

Tetris Project

CDR - Project 5A GPSE

03/11/2021



Marchand Loïc
5A GPSE
2021-2022

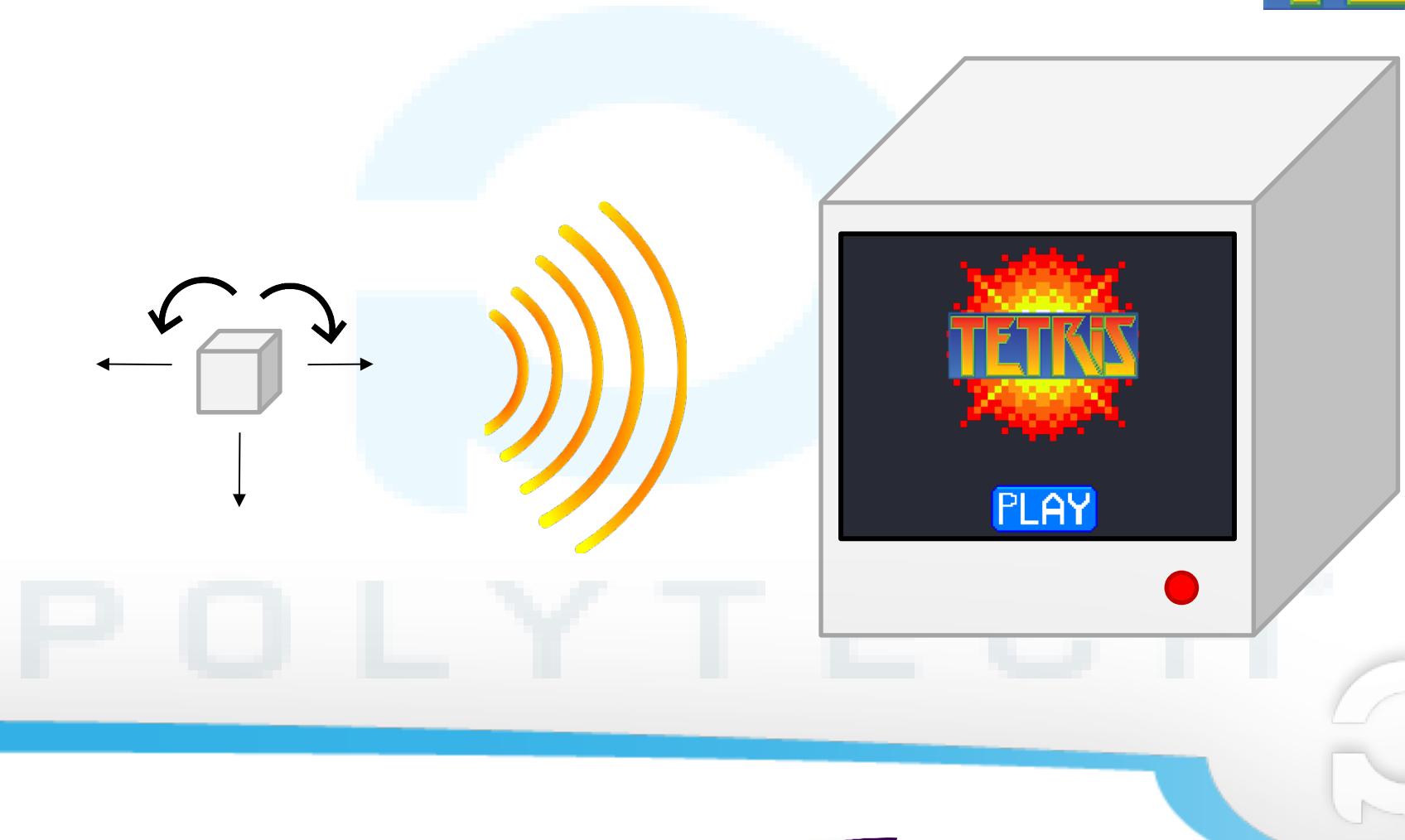


SUMMARY



1. Presentation of the project
2. Tasks
3. Components
4. Risk
5. Planning
6. Skills

Presentation of the project



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Presentation of the project



- Weight : < 500g
- Dimensions : 7cm x 7cm x 7cm (all the control cube)
and 5cm x 5cm x 5cm (the electronic part of the cube)
- Autonomy : 1 hour



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Presentation of the project



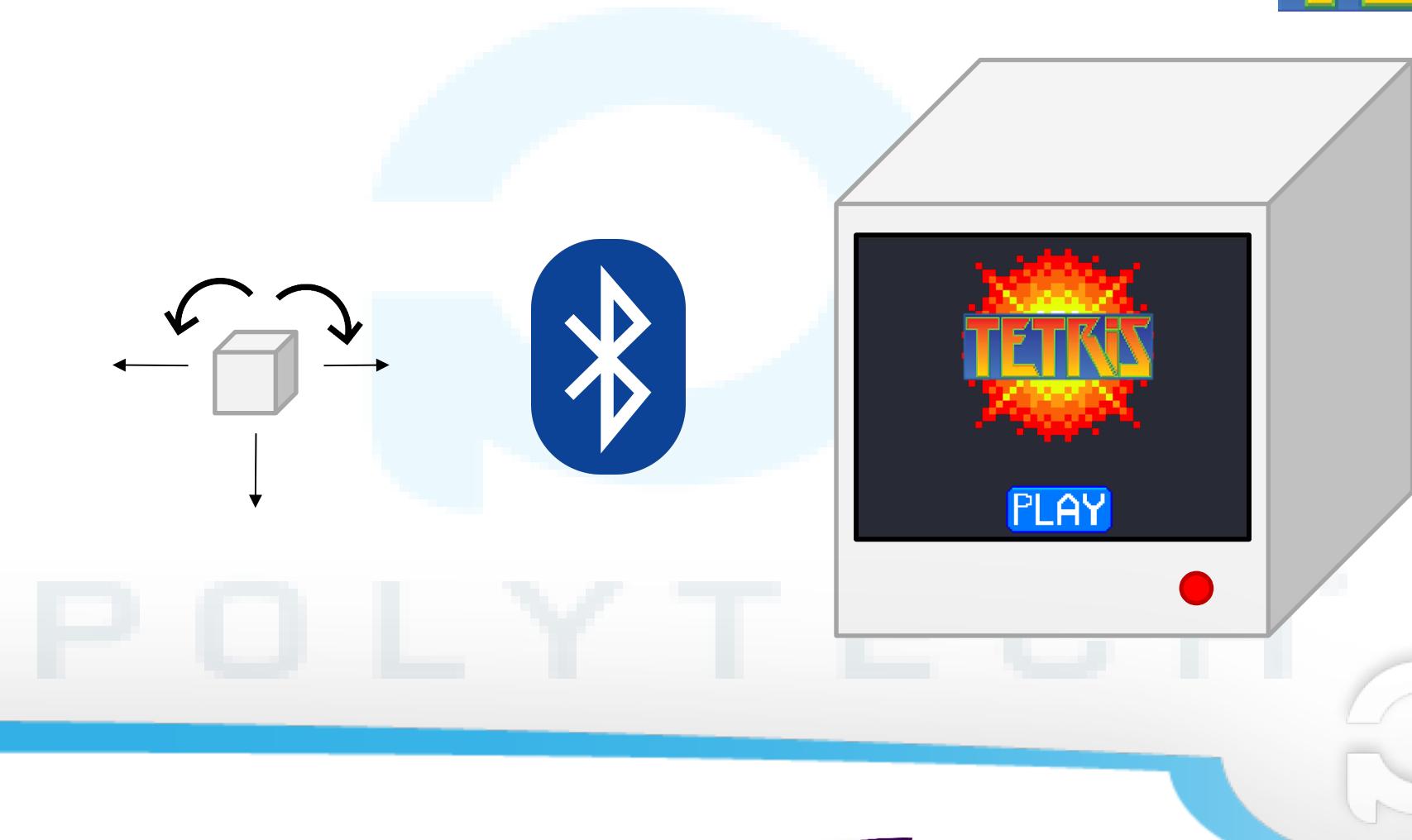
- Dimensions : 50cm x 50cm x 50cm
- Screen : 19inches
- Weight : 8kg



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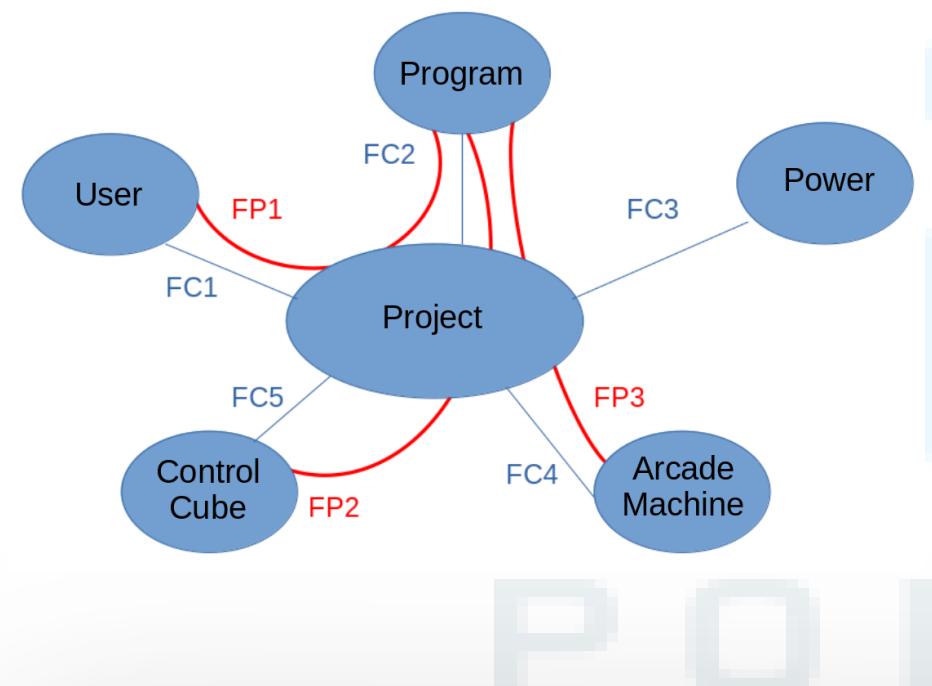


Tasks



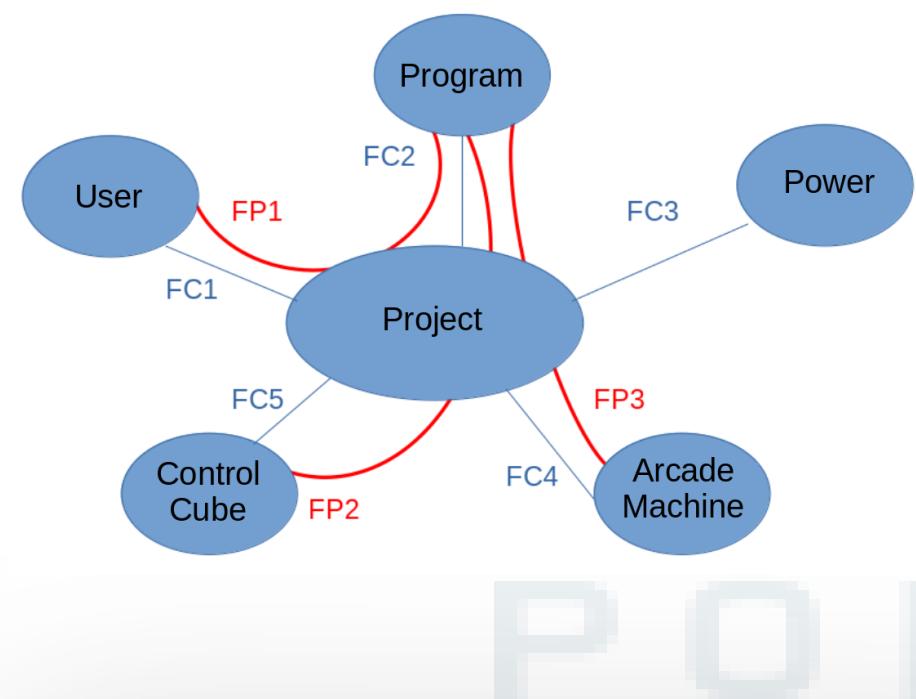
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Tasks



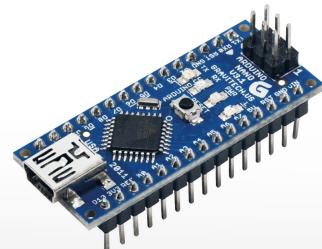
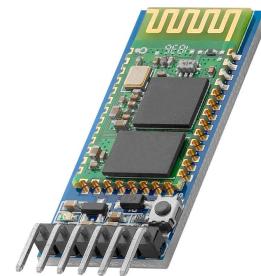
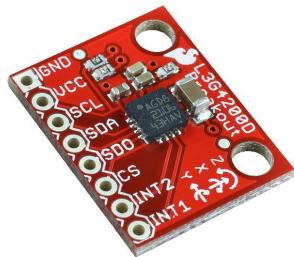
| | | Main function | Technical function | Criterion |
|-----|-------|---|---------------------------|---|
| PF1 | PF1.1 | User can play Tetris | A user-friendly interface | Usable by a 3 years old children |
| PF2 | PF2.1 | Having a cube that allows the Tetris to be controlled remotely by movements | Wireless control cube | Lenght : 2 m |
| | PF2.2 | | Rechargeable | Time of use : 1h Recharge time : 30min |
| | PF2.3 | | Easy to use | Usable by a 3 years old children |
| | PF2.4 | | Be fall resistant | Height : 2m |
| | PF2.5 | | Visually attractive | |

Tasks



| | | Main function | Technical function | Criterion |
|-----|-------|--------------------------------------|------------------------|--|
| PF3 | PF3.1 | Play Tetris on an arcade terminal | Good quality | Square box : 50cm x 50cm x 5cm Screen : 18inches Weight : 8kg |
| | PF3.2 | | Interact with the game | Lighting effect |
| CF1 | | Be intuitive | | Simple control |
| CF2 | | Python program must be flexible | | Possibility of putting the instructions we want |
| CF3 | | Arcade machine works with main power | | 230V |
| CF4 | | Good quality of video and sound | | Screen and speakers |
| CF5 | | Be ergonomic | | Weight < 500g |

Components



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Components



Risk



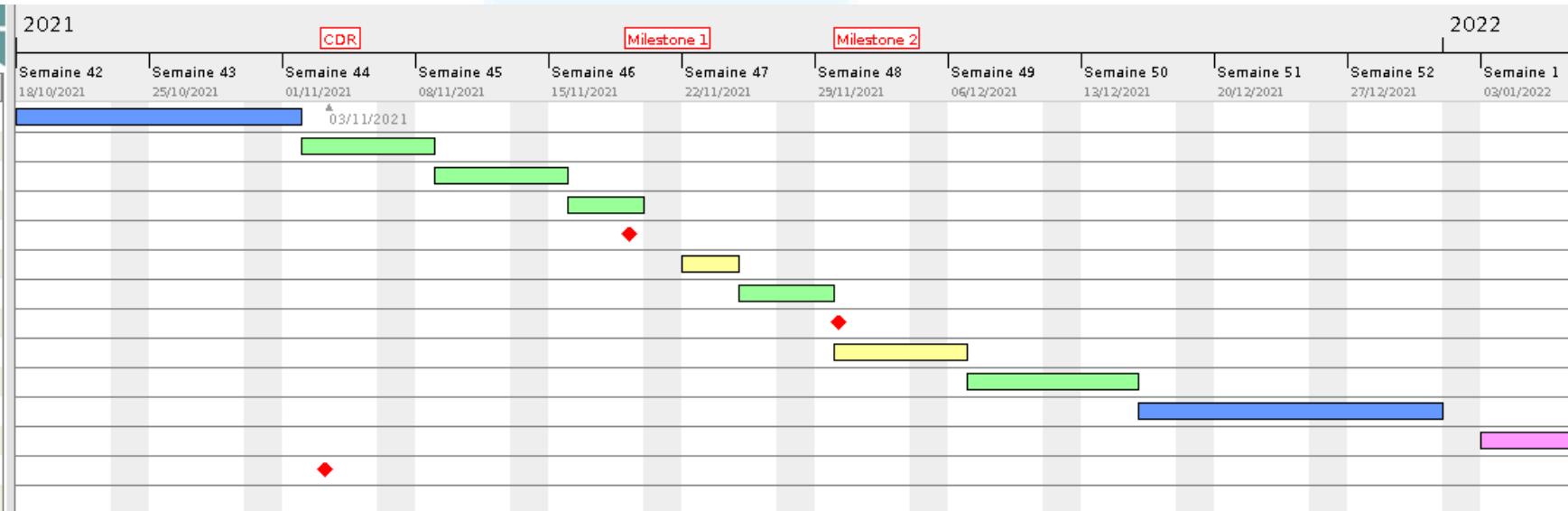
| Issue : | Frequency | Gravity | Criticaly | Action plan |
|--------------------------------|-----------|---------|-----------|---|
| Delay in components delivering | 2 | 4 | 8 | Plan tasks that do not requires component |

Planning



GANTT project

| Nom | Date de d... | Date de fin |
|------------------------|--------------|-------------|
| • Find a Tetris pro... | 18/10/20... | 01/11/20... |
| • Study the auton... | 02/11/20... | 08/11/20... |
| • Test the differe... | 09/11/20... | 15/11/20... |
| • Send data with ... | 16/11/20... | 19/11/20... |
| • Milestone 1 | 19/11/20... | 19/11/20... |
| • Test interaction ... | 22/11/20... | 24/11/20... |
| • Design | 25/11/20... | 29/11/20... |
| • Milestone 2 | 30/11/20... | 30/11/20... |
| • Connect the tiny... | 30/11/20... | 06/12/20... |
| • Elec card of the ... | 07/12/20... | 15/12/20... |
| • End of the code | 16/12/20... | 31/12/20... |
| • Assembling | 03/01/20... | 13/01/20... |
| • CDR | 03/11/20... | 03/11/20... |
| • Final Oral | 14/01/20... | 14/01/20... |



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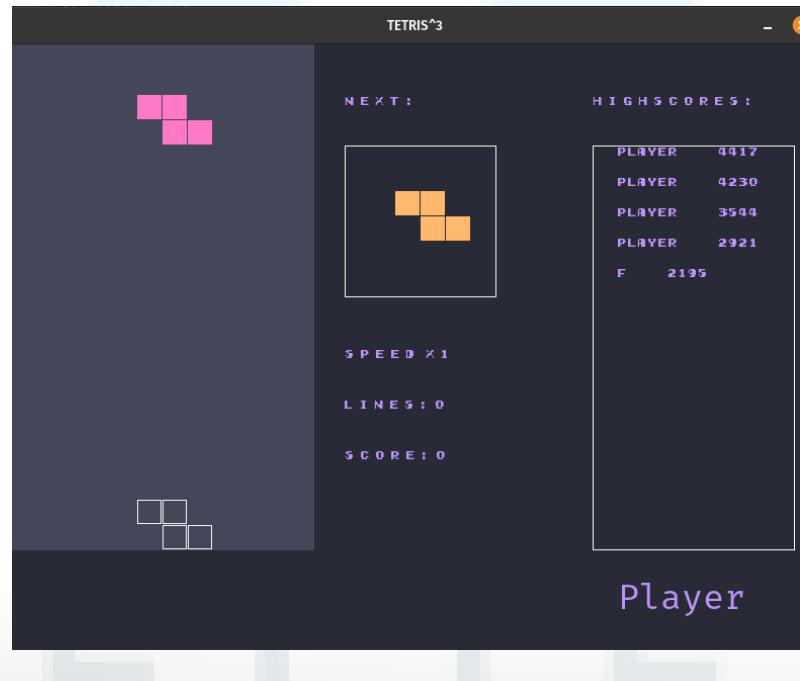
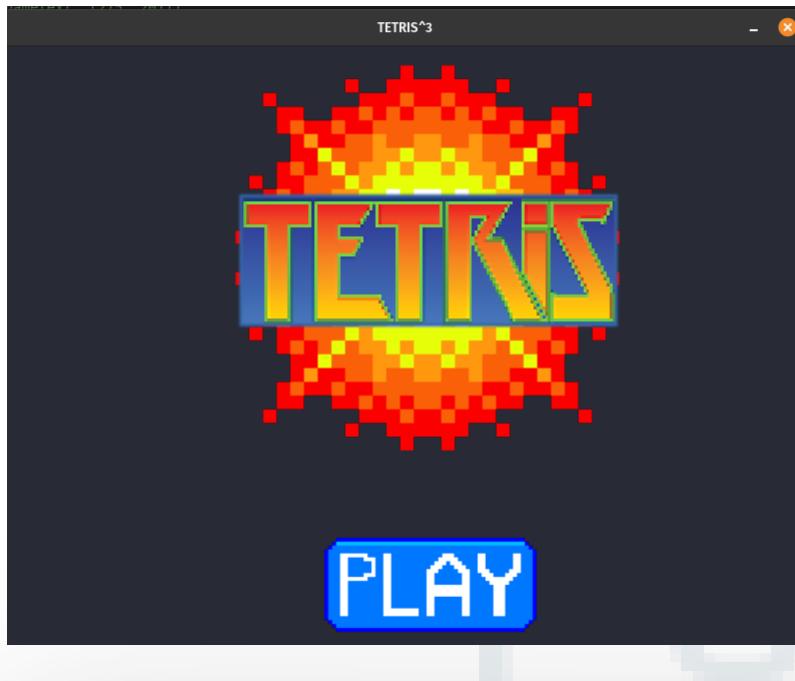
Planning



GANTT project

| Nom | Date de début | Date de fin |
|---|---------------|-------------|
| • Find a Tetris program | 18/10/2021 | 01/11/2021 |
| • Study the autonomy of the control cube | 02/11/2021 | 08/11/2021 |
| • Test the differents captors with a computer | 09/11/2021 | 15/11/2021 |
| • Send data with Bluetooth | 16/11/2021 | 19/11/2021 |
| • Milestone 1 | 19/11/2021 | 19/11/2021 |
| • Test interaction between game and LED | 22/11/2021 | 24/11/2021 |
| • Design | 25/11/2021 | 29/11/2021 |
| • Milestone 2 | 30/11/2021 | 30/11/2021 |
| • Connect the tiny cube with the game | 30/11/2021 | 06/12/2021 |
| • Elec card of the tiny cube | 07/12/2021 | 15/12/2021 |
| • End of the code | 16/12/2021 | 31/12/2021 |
| • Assembling | 03/01/2022 | 13/01/2022 |
| • CDR | 03/11/2021 | 03/11/2021 |
| • Final Oral | 14/01/2022 | 14/01/2022 |

Planning



Skills



- Learn how to manage whole a project alone
- Develop my skills in programming
- Improve my stress management

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THANKS FOR LISTENING

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