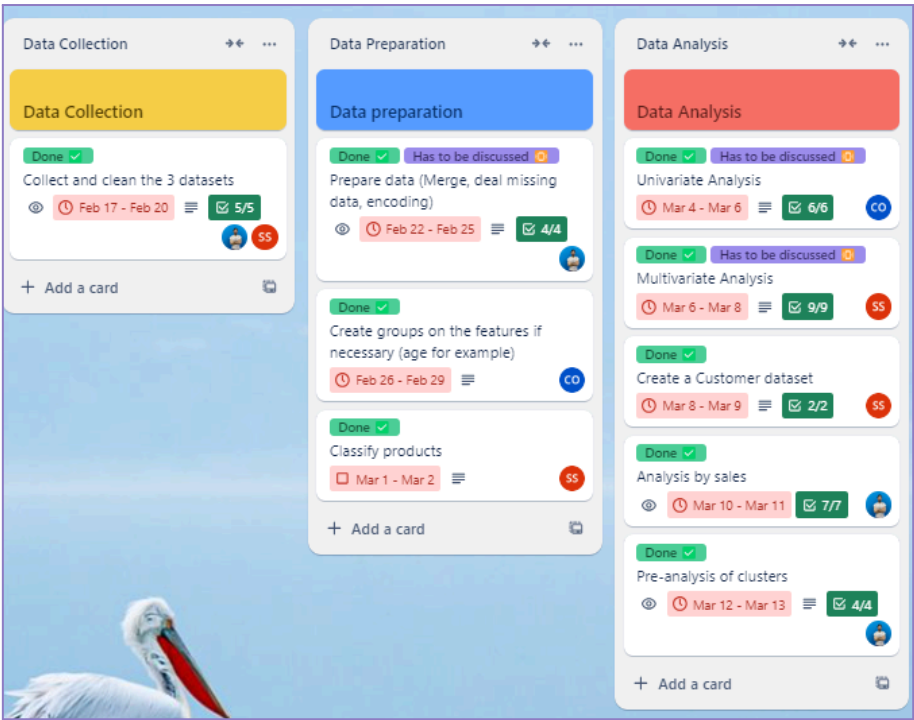


Fig 1.1 - List of cards related with task 1: Data Collection, Data Preparation and Data Analysis.

Data Collection	Data Collection	Done ✓	CO SS	<input type="checkbox"/> Feb 21
Collect and clean the 3 datasets	Data Collection	Done ✓	SS	<input type="checkbox"/> Feb 20
Data preparation	Data Preparation	Done ✓	CO SS	<input type="checkbox"/> Mar 2
Prepare data (Merge, deal missing data, encoding)	Data Preparation	Done ✓ Has to be discussed ⚠	CO	<input type="checkbox"/> Feb 25
Create groups on the features if necessary (age for example)	Data Preparation	Done ✓	CO	<input type="checkbox"/> Feb 29
Classify products	Data Preparation	Done ✓	SS	<input type="checkbox"/> Mar 2
Data Analysis	Data Analysis	Done ✓	CO SS	<input type="checkbox"/> Mar 13
Univariate Analysis	Data Analysis	Done ✓ Has to be discussed ⚠	CO	<input type="checkbox"/> Mar 6
Multivariate Analysis	Data Analysis	Done ✓ Has to be discussed ⚠	SS	<input type="checkbox"/> Mar 8
Create a Customer dataset	Data Analysis	Done ✓	SS	<input type="checkbox"/> Mar 9
Analysis by sales	Data Analysis	Done ✓	CO	<input type="checkbox"/> Mar 11
Pre-analysis of clusters	Data Analysis	Done ✓	CO	<input type="checkbox"/> Mar 13

Fig 1.2 - Table with information about cards related to task 1: Data Collection, Data Preparation and Data Analysis.

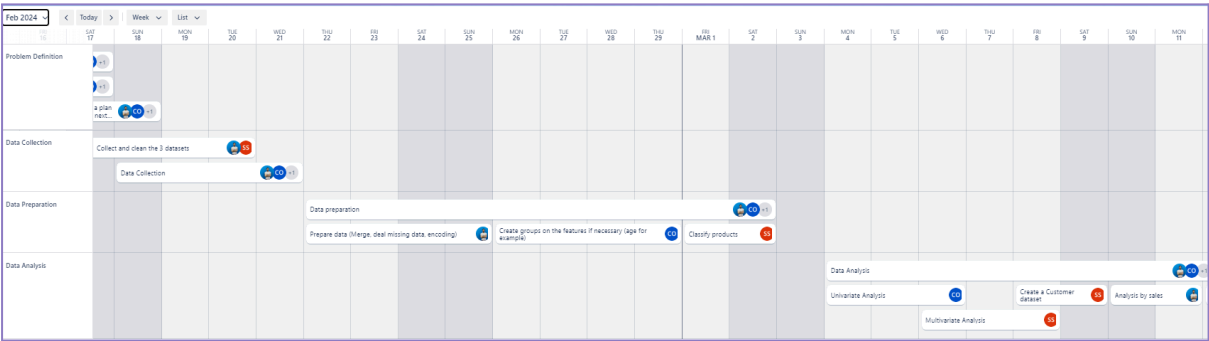


Fig 1.3 - Timeline related with task 1: Data Collection, Data Preparation and Data Analysis.

Task 2 - Segmentation

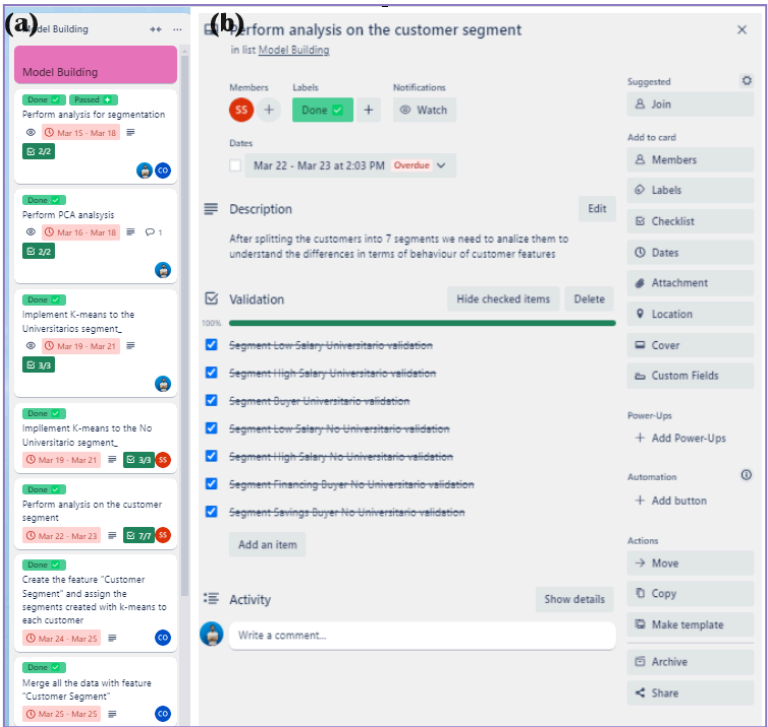


Fig 2.1 - List of cards related to task 2: Model Building (a) and Details of card “Perform analysis on the customer segment” (b).

Perform analysis for segmentation	Model Building	Done	Mar 15
Perform PCA analysis	Model Building	Done	Mar 18
Implement K-means to the Universitario segment,	Model Building	Done	Mar 21
Implement K-means to the No Universitario segment,	Model Building	Done	Mar 21
Perform analysis on the customer segment	Model Building	Done	Mar 23
Create the feature "Customer Segment" and assign the segments created with k-means to each customer	Model Building	Done	Mar 25
Merge all the data with feature "Customer Segment"	Model Building	Done	Mar 25

Fig 2.2 - Table with information about cards related to task 2: Model Building.

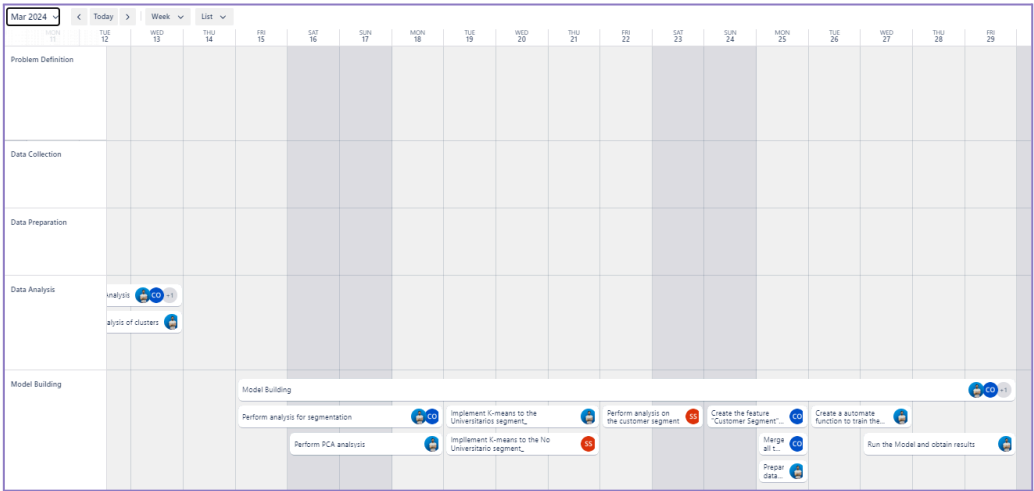


Fig 2.3 - Timeline related with task 2: Model Building.

Task 3 - Recommendation

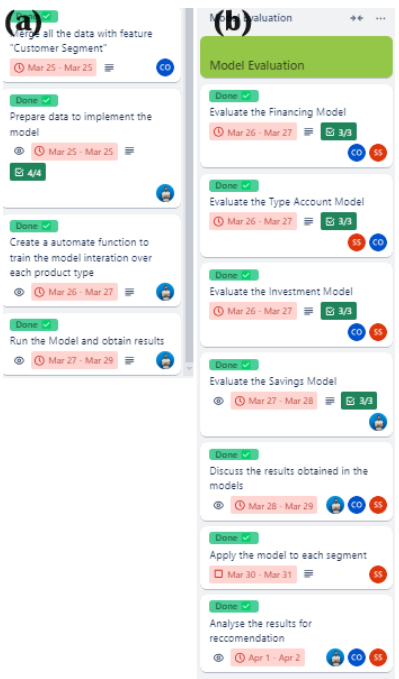


Fig 3.1 - List of cards related to task 3: Model Building (a) and Model Evaluation (b).

Prepare data to implement the model	Model Building	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Create a automate function to train the model interation over each product type	Model Building	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Run the Model and obtain results	Model Building	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Model Evaluation	Model Evaluation	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Evaluate the Financing Model	Model Evaluation	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Evaluate the Type Account Model	Model Evaluation	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Evaluate the Investment Model	Model Evaluation	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Evaluate the Savings Model	Model Evaluation	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Discuss the results obtained in the models	Model Evaluation	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Apply the model to each segment	Model Evaluation	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
Analyse the results for recommendation	Model Evaluation	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>

Fig 3.2 - Table with information about cards related to task 3: Model Building and Model Evaluation.

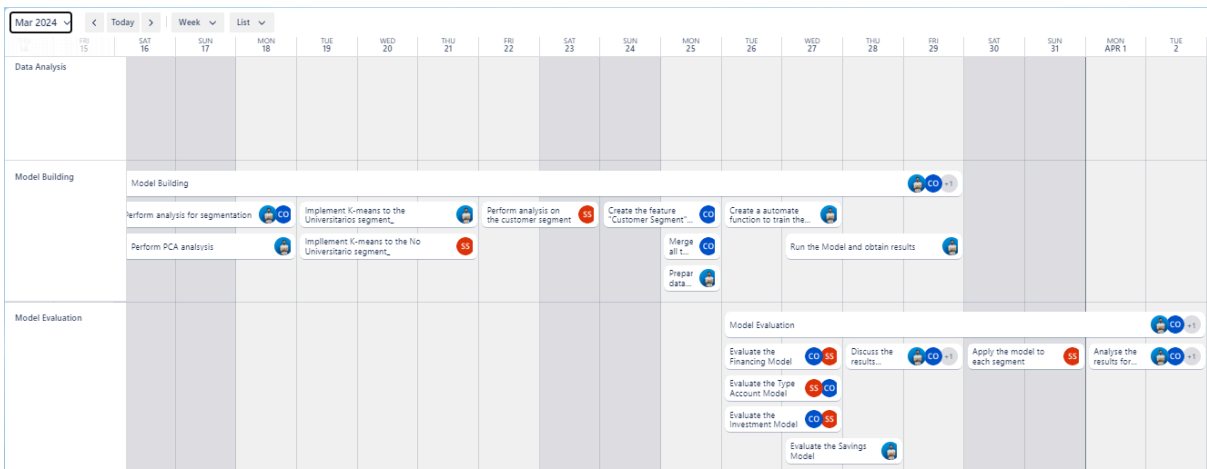


Fig 3.3 - Timeline related with task 3: Model Building and Model Evaluation.

Task 4 - Monitoring

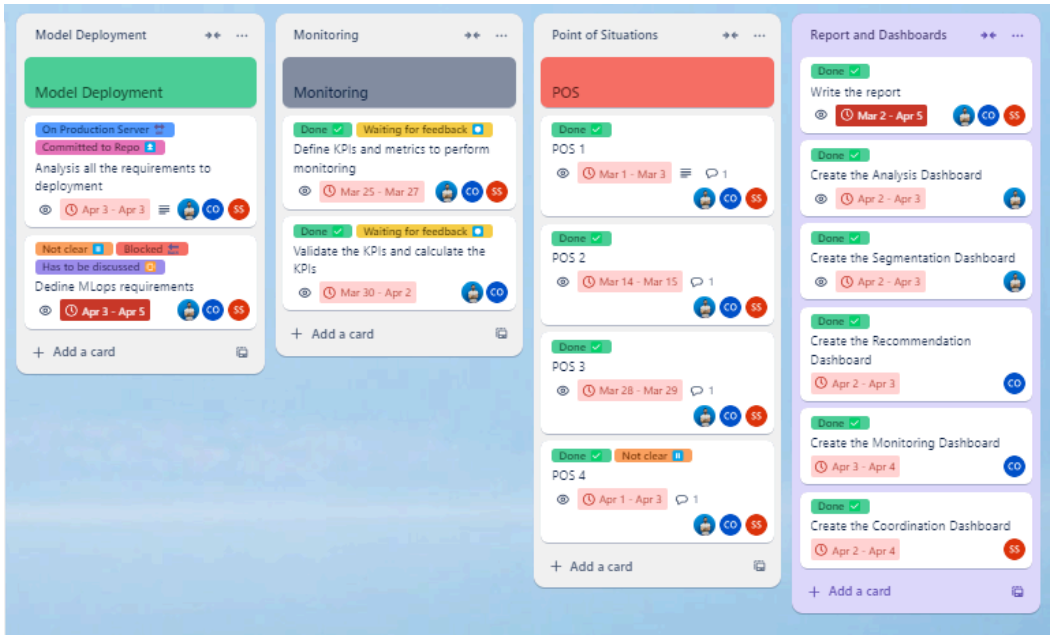


Fig 4.1 - List of cards related to task 4: Model Deployment (definition), Monitoring (definition), POS and Report and Dashboards.

Model Deployment	Model Deployment	Waiting for feedback	CO	SS	Apr 5
Analysis all the requirements to deployment	Model Deployment	On Production Server	CO	SS	Apr 3
Define MLops requirements	Model Deployment	Not clear	CO	SS	Apr 5
Monitoring	Monitoring	Done	CO	SS	Apr 2
Define KPIs and metrics to perform monitoring	Monitoring	Done	CO	SS	Mar 27
Validate the KPIs and calculate the KPIs	Monitoring	Done	CO	SS	Apr 2

Fig 4.2 - Table with information about cards related to task 4: Model Deployment (definition), Monitoring (definition), POS and Report and Dashboards.

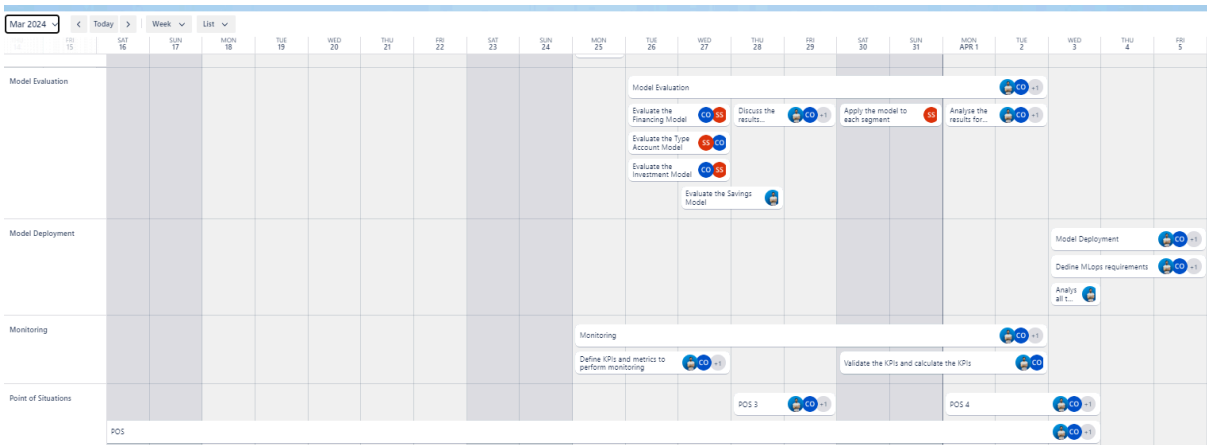


Fig 4.3 - Timeline related with task 4: Model Deployment (definition), Monitoring (definition), POS and Report and Dashboards.

Task 5 - Coordination/ Planning

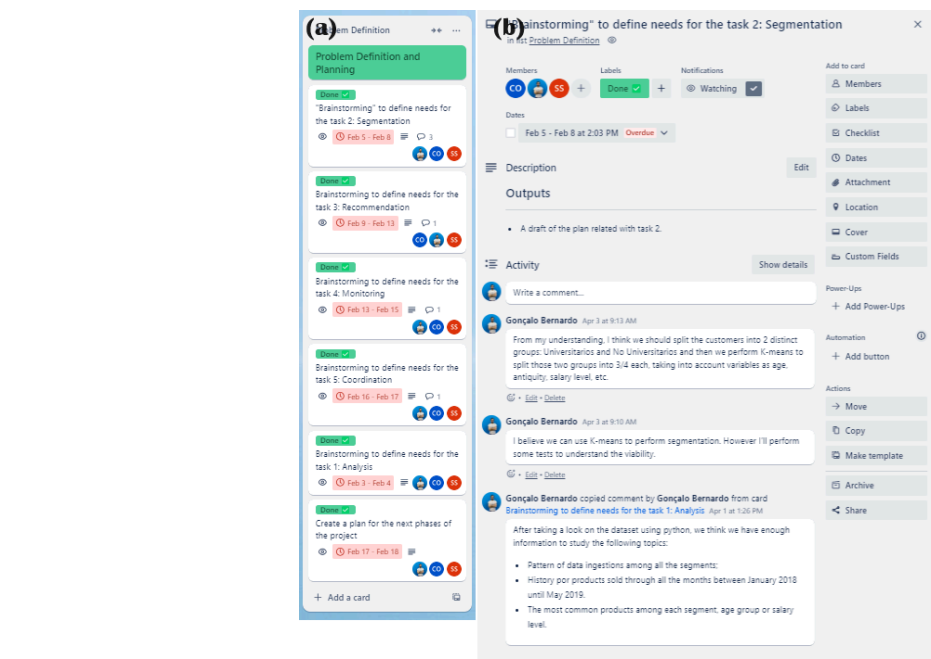


Fig 5.1 - List of cards related to task 5: Problem Definition and Planning (a) and a detail of the card “Brainstorming to define needs for task 2: Segmentation” (b).

Card	List	Labels	Members	Due date
Problem Definition and Planning	Problem Definition	Done ✓	CO, PS	Feb 17
"Brainstorming" to define needs for the task 2: Segmentation	Problem Definition	Done ✓	CO, PS	Feb 8
Brainstorming to define needs for the task 3: Recommendation	Problem Definition	Done ✓	CO, PS	Feb 13
Brainstorming to define needs for the task 4: Monitoring	Problem Definition	Done ✓	CO, PS	Feb 15
Brainstorming to define needs for the task 5: Coordination	Problem Definition	Done ✓	CO, PS	Feb 17
Brainstorming to define needs for the task 1: Analysis	Problem Definition	Done ✓	CO, PS	Feb 4
Create a plan for the next phases of the project	Problem Definition	Done ✓	CO, PS	Feb 18

Fig 5.2 - Table with information about cards related to task 5: Definition and Planning.

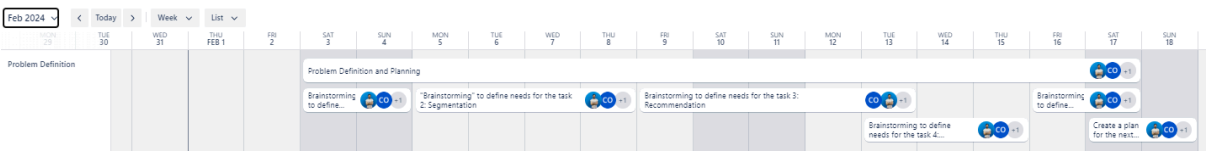


Fig 5.3 - Timeline related with task 5: Definition and Planning.