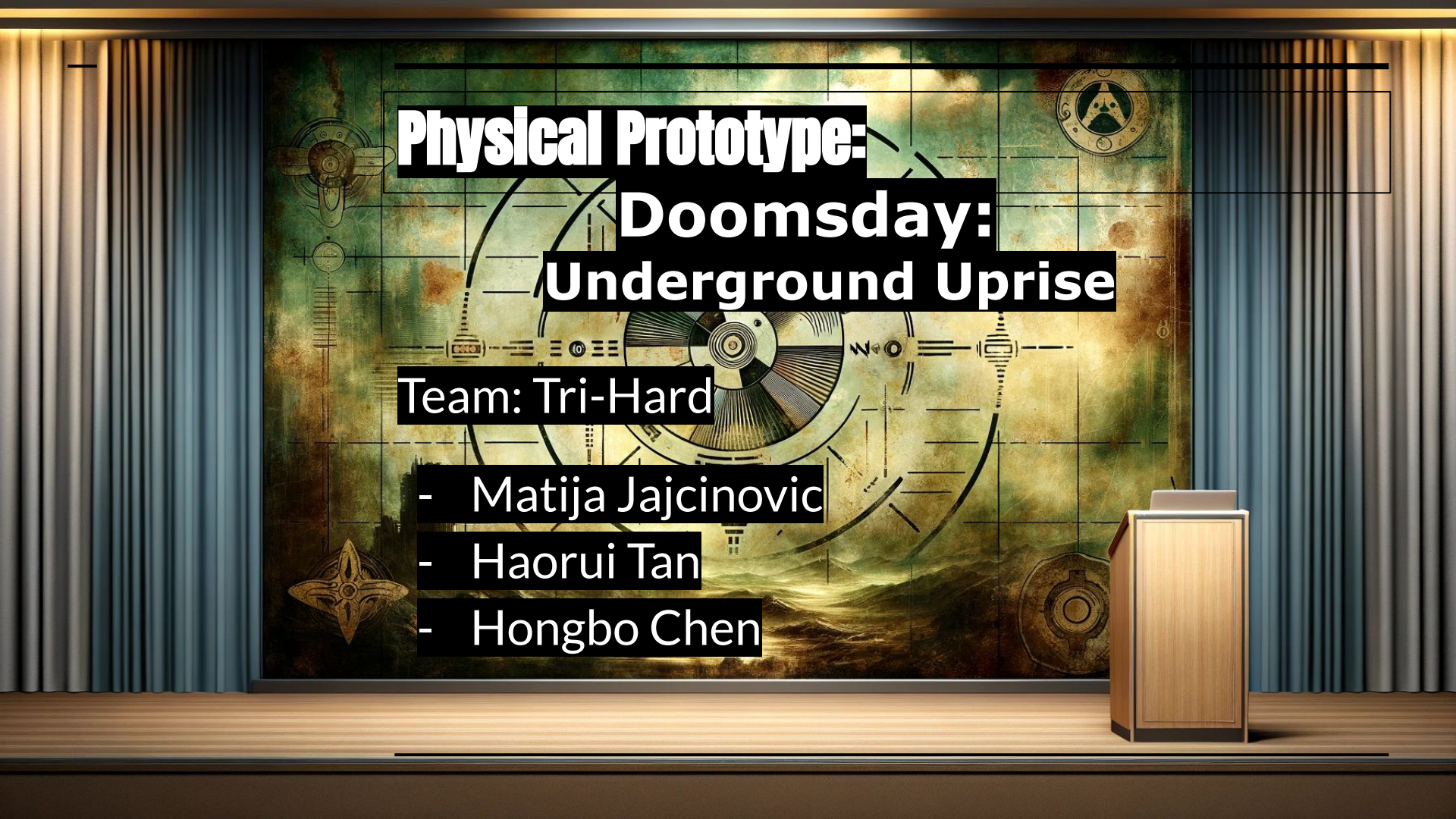

Physical Prototype:
Doomsday:
Underground Uprise
Team: Tri-Hard
- Matija Jajcinovic
- Haorui Tan
- Hongbo Chen

Gameplay

- build your bunker and surface buildings
- assign people to it, or build robots to operate on surface
- surface absolute essential to survive but attack regularly by enemies

=> employ Tower Defense and Defend Bots

Abstractions for Prototyping

- round based discretization (approx 1 min equals round)
- no advanced fights but “plus minus” strength values
- action cards for random events (like generators explodes)

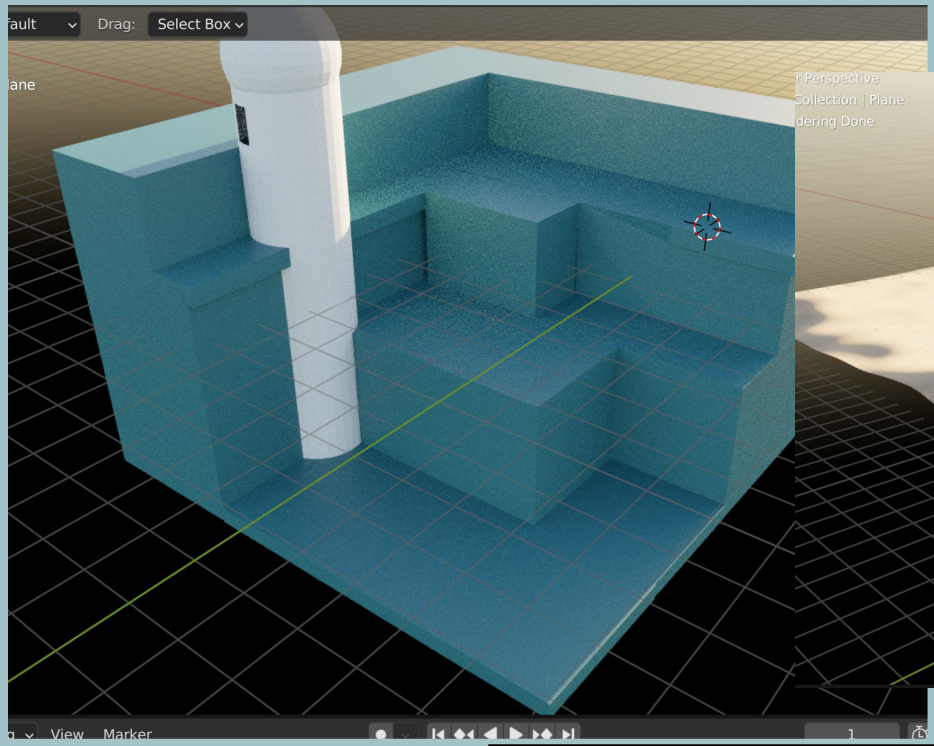
Goal

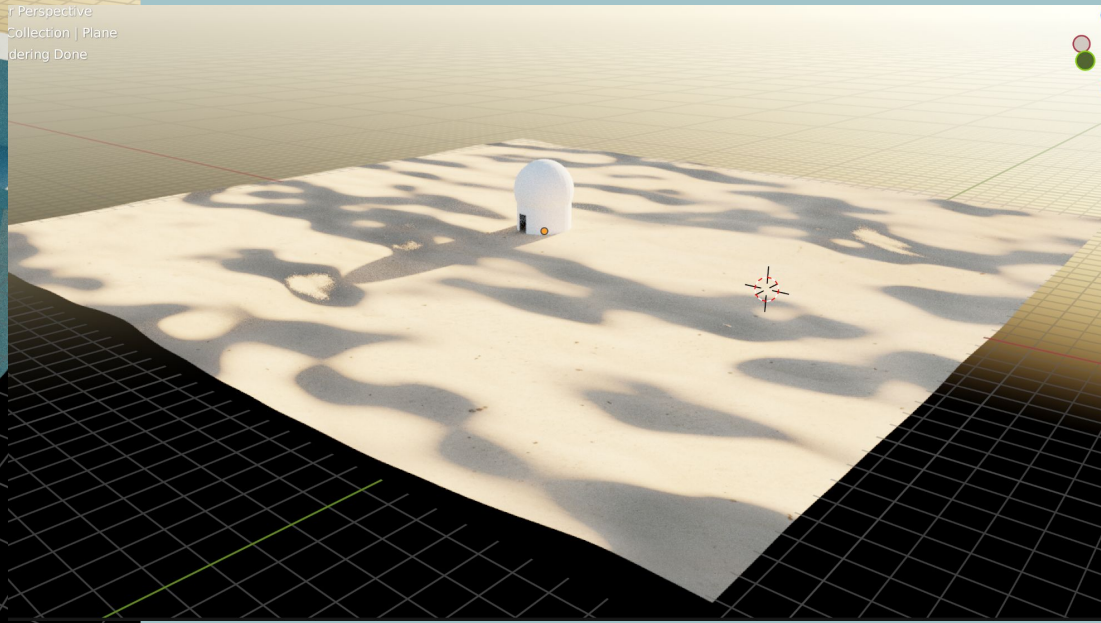
- find some balance for resources and core game mechanic of building

Restrictions

- Cannot fully replicate physics-based fights
- Tower defense not simulateable
- trying to reduce travel time of workers by placing buildings right

First Drafts - Switch between views





Workers’ status

Normal: **Hungry:** **Hurted:**

In one round

Robot Factory

- turns Normal workers into Hungry workers
- turns Hungry workers into Hurt workers
- produce N robots when having N workers in the factory

Electricity Generator

- turns Normal workers into Hungry workers
- turns Hungry workers into Hurt workers
- support Robot Factory and Defense Towers

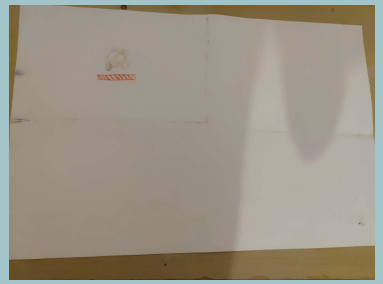
Mensa

- turns Hungry workers into Normal workers

Medical Bay

- turns Hurt workers into Hungry workers
- turns Hungry workers into Normal workers

-At the beginning of the game, there is only one base on the surface without any defense system.

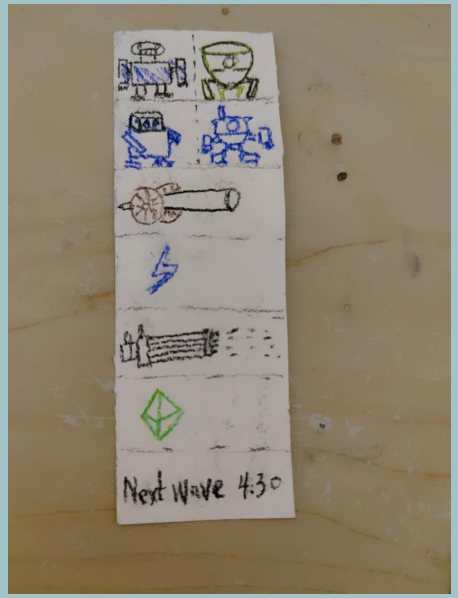


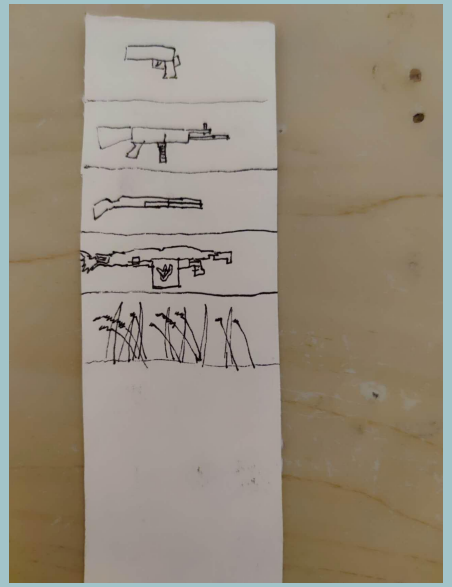
-When enough resources are produced underground, players can choose to build defense towers,robots and weapons. They all have unique values (attack power, attack range, etc.).

-Robots can only fight with designated weapons. Players can control robots and designate them to go to specific places to fight.

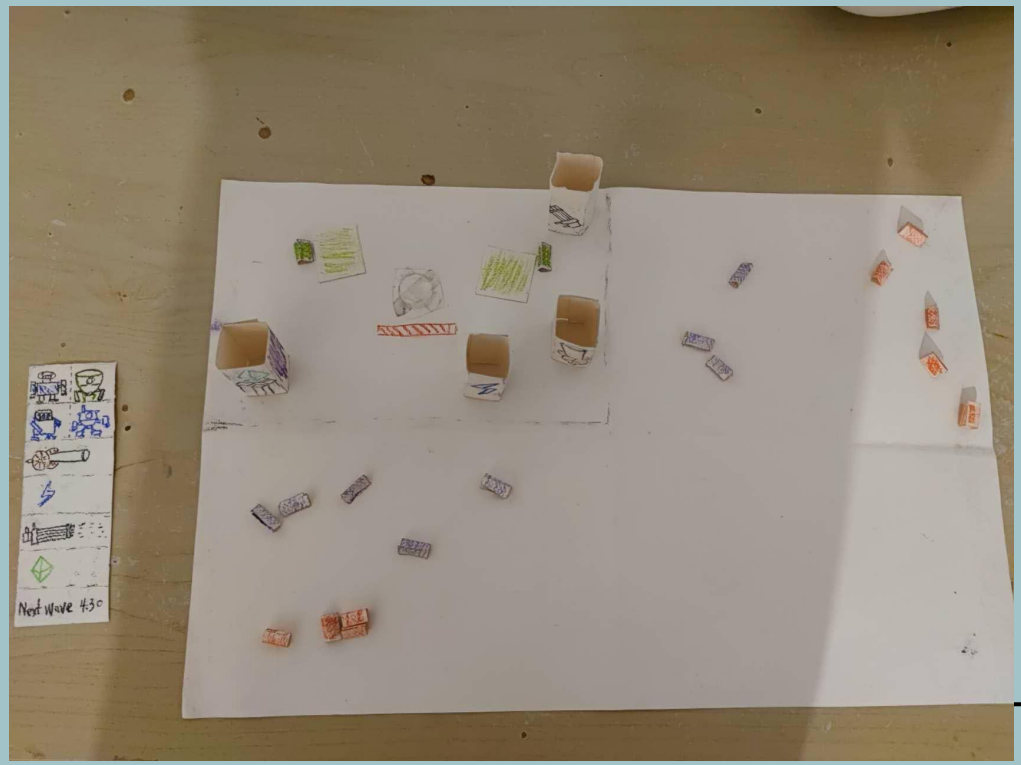
-Players can also build crops on the surface to reduce hunger. There are also harvest robots to harvest crops(can’t fight).

-Building any object will reduce different metal values, and towers and robots will reduce electric value per min.

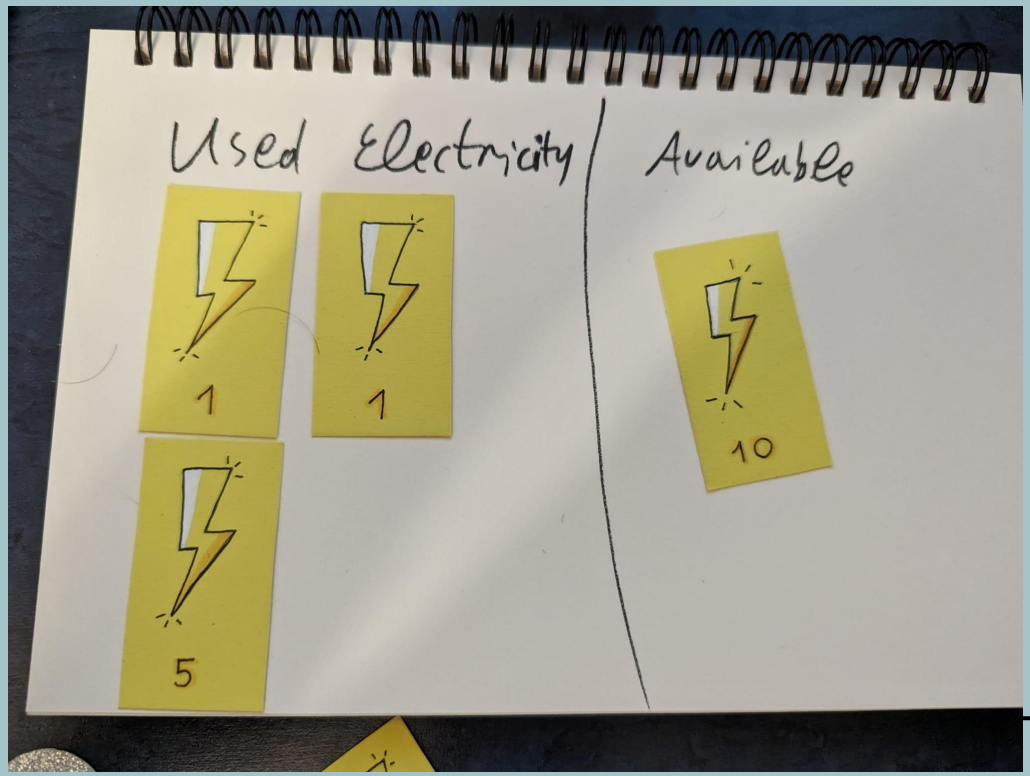


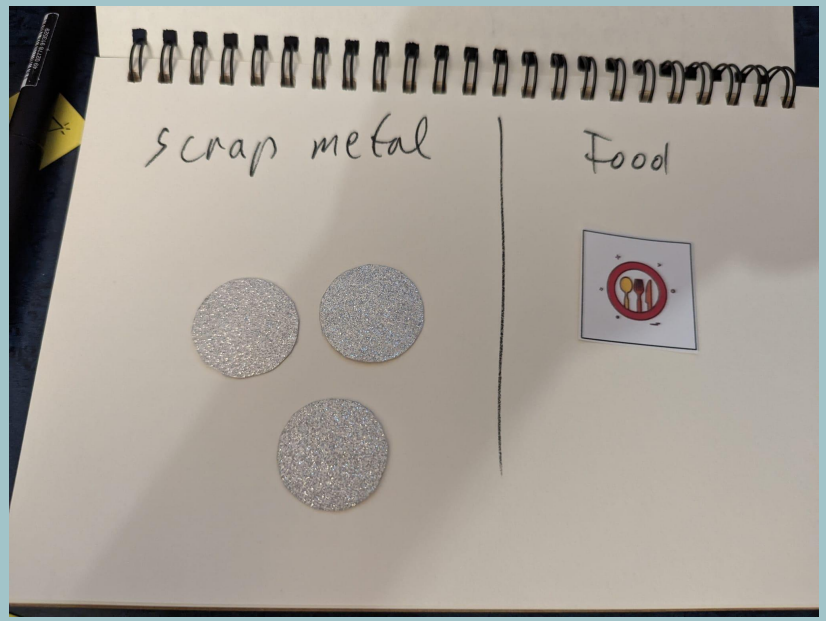


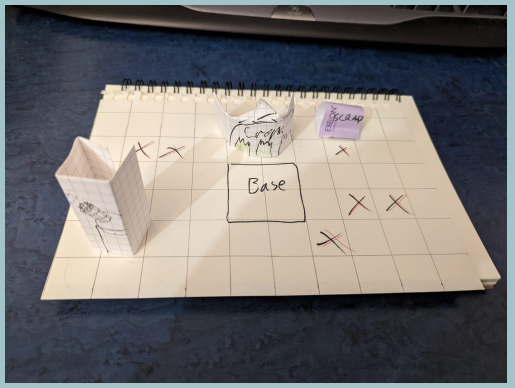
-Monsters will appear from the lower left and upper right corners of the map. They will move towards the base and attack anything nearby. Monsters have different settings.

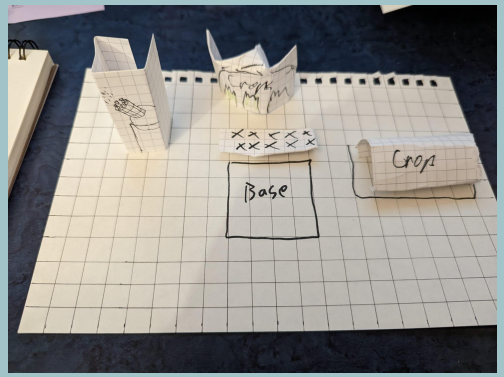


Resources









Assessment

- many new revealed questions
- map design boring => more complicated layout
- need for mathematical model to estimate resources

THANK YOU
FOR YOUR
ATTENTION!