

# Sprint 5 Review

Project Code Defenders - Robo Tournament

Team Codebenders

Sprint retrospective

# Agenda

- Our Team
- Development Progress
- Integration and Unit Tests progress
- Acceptance Tests Plan
- Communication with the Customer
- Product Backlog
- Overall Progress Review
  - Sprint burndown chart
  - Comparison with previous sprints
  - Competence matrix
- Sprint 5 verdict
- Sprint 5 retrospective

# Our Team

Frontend

Product Owner



Fanny Delnondedieu

Scrum Master



Dominik Brdar



Fabio Patella



Simone Mezzaro



Riccardo Nava



Andrea Restelli

Testers



Hrvoje Rom

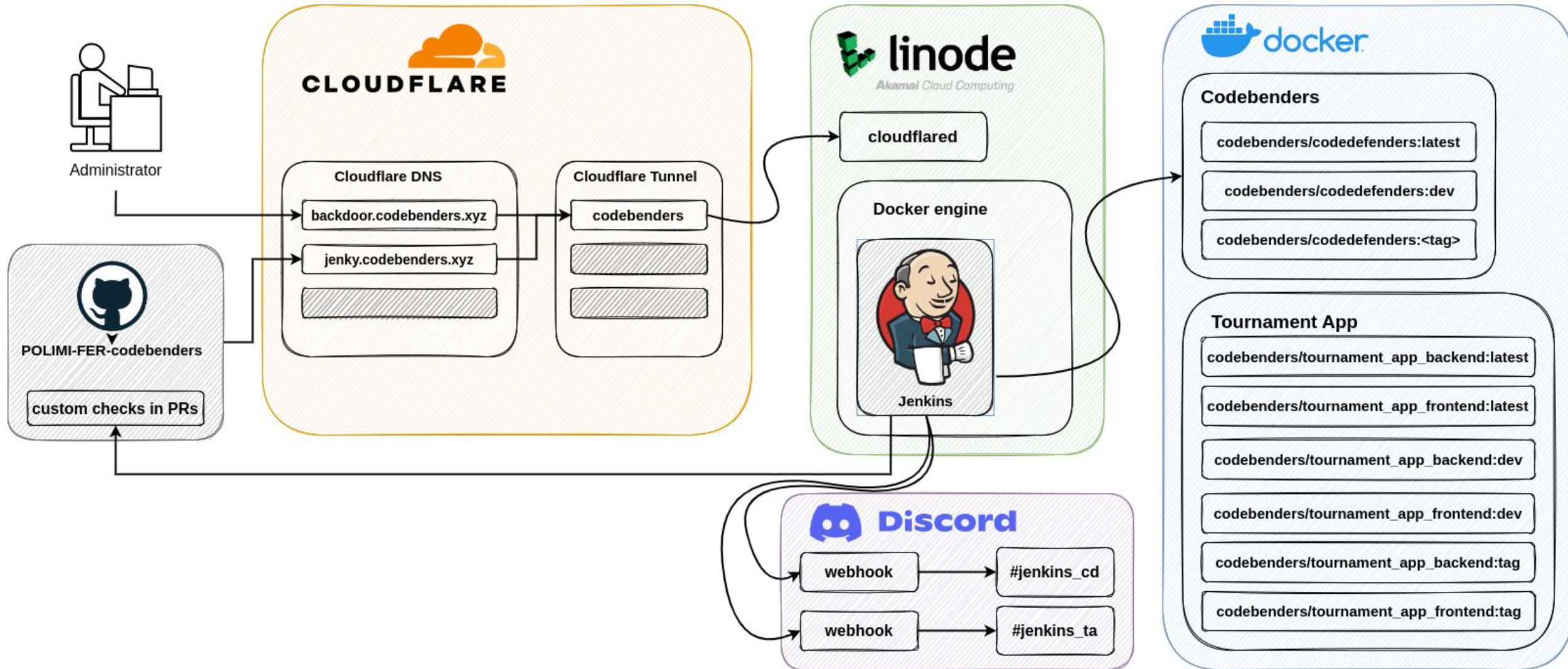
Backend

# Development progress

- We completed remaining functionalities and details of the tournament application
  - Integrated Join Team and Tournament Ending functionalities
  - Added buttons and timers on CodeDefenders overlay
  - Improved user interface and fixed some bugs
- We implemented the streaming component
- We didn't manage to complete bots API. They will be addressed in sprint 6
- Some bug fixes are also left for the last sprint



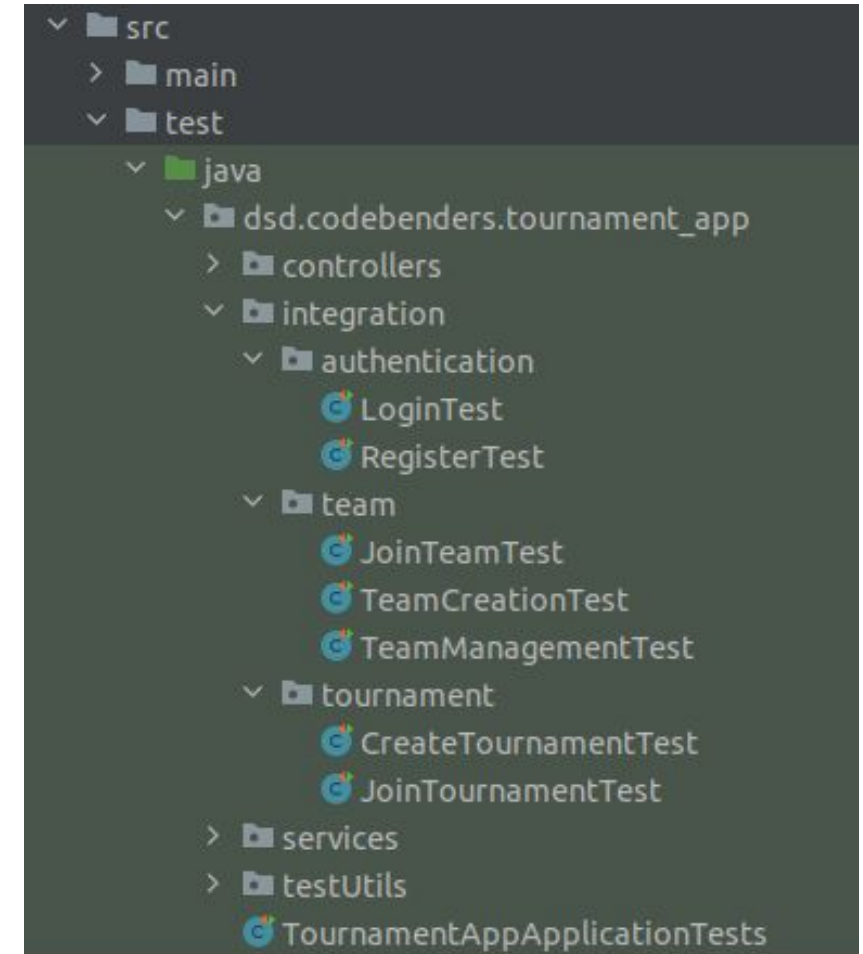
# Testing Infrastructure Diagram



# Integration and Unit Tests Progress

- Integration tests
  - testing application backend as a single unit
  - calling API with predefined values and comparing expected and actual output

```
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 45, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- jacoco-maven-plugin:0.8.8:report (report) @ tournament_app ---
[INFO] Loading execution data file /home/hrvoje/dsd/tournament_app/backend_ta/target/jacoco.exec
[INFO] Analyzed bundle 'tournament_app' with 108 classes
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 22.655 s
[INFO] Finished at: 2022-12-26T23:16:57+01:00
[INFO] -----
```





# Integration and Unit Tests Progress

## tournament\_app

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
<a href="#">dsd.codebenders.tournament_app.services</a>	<div><div></div></div>	66%	<div><div></div></div>	51%	113	236	209	642	39	119	0	12
<a href="#">dsd.codebenders.tournament_app.controllers</a>	<div><div></div></div>	43%	<div><div></div></div>	40%	72	112	137	266	25	52	0	9
<a href="#">dsd.codebenders.tournament_app.tasks</a>	<div><div></div></div>	29%	<div><div></div></div>	7%	16	24	62	101	4	11	0	5
<a href="#">dsd.codebenders.tournament_app.entities</a>	<div><div></div></div>	74%	<div><div></div></div>	65%	45	187	67	314	40	177	1	14
<a href="#">dsd.codebenders.tournament_app.responses</a>	<div><div></div></div>	40%		n/a	26	33	38	62	26	33	0	3
<a href="#">dsd.codebenders.tournament_app.entities.score</a>	<div><div></div></div>	42%		n/a	23	37	24	42	23	37	2	11
<a href="#">dsd.codebenders.tournament_app.security</a>	<div><div></div></div>	83%	<div><div></div></div>	38%	9	32	11	81	0	23	0	6
<a href="#">dsd.codebenders.tournament_app.requests</a>	<div><div></div></div>	78%		n/a	13	51	20	83	13	51	2	13
<a href="#">dsd.codebenders.tournament_app.errors</a>	<div><div></div></div>	56%		n/a	9	20	15	32	9	20	4	11
<a href="#">dsd.codebenders.tournament_app.interceptors</a>	<div><div></div></div>	0%	<div><div></div></div>	0%	5	5	8	8	3	3	1	1
<a href="#">dsd.codebenders.tournament_app.entities.utils</a>	<div><div></div></div>	81%		n/a	1	8	2	16	1	8	1	8
<a href="#">dsd.codebenders.tournament_app.entities.streaming</a>	<div><div></div></div>	89%		n/a	7	32	13	64	7	32	0	4
<a href="#">dsd.codebenders.tournament_app</a>	<div><div></div></div>	88%	<div><div></div></div>	100%	2	12	5	38	2	11	0	3
<a href="#">dsd.codebenders.tournament_app.config</a>	<div><div></div></div>	87%		50%	1	10	1	19	0	9	0	3
<a href="#">dsd.codebenders.tournament_app.utils</a>	<div><div></div></div>	97%	<div><div></div></div>	100%	1	8	1	25	1	7	0	2
<a href="#">dsd.codebenders.tournament_app.serializers</a>	<div><div></div></div>	100%		n/a	0	13	0	36	0	13	0	4
Total	2.727 of 7.610	64%	229 of 422	45%	343	820	613	1.829	193	606	11	109

# Integration and Unit Tests Progress

## dsd.codebenders.tournament\_app.services

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
<a href="#">TournamentService</a>	<div><div></div></div>	53%	<div><div></div></div>	36%	40	62	78	164	16	33	0	1
<a href="#">MatchService</a>	<div><div></div></div>	57%	<div><div></div></div>	20%	27	43	47	124	10	24	0	1
<a href="#">ServerService</a>	<div><div></div></div>	27%	<div><div></div></div>	25%	14	20	37	54	5	8	0	1
<a href="#">InvitationService</a>	<div><div></div></div>	57%	<div><div></div></div>	50%	15	22	17	49	6	11	0	1
<a href="#">PlayerService</a>	<div><div></div></div>	71%	<div><div></div></div>	35%	6	18	9	28	1	11	0	1
<a href="#">ClassService</a>	<div><div></div></div>	70%	<div><div></div></div>	50%	1	4	9	33	0	3	0	1
<a href="#">StreamingService</a>	<div><div></div></div>	93%	<div><div></div></div>	76%	8	21	8	67	0	4	0	1
<a href="#">TournamentSchedulerService</a>	<div><div></div></div>	89%	<div><div></div></div>	83%	1	5	4	25	0	2	0	1
<a href="#">TeamService</a>	<div><div></div></div>	98%	<div><div></div></div>	100%	1	31	0	80	1	13	0	1
<a href="#">CDPlayerService</a>	<div><div></div></div>	100%		n/a	0	5	0	8	0	5	0	1
<a href="#">CDGameClassService</a>	<div><div></div></div>	100%		n/a	0	3	0	6	0	3	0	1
<a href="#">RoundClassChoiceService</a>	<div><div></div></div>	100%		n/a	0	2	0	4	0	2	0	1
Total	1.060 of 3.146	66%	111 of 228	51%	113	236	209	642	39	119	0	12

## dsd.codebenders.tournament\_app.controllers

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
<a href="#">MatchController</a>	<div><div></div></div>	6%	<div><div></div></div>	0%	10	11	38	44	5	6	0	1
<a href="#">TournamentController</a>	<div><div></div></div>	54%	<div><div></div></div>	53%	23	32	31	72	3	6	0	1
<a href="#">CDServerController</a>	<div><div></div></div>	7%	<div><div></div></div>	0%	16	17	31	35	6	7	0	1
<a href="#">StreamingController</a>	<div><div></div></div>	12%	<div><div></div></div>	0%	3	4	9	12	1	2	0	1
<a href="#">InvitationController</a>	<div><div></div></div>	55%	<div><div></div></div>	0%	4	8	9	21	2	6	0	1
<a href="#">AuthenticationController</a>	<div><div></div></div>	82%	<div><div></div></div>	81%	6	19	7	36	2	8	0	1
<a href="#">TeamController</a>	<div><div></div></div>	77%	<div><div></div></div>	37%	6	14	6	31	2	10	0	1
<a href="#">ClassUploadController</a>	<div><div></div></div>	33%		n/a	3	4	5	10	3	4	0	1
<a href="#">PlayerController</a>	<div><div></div></div>	71%		n/a	1	3	1	5	1	3	0	1
Total	669 of 1.184	43%	71 of 120	40%	72	112	137	266	25	52	0	9




















# Acceptance Tests Plan

- We listed all the actions that can be performed in our application
  - Each action maps one or more requirements by the customer and is covered by one specific acceptance test
- We plan to go through all the tests together with our customer to verify that they are successful and that the behavior of the application is the one required by him
- Finally, the customer will express whether the product we implemented meets all his needs or not

# Communication with the customer

- We had a meeting with the customer near the end of the sprint
  - We presented our plan for acceptance testing, and customer agreed with it
  - We showed a demo of the streaming component. The customer was satisfied with it
- We agreed to have one last meeting during the next sprint to present the final project and go through the acceptance tests together

# Product Backlog

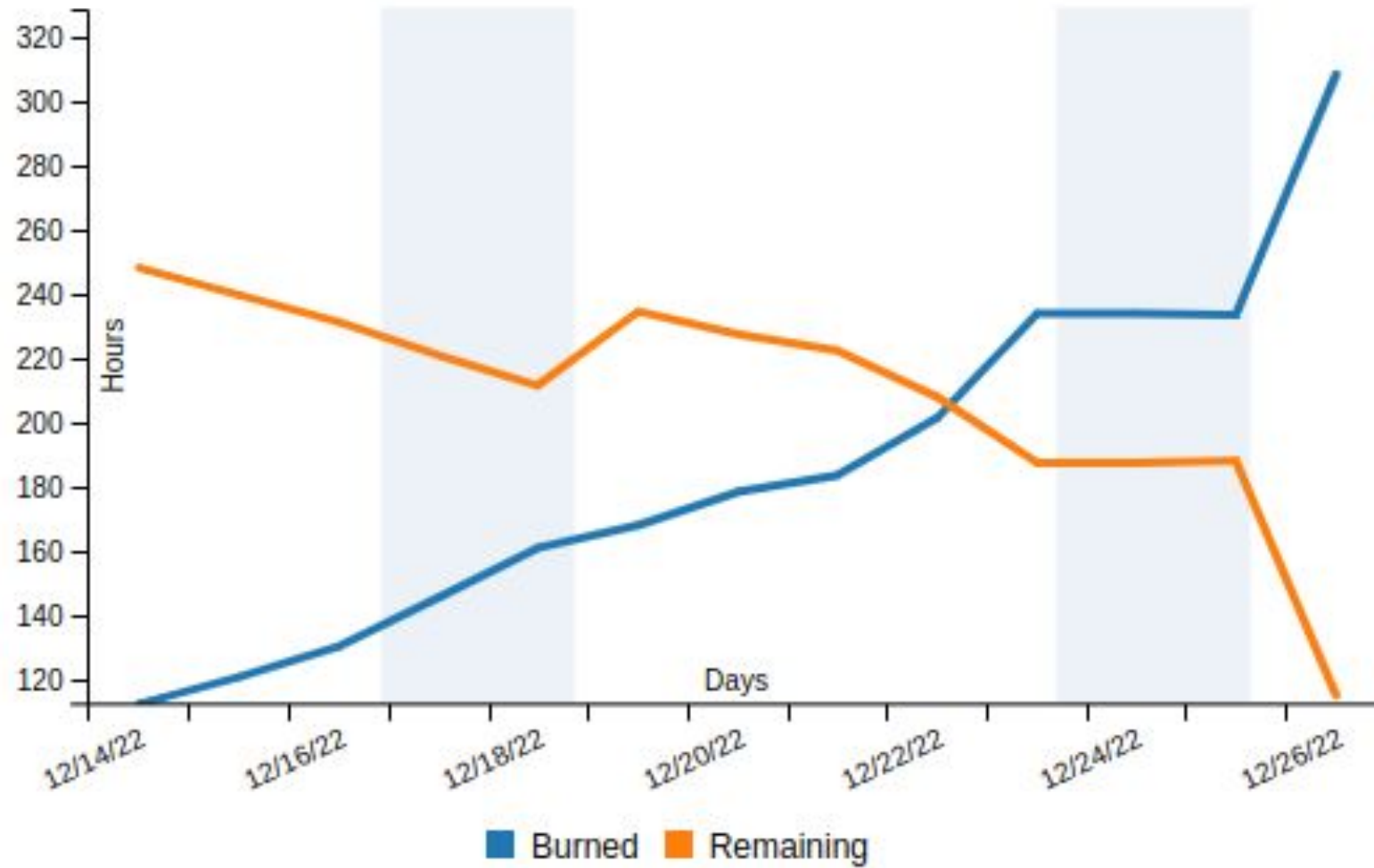
not mandatory	 CDF-36 Starting games with notification	DONE ▾	
	 CDF-38 Return to tournament app on game end	DONE ▾	
	 CDF-39 view game stream	DONE ▾	
	 CDF-40 notifications of game stream update	DONE ▾	
	 CDF-69 Efficient flow of updates	TO DO ▾	
	 CDF-43 Bots can play	IN PROGRESS ▾	
	 CDF-44 Bots can be trained	IN PROGRESS ▾	
	 CDF-42 Matchmaking	TO DO ▾	
	 CDF-97 Search, filter, sort lists of tournaments and teams	TO DO ▾	
	 CDF-104 Join team with request to team leader	TO DO ▾	
	 CDF-106 Develop list of invitations set by a team frontend	TO DO ▾	
	 CDF-107 Implement tournament trees for knockout trees in frontend	TO DO ▾	
	 CDF-118 Fault tolerance for CD servers	TO DO ▾	



# Detailed Functionalities of current MVP

- Authentication: login and registration
- Team:
  - Create team
  - Join team
  - Invite other players
  - Kick team member
  - Manage team
- Game streaming
- Tournament
  - Create tournament
  - Display tournaments
  - Join tournament
  - Start tournament
  - Progress through the tournament
  - Tournament ending
- Game
  - Start game
  - Play game on CodeDefenders

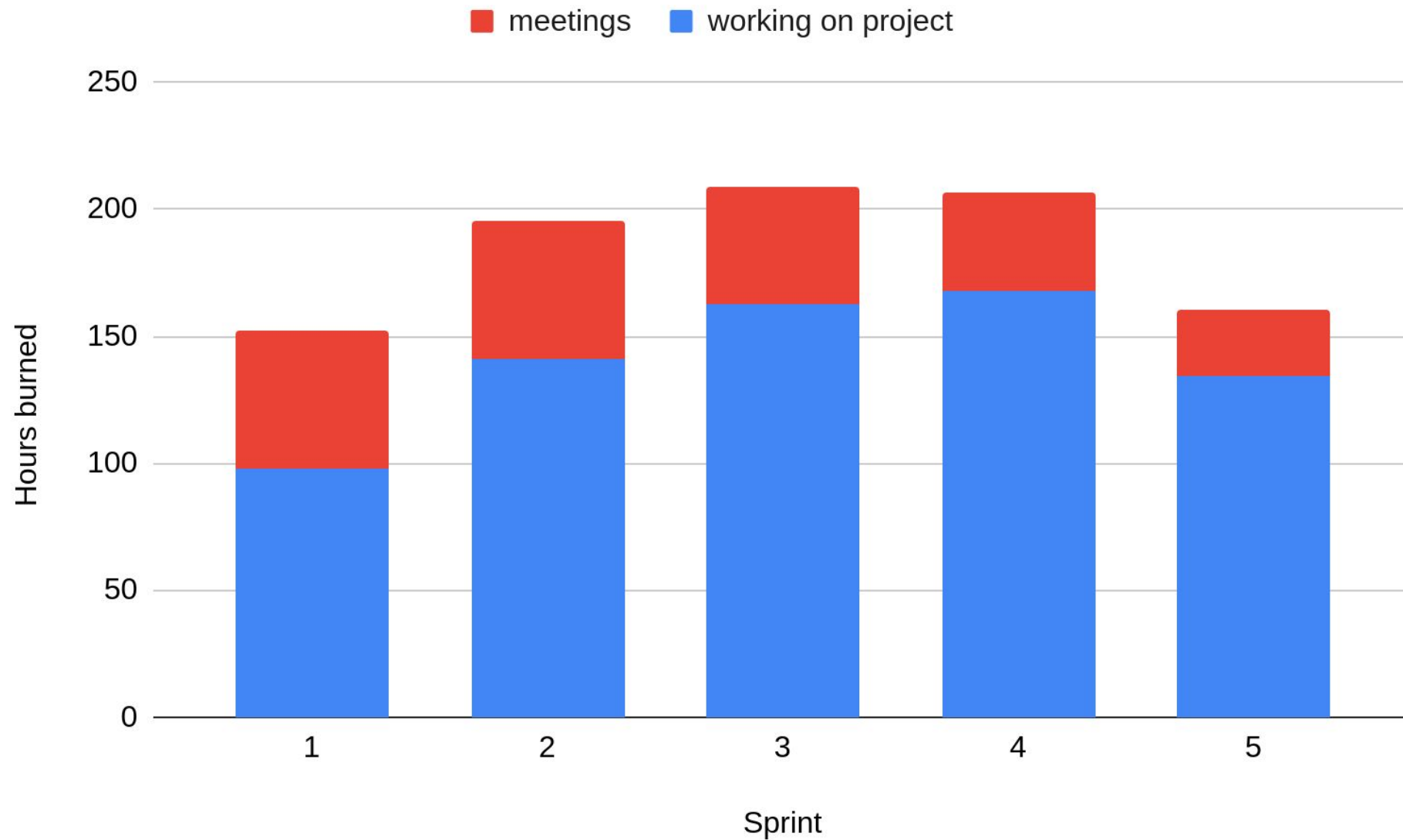
# Sprint 5 Burndown Chart



# Comparison with Previous Sprints

	Time spent on meetings	Development
Sprint 0	32h 40min	-
Sprint 1	54h 50min	97.59 h
Sprint 2	54h 15min	141 h
Sprint 3	45h 35min	163 h
Sprint 4	38h 50min	167.67 h
Sprint 5	25h 40min	134.75 h





Sprint comparison

# Development Hours Spent by Each Team Member

	Andrea	Dominik	Fabio	Fanny	Hrvoje	Riccardo	Simone
Sprint 1	12h 40m	16h 10m	17h	11h 45m	13h	11h 30m	15h 30m
Sprint 2	24h 30m	18h	22h	12h	14h	30h	20h 30m
Sprint 3	18h	10h 30m	34h	15h 30m	19h	39h	27h
Sprint 4	15h 45m	15h	31h 9m	20h 30m	17h	35h 15m	33h
Sprint 5	12h	15h 30m	17h	16h 30m	26h 30m	29h 45m	17h 30m

# Competence Matrix

Name of the team member	Communication skills	Programming	Writing documentation	Agile process
Fanny	8	7	6	8
Dominik	7	7	6.5	8
Hrvoje	6->7	5->6	8	4->5
Andrea	8	6	6	5
Fabio	6	8	7	4
Riccardo	5	8	7	5
Simone	4.5	8.5	6	5

\* skills are ranked 0-10 (0 meaning no skill at all, and 10 meaning excellent)



# Sprint 5 Verdict

Progress on integration and unit testing for tournament application

Defined plan for acceptance tests

Refined tournament application and completed streaming component!

We agree that Sprint 5 was successful

# Sprint 5 retrospective

What worked well?

What could be improved?

What will we commit to doing in the next Sprint?

*Scrum Team members  
make actionable  
commitments*

# What worked well?



- We improved bug tracking
  - GitHub issues are great tool for that
  - The whole team participated actively in discovering and solving bugs
- Progress in testing
  - we managed to do more testing
  - testing infrastructure helped us resolve issues before merging
- Review and pull request
- Communication and organisation are better
- The streaming component, a crucial part of the project, was implemented very quickly
- Customer is happy with our project status



# What can be improved

- Try to be more in contact with supervisors
- Revise documentation again to make it better linked and well organised
  - Check if we forgot to document something
  - Explain team decisions
  - Show progress on project process
- Have a better demo with different player as the customer suggested

# What we committed to in this sprint?

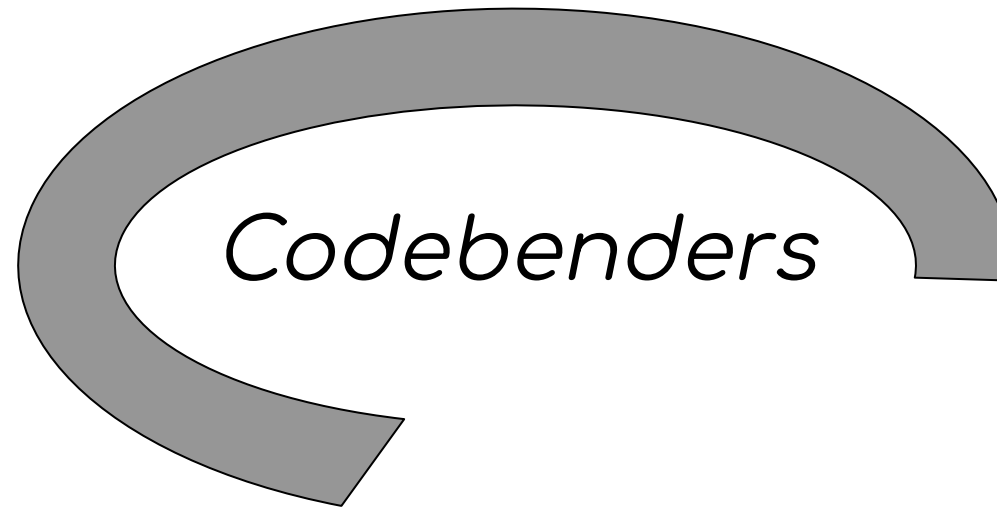
- Bug reporting and handling 
- Availability of testing infrastructure 
- Take more time to estimate time/effort/competence needed for tasks

# What will we commit to in the next sprint?

- Revise documentation
- Prepare report for SCORE competition
- Improve demo of our final product
- Address as many bugs as possible
- Continue to improve UI

# Thank you all for attending

## Questions?



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