



# GyroGame

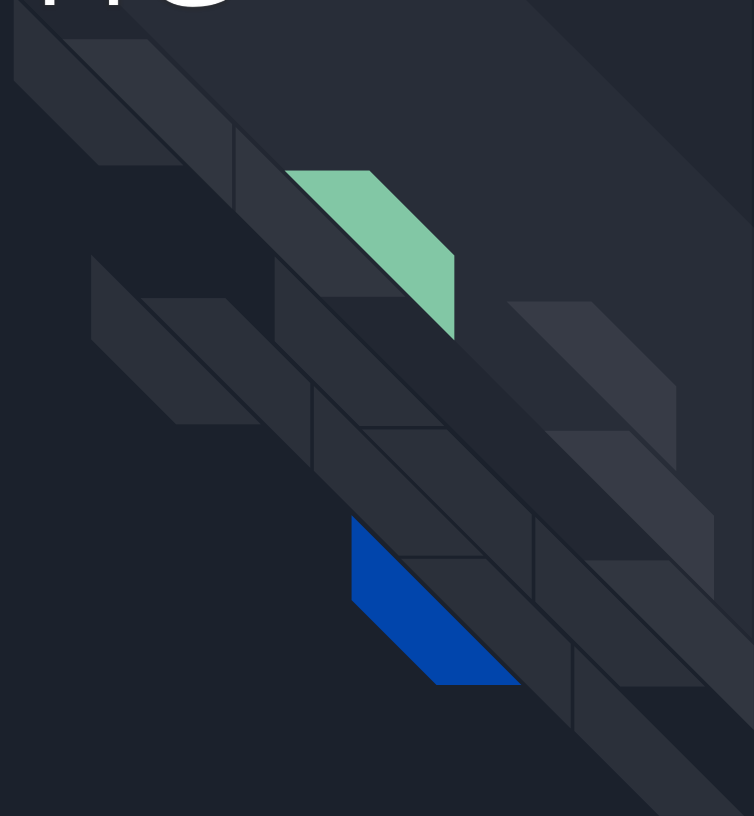
Final Presentation





# GyroGame

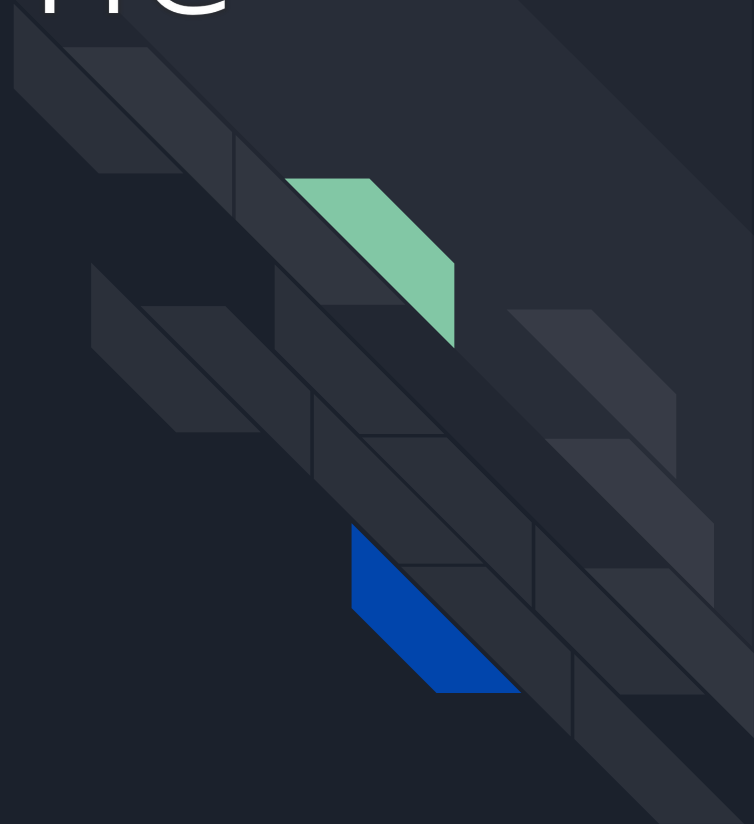
Trailer





# GyroGame

Business





# Business Vision



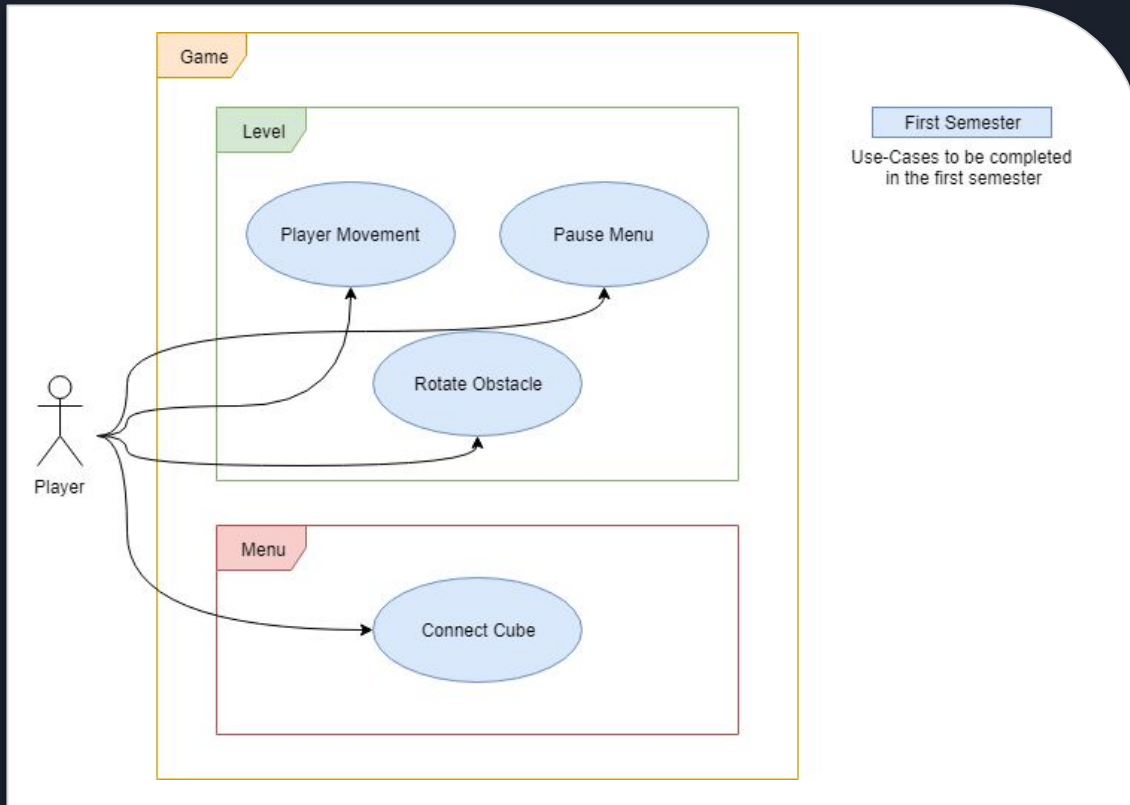
- Innovative Concept
- Merge Physical and Digital
- Inspire Makers





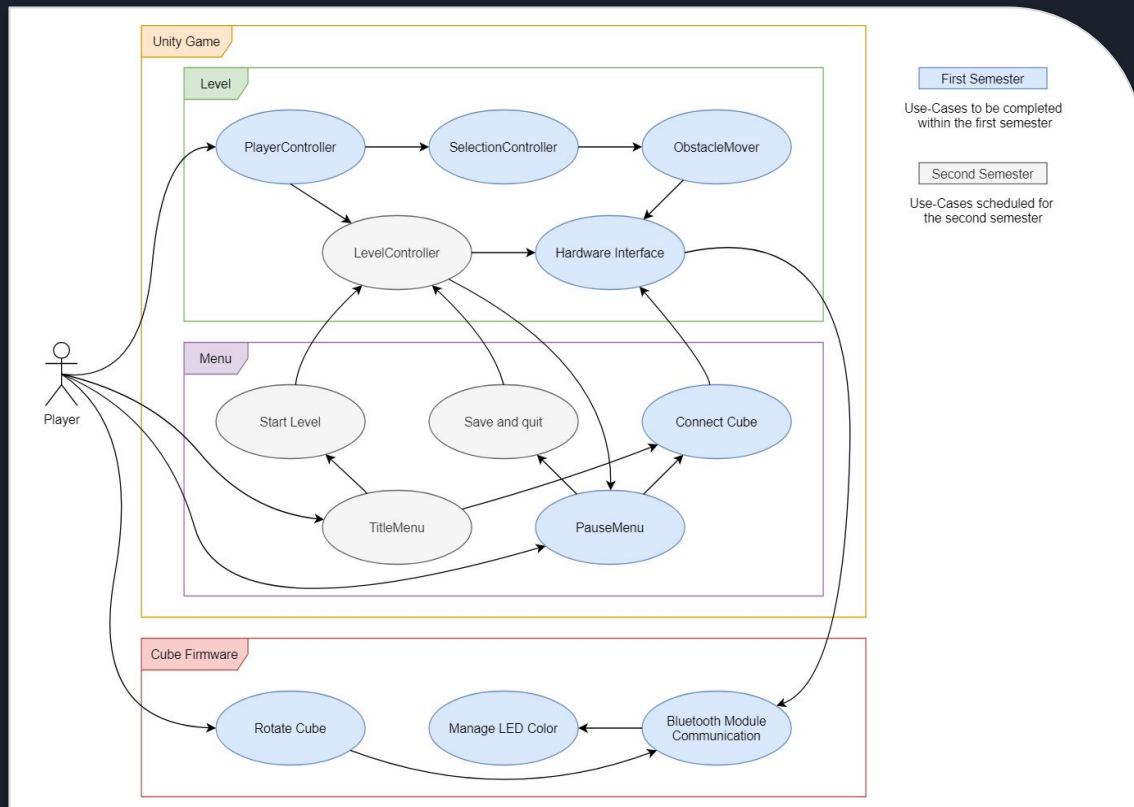
# Business

## Scope first Semester





# Business Scope second Semester





# Business Technology Stack



Project Management



Version Control



Development Environments



# Business Youtrack



- Time Tracking
- Task Distribution
- Sprint Management
- Reports Generation

The screenshot displays the Business Youtrack interface. At the top, there is a navigation bar with the Youtrack logo and menu items: Issues, Dashboards, Agile Boards, Reports, Projects, and a New Issue button. A search bar is located below the navigation bar, containing the text "Everything" and "Enter search request".

On the left side, there is a sidebar menu with the following sections:

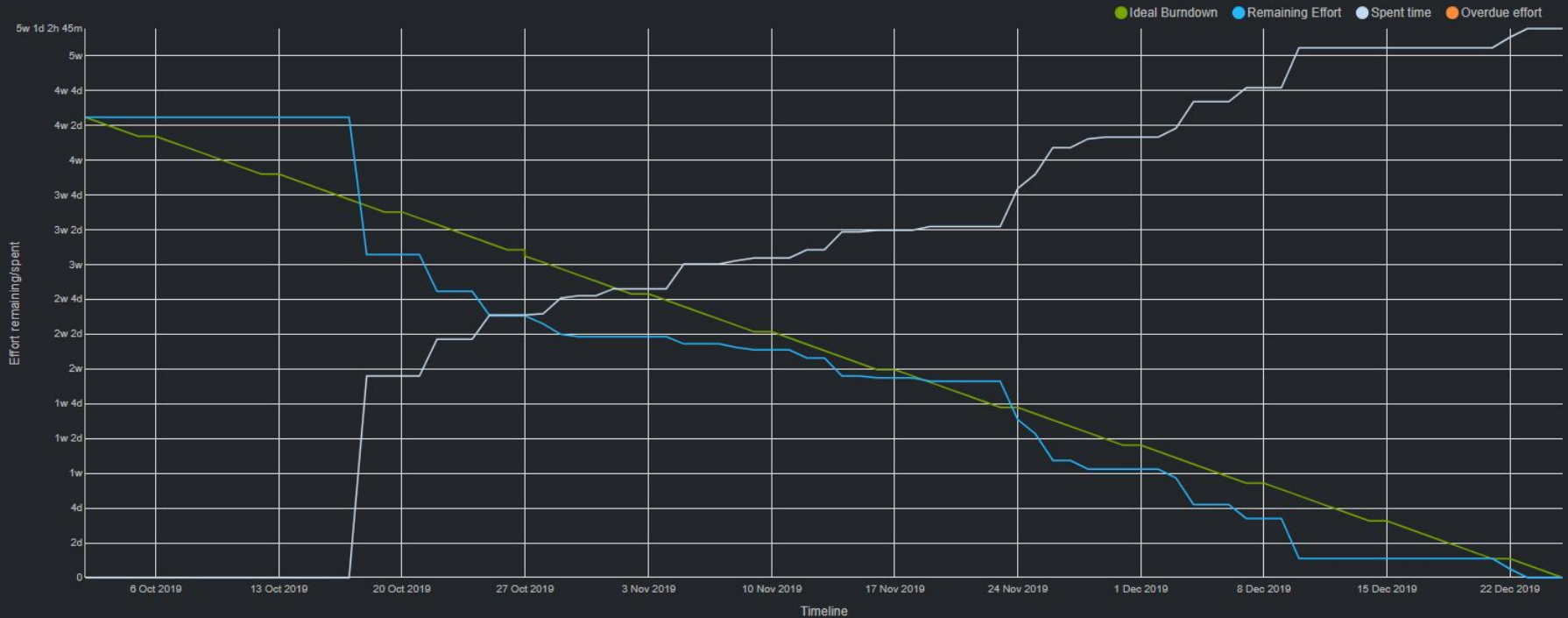
- PROJECTS (1)
- SAVED SEARCHES (7)
  - Assigned to me
  - Commented by me
  - Current Sprint
  - Reported by me
  - Unassigned in GG
  - Unresolved
- TAGS (1)
  - Star

The main area shows a list of 102 issues, sorted by Updated. Each issue entry includes a status icon (C for Critical, N for Normal), a title, a date, a priority level, a state, a tag, and the assignee. The issues listed are:

- GG-86 Peer Reviews - SZW7 (Critical, Done, 1h, Simon König, S2W7 - Const | Construct | Task, Manuel Piroch, 20:06)
- GG-94 Peer Reviews - SZW10 (Critical, Done, 1h, 1h, Manuel Piroch | S2W10 - Trai | Transition | Task, Manuel Piroch, 14:34)
- GG-103 Fix player movement (Normal, Done, 1h, 2h, Manuel Piroch | S2W10 - Trai | Transition | Task, Manuel Piroch, 28 Jun)
- GG-100 Write script for promotional video (Normal, Done, 1h, 1h, Simon König | S2W10 - Trai | Transition | Task, Manuel Piroch, 28 Jun)
- GG-104 Get assets / record voiceclns for promotional video (Normal, Done, 2h 30m, 3h 30m, Manuel Piroch | S2W10 - Trai | Transition | Task, Manuel Piroch, 28 Jun)
- GG-07 Add "no cube mode" (Normal, Done, 1h 30m, 3h, Manuel Piroch | S2W10 - Trai | Transition | Task, Manuel Piroch, 28 Jun)
- GG-09 Prepare release alpha 1 (Normal, Done, 1h, 2h, Manuel Piroch | S2W10 - Trai | Transition | Task, Manuel Piroch, 28 Jun)
- GG-102 Reorganize scripts (Normal, Done, 1h, 1h, Manuel Piroch | S2W10 - Trai | Transition | Task, Manuel Piroch, 28 Jun)
- GG-85 Blog Post - SZW7 (Critical, Done, 1h, Manuel Piroch | S2W7 - Const | Construct | Task, Manuel Piroch, 28 Jun)
- GG-08 Cut promotional video (Normal, Done, 3h, 3h 30m, Manuel Piroch | S2W10 - Trai | Transition | Task, Manuel Piroch, 28 Jun)
- GG-06 alternate obstacle colors (Normal, Done, 1h, 2h, Manuel Piroch | S2W8-9 - Cr | Construct | Task, Manuel Piroch, 28 Jun)



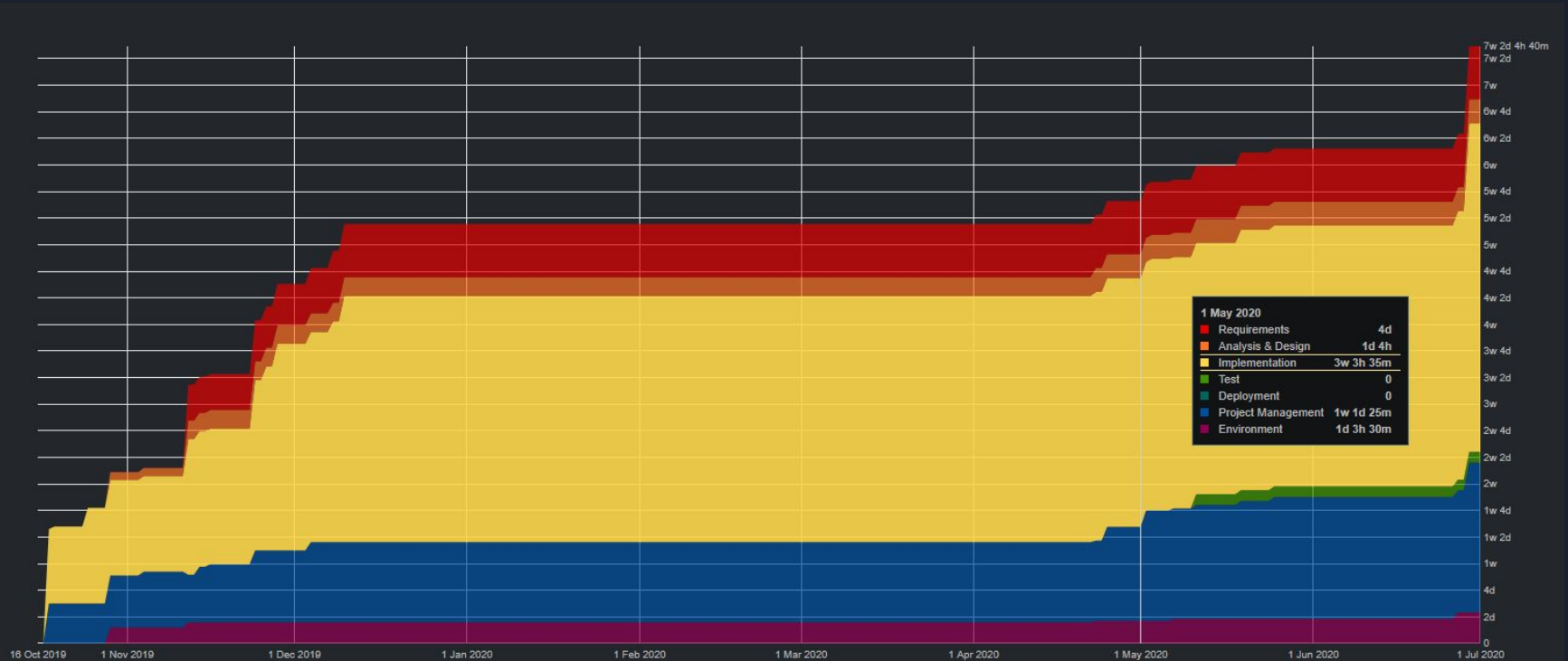
# Business Burndown Chart - First Semester



# Business Burndown Chart - Second Semester





# Business Cumulative Flow Diagram





# Business Total Time



Users	Time estimated	Time spent
<b>Total time</b>	<b>212h 40m</b>	<b>234h 40m</b>
 Manuel Piroch		133h 35m
 Simon König		101h 05m

# Business Time Estimation



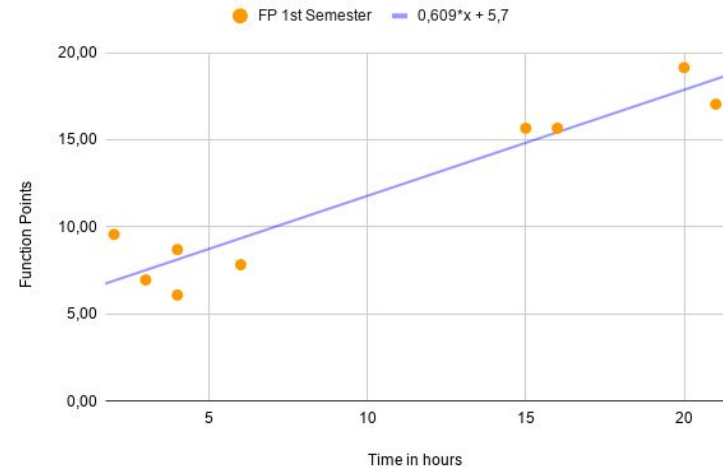
## First Semester UCs

Use Case	Time Spent in hours	FP 1st Semester
PlayerController	15	15,66
SelectionController	4	6,09
HardwareInterface	20	19,14
PauseMenu	2	9,57
ObstacleMover	3	6,96
Rotate Cube	21	17,04
Bluetooth Module Communication	16	15,66
ConnectCube	4	8,7
Manage LED Color	6	7,83

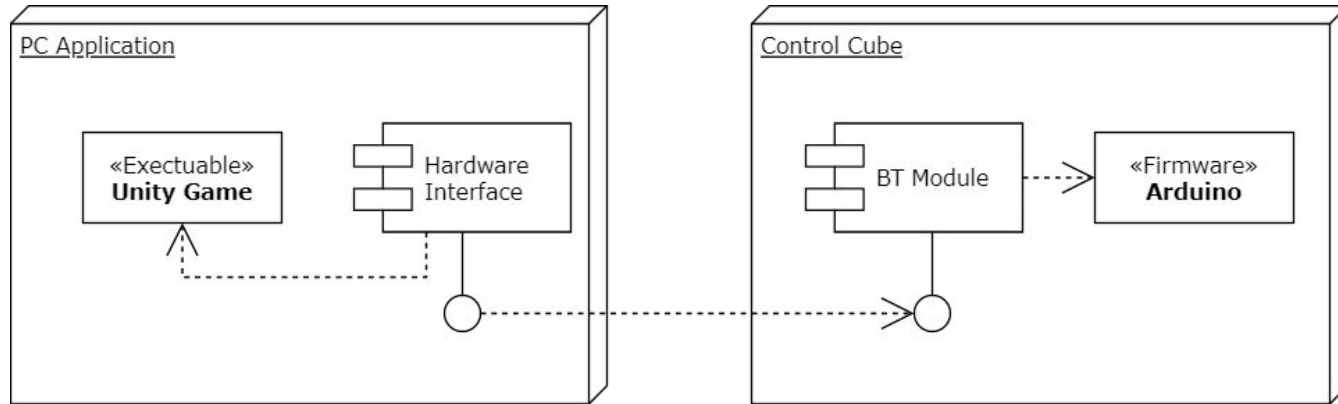
## Second Semester UCs

Use Case	Estimated Time in hours	FP 2nd Semester
LevelController	19,47558	22,62
Start Level	9,40881	6,09
Save and quit	14,70711	14,79
TitleMenu	12,05796	10,44

GyroGame - Function Points



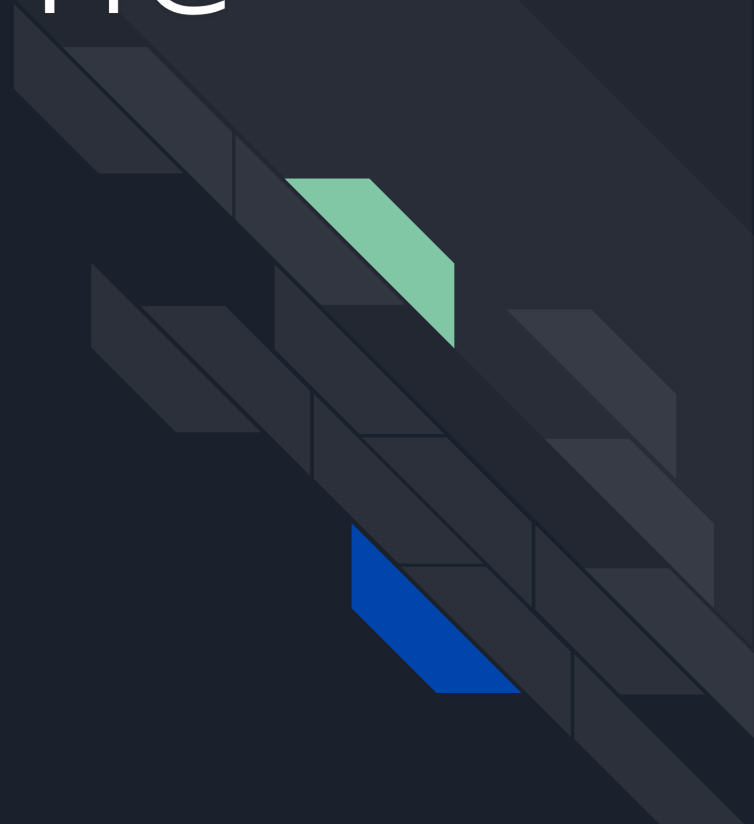
# Technology Software Architecture





# GyroGame

Quality





# Quality Testing

- Friends & Family
- Blog Readers



**Jannik (Card Game)** says:

June 28, 2020 at 8:55 PM [Edit](#)

Hey there,

so I tested your game and it works good. I tested it with mouse and keypad. I played to the end and took a screenshot to proof it, but I can't attach it into this comment unfortunately....



# Quality Risk Management

- No Risk - No Fun
- Own Experience



Risk name	Risk description	1 - 100%	1-10	1-10	Risk Mitigation	Person in Charge of Tracking
		Probab. of Occurrence	Risk Impact	Risk Factor		
Wrong priorities	Less important Tasks being more prioritized than ones that are crucial to finishing the project	70%	7	4,9	Extensive planning of sprints to define task priorities beforehand	Manuel Piroch
Underestimated complexity	The project goals are simply too hard to achieve with our level of experience	40%	8	3,2	Regular self-reflection of our progress	Simon König
Critical firmware bug	Unfixable, game breaking bug in our controller firmware	30%	10	3	Always keep prototypes of the controller with a working hardware/software revision on hand	Simon König
Hardware failure	Parts or all of the cube hardware breaks	30%	9	2,7	Keep spare modules ready to repair or rebuild a cube if necessary	Simon König
Lack of time	Not finishing our scope of this semester in time	20%	10	2	Plan and finish sprints carefully, be careful about time management	Manuel Piroch
Coronavirus	Unexpected problems related to a global pandemic (e.g. Internet connection failing)	15%	7	1,05	Nothing really we can do about that	Whole Team
Workstation failure	A team member's workstation breaks down	10%	8	0,8	Have a backup device ready that can be used as an alternative	Whole Team
Data loss	Loss of progress due to file corruption	7%	7	0,49	Version control on GitHub and regular backups	Manuel Piroch



# Quality Design Patterns

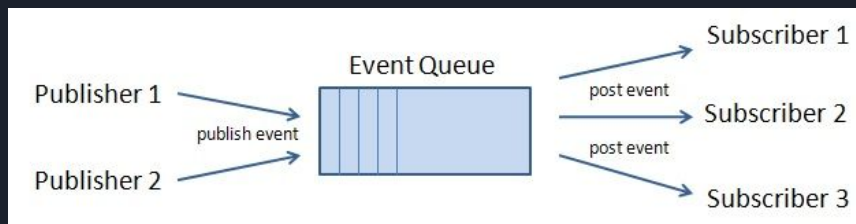
## Singleton

43 references

```
public static HardwareInterface Instance { get; private set; }
```

## Event Queue

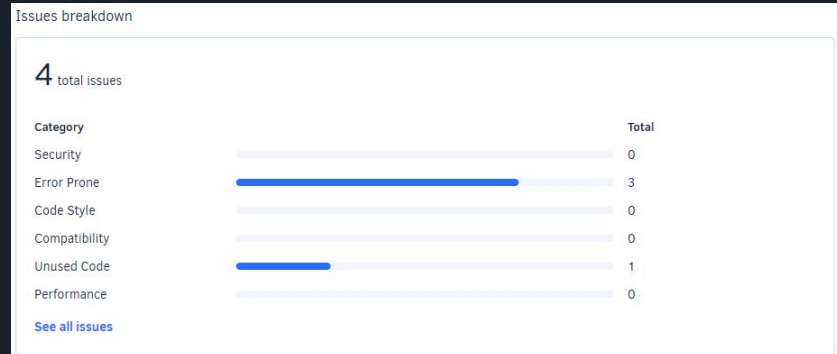
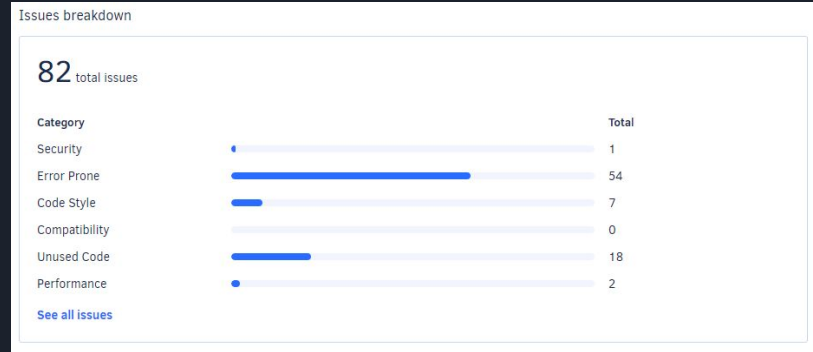
```
public event CubeStatusChangeHandler CubeConnectedEvent;  
public event CubeStatusChangeHandler CubeDisconnectedEvent;
```



# Quality Metrics



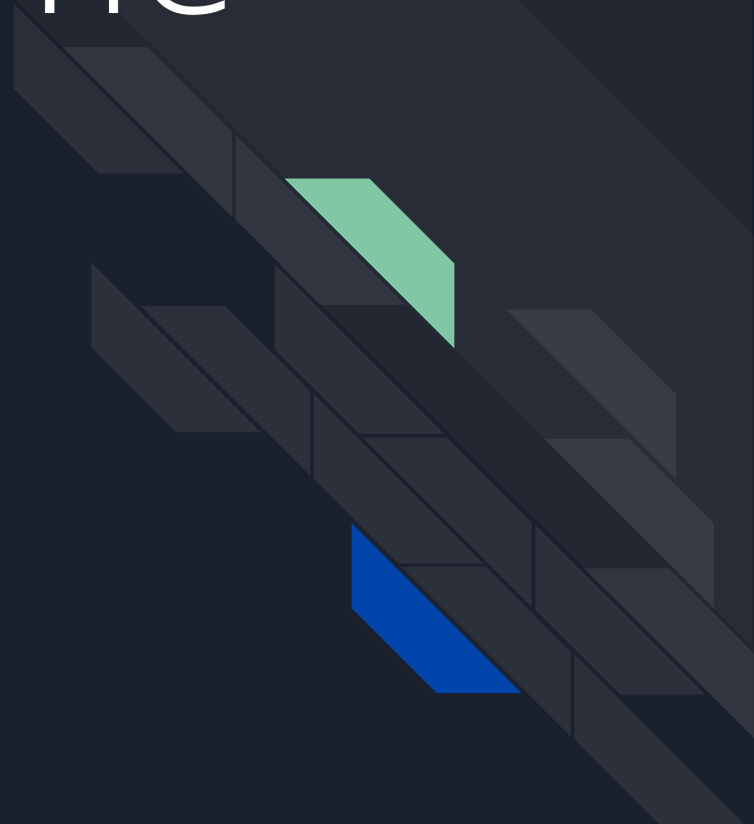
- Codacy
- Automated Code Reviews
- Improves Code Quality
- High Standards





# GyroGame

Live-Demo



Thank you!

