

Tank War

Group 212

Genius:

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Team



Xinyu Huang (Rick):

- Team Leader
- Developer
- Tester



Di Wu (Jimmy):

- Developer
- Designer



Jiahao Zhou (Dios):

- Designer
- Tester

BackGround

- 20th Century
 - Classic family computer games
- 21st Century
 - Hard to access
- Now
 - Redevelop “BattleCity”
 - One of the most popular games decades ago.



[1]

Purpose

- Develop “BattleCity” for
 - Windows 7 and later
 - Mac OS X
 - Linux
- Upgrade “BattleCity” to “TankWar”
 - Add new modes
 - Add new tanks



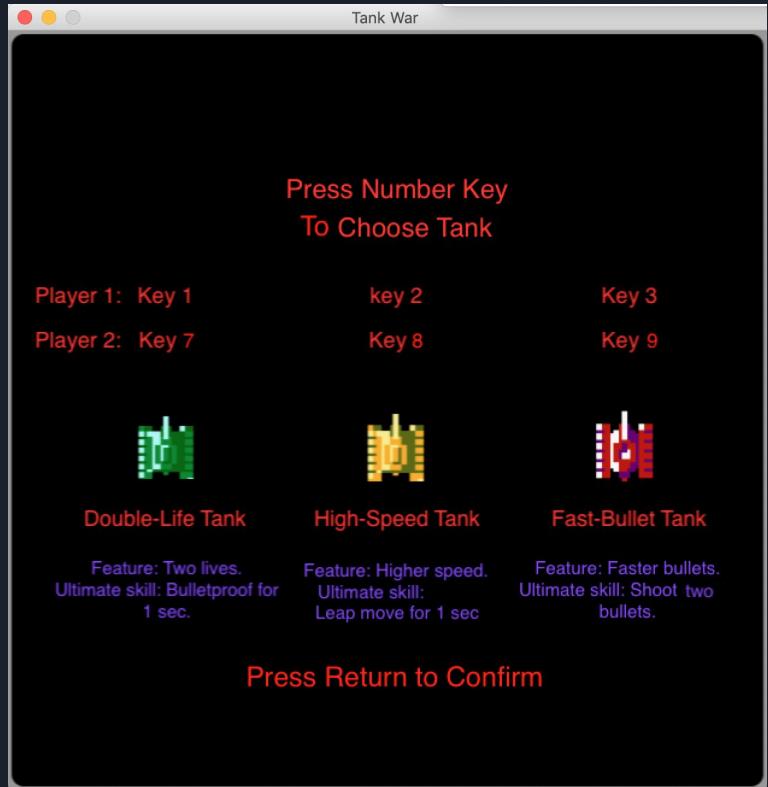
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Scope

- Develop “Tankwar” in python
- New modes
 - PVP
 - Map editor
- New tanks
 - Double life tank
 - High speed tank
 - Fast bullet tank



Technology

- Python & Pygame
- Git
- Sublime Text
- Python unittest
- Coverage
- Flake8
- Doxygen



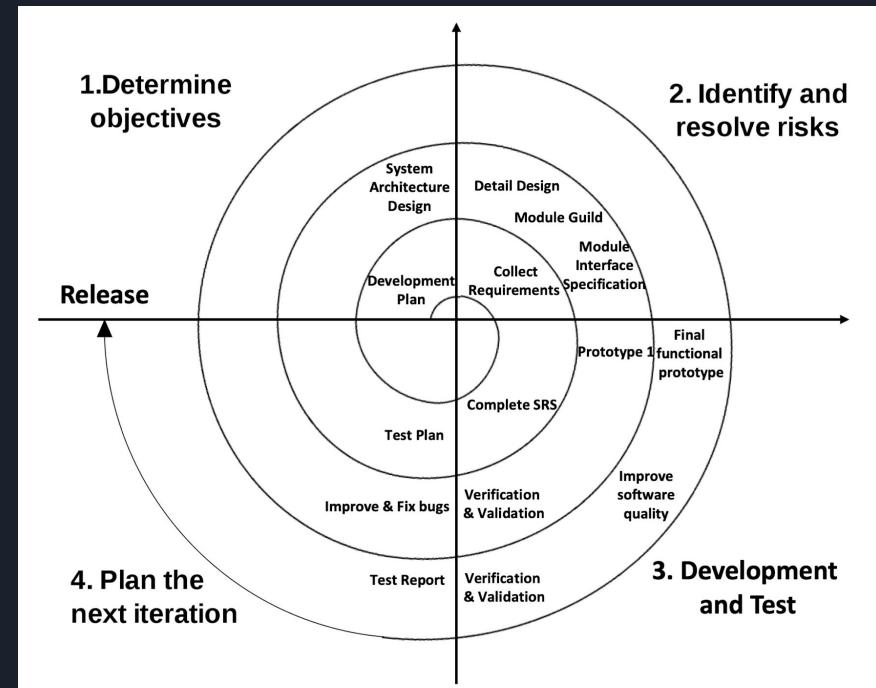
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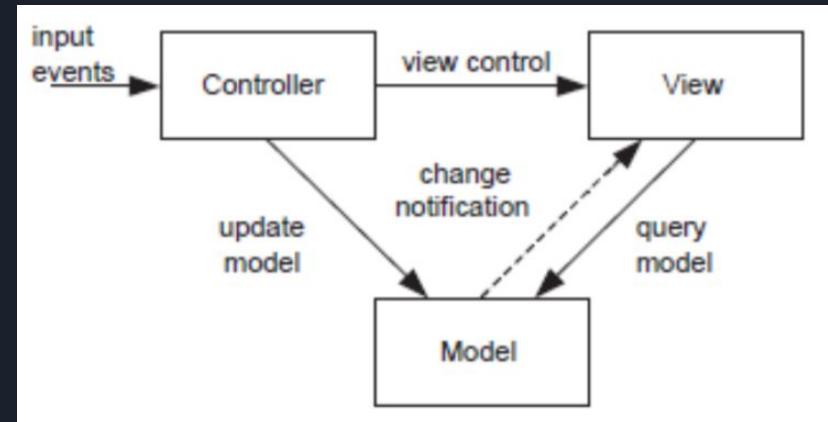
Design Process

1. Software Development Life Cycle (SDLC)
2. Spiral Model
3. Test-Driven Development (TDD)



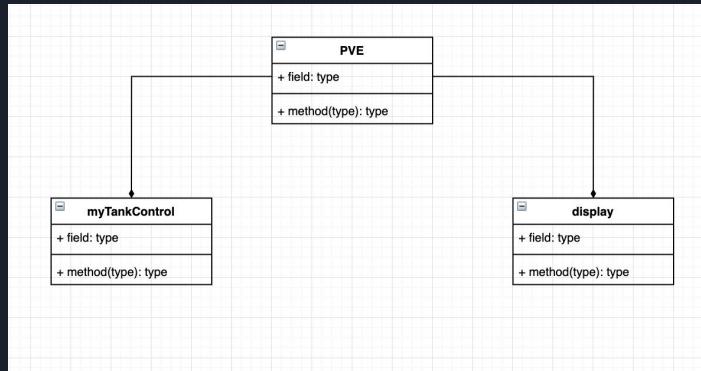
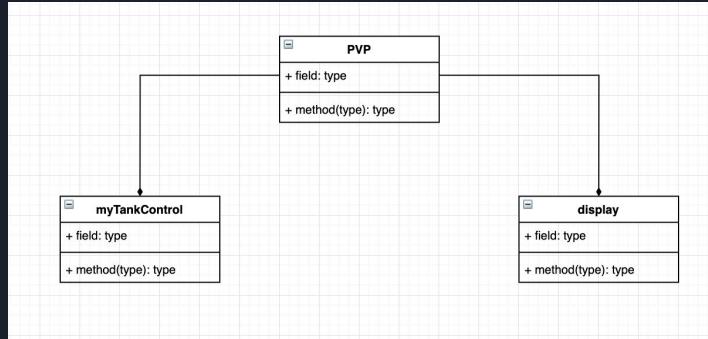
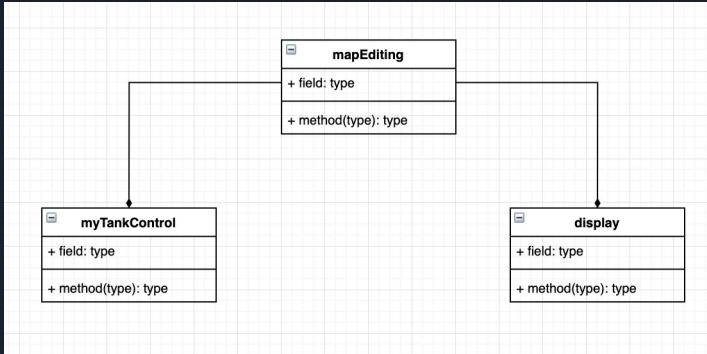
System Architecture

- MVC
 - Model, View, Controller.
- Suitable for our project.
 - Interactions with users.
 - Easy to collaborate.



System Architecture

- MVC



Software Quality

- Reliability
- Portability
- Performance
- Maintainability





Software Quality

Usability

Robustness

Tank War

Operation Instruction

Press Following Key To Control Tanks

Player 1



W
A S D
J Shoot
K Ultimate Skill

Player 2



↑
← ↓ →
, Shoot
. Ultimate Skill

Press Enter To Next Step

Tank War

Press Number Key To Choose Tank

Player 1: Key 1 key 2 Key 3

Player 2: Key 7 Key 8 Key 9

Double-Life Tank High-Speed Tank Fast-Bullet Tank

Feature: Two lives.
Ultimate skill: Bulletproof for 1 sec.

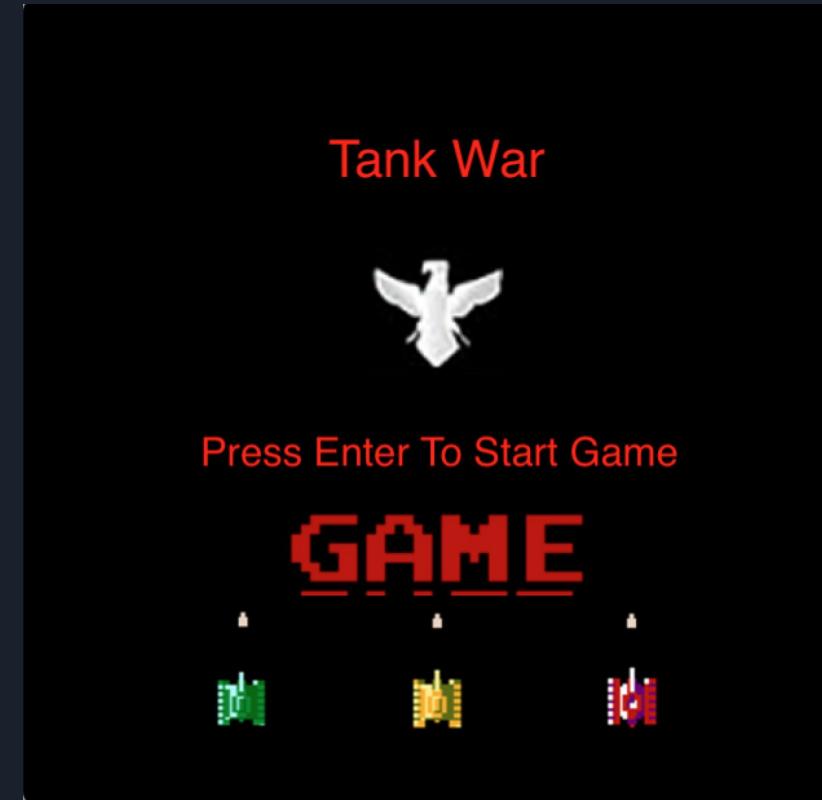
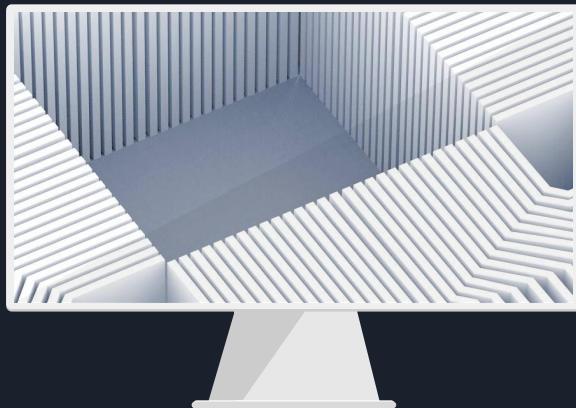
Feature: Higher speed.
Ultimate skill: Leap move for 1 sec

Feature: Faster bullets.
Ultimate skill: Shoot two bullets.

Press Return to Confirm

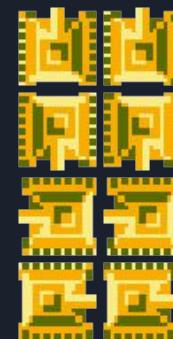


Demo Time



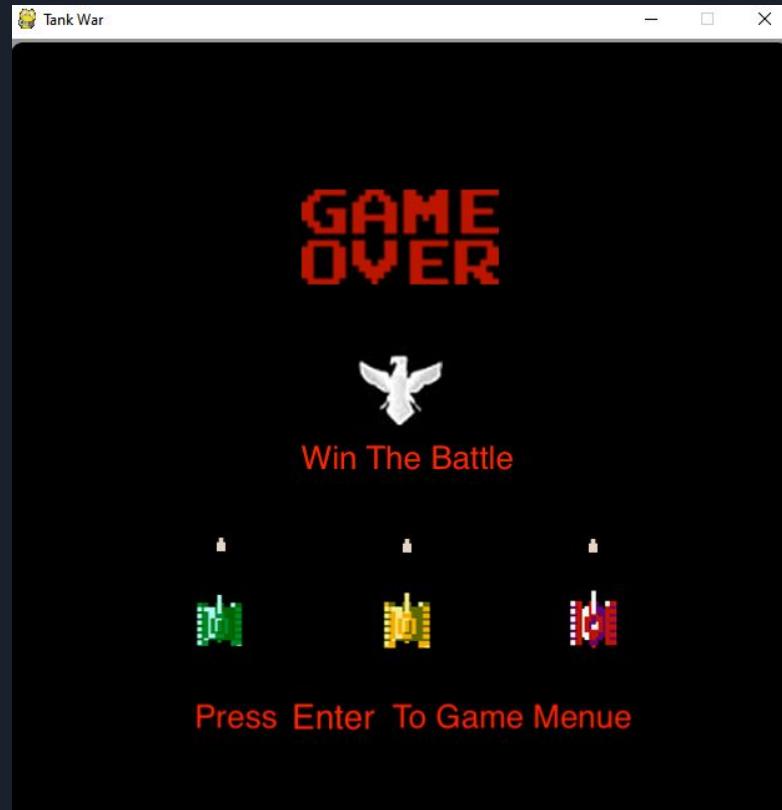
Future Feature

1. More types of landforms
2. More types of tanks
3. Game addiction Prevention



Conclusions

- Upgraded game “TankWar”
 - New modes
 - New Tanks
- High software qualities
- More Fun in the Game





Any Question?

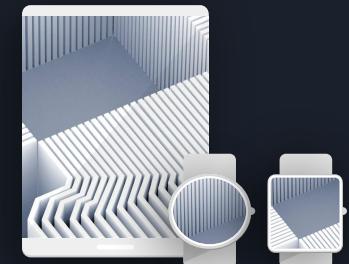
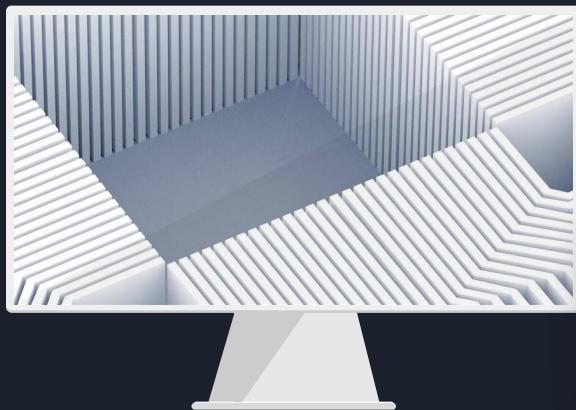




Image Reference

- [1] <https://www.pinterest.ca/pin/334392341066912698>
- [2] <https://surface-pro.ru/2019/10/01/pervaya-utechka-renderov-microsoft-surface-on-arm-surface-pro-7-i-surface-laptop-3/>
- [3] <https://mac.softpedia.com/get/Games/BattleCity-Tanks.shtml>
- [4] <https://www.python.org/>
- [5] <https://www.freecodecamp.org/news/an-introduction-to-git-for-absolute-beginners-86fa1d32ff71/>
- [6] <https://www.roberthalf.com/blog/salaries-and-skills/6-basic-sdlc-methodologies-which-one-is-best>
- [7] 3XA3 Lecture Slide 9, page 19

Thank you!

