The Rolling Stones

present

VIKINGS

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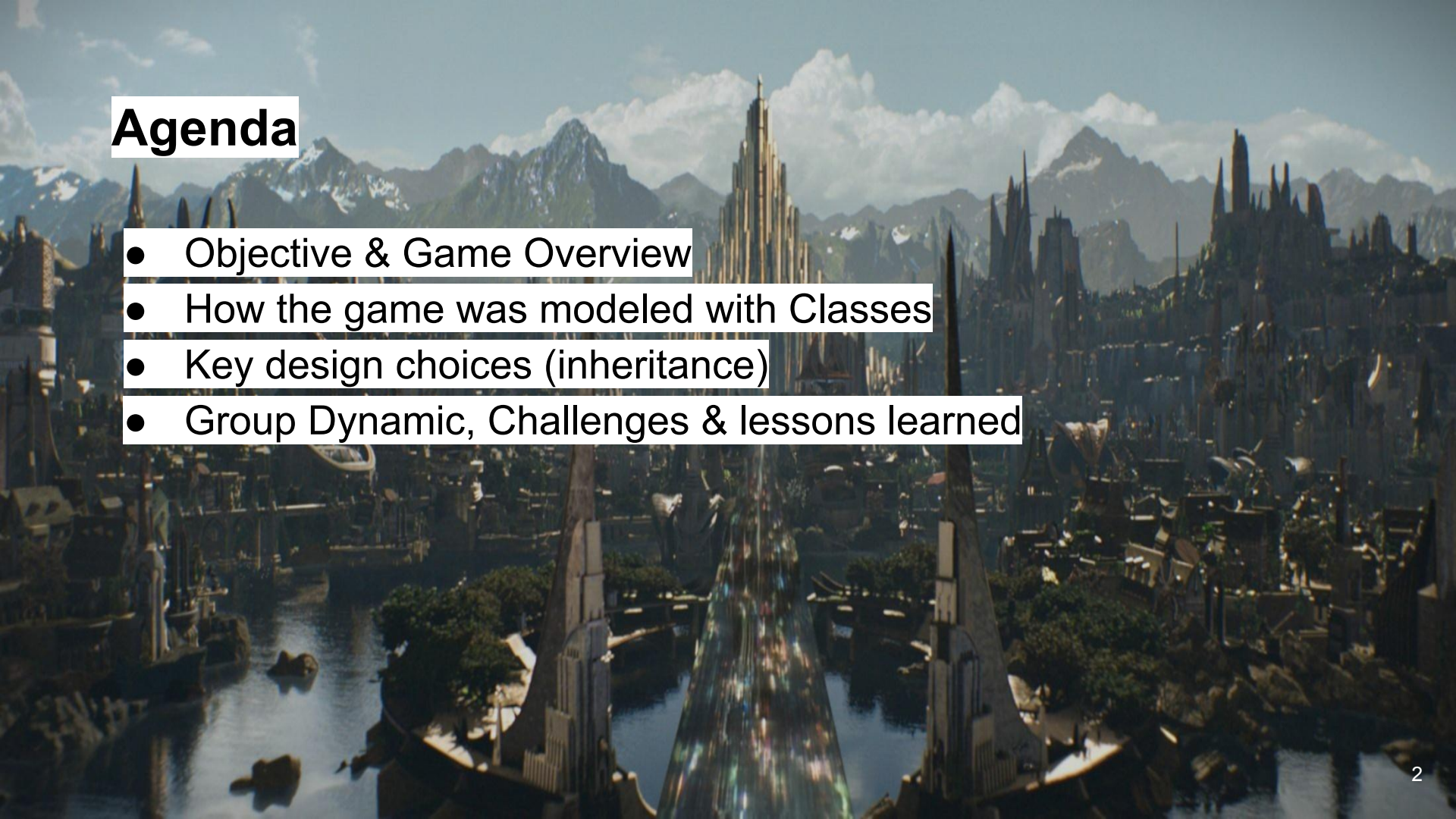


Agenda

- Objective & Game Overview
- How the game was modeled with Classes
- Key design choices (inheritance)
- Group Dynamic, Challenges & lessons learned

Objective & Game Overview

- Build a turn-based war simulation
- Make all predefined tests pass
- Practice Object-Oriented Programming

But Also…

- Combine and apply all Python fundamentals learned:
  - Defining variables & attributes
  - Python syntax
  - for loops & conditionals
  - Using built-in methods (len(), append(), remove())
  - Reading & understanding error messages

Classes conception

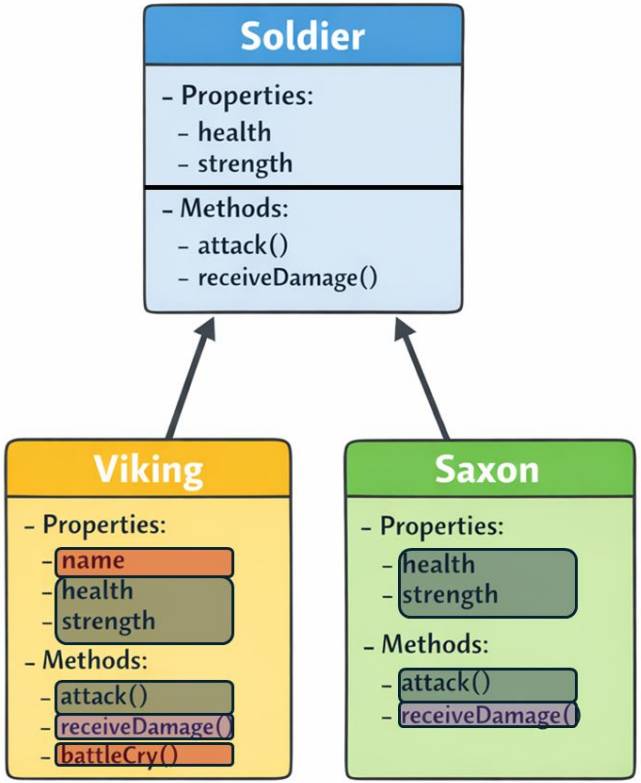
Soldier

- Properties:
  - health
  - strength
- Methods:
  - attack()
  - receiveDamage()

War

- Properties:
  - vikingArmy (list)
  - saxonArmy (list)
- Methods:
  - addViking()
  - addSaxon()
  - vikingAttack()
  - saxonAttack()
  - showStatus()

Soldier class



Inherited items

Inherited but modified items

New items

War class

War

- Properties:
  - vikingArmy (list)
  - saxonArmy (list)
- Methods:
  - addViking()
  - addSaxon()
  - vikingAttack()
  - saxonAttack()
  - showStatus()

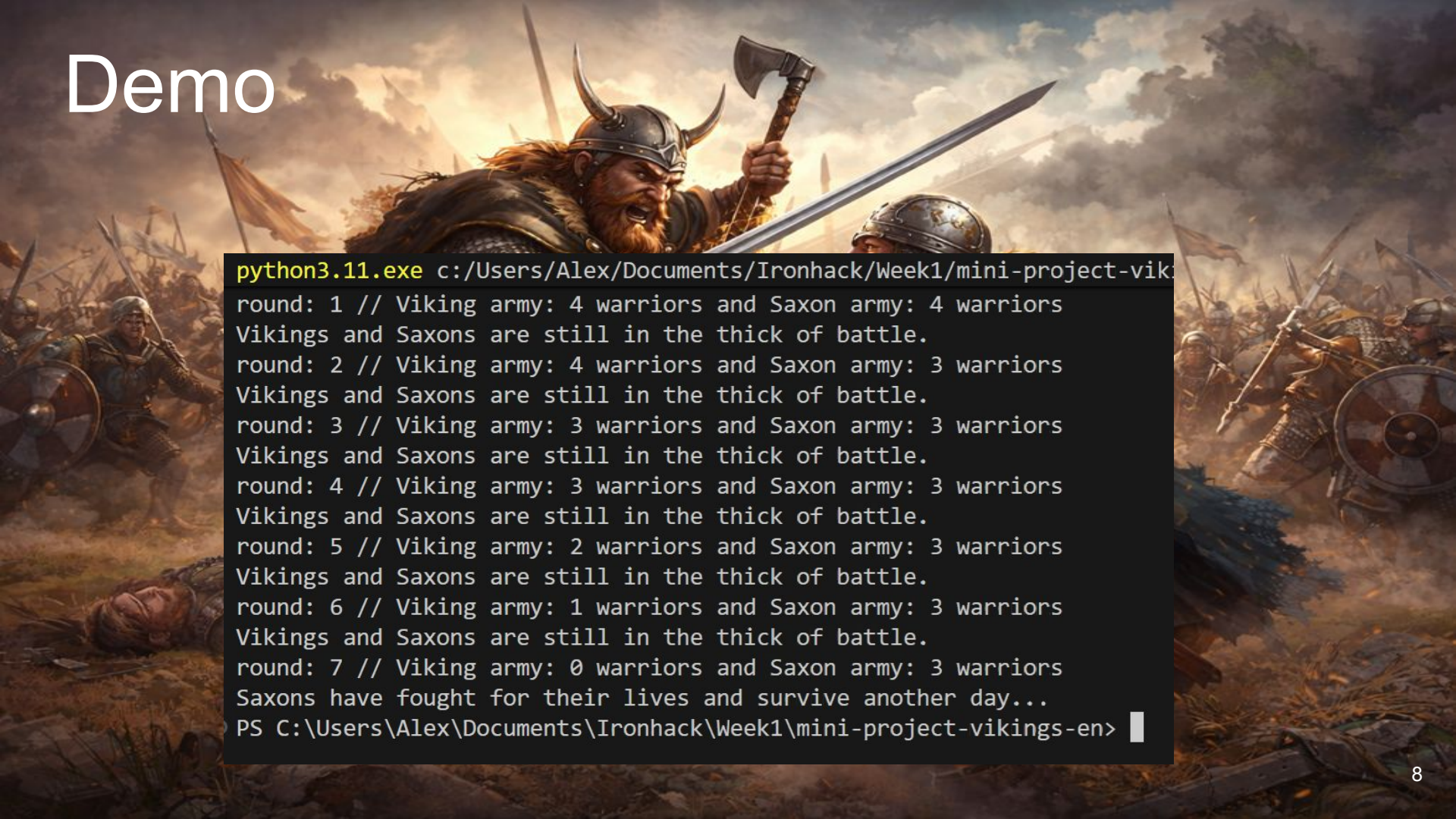
Challenges

- Understanding test expectations from error messages
- Inheritance + method overriding
- Removing dead soldiers safely from lists

Lessons Learned

- Managing Errors & Failures
- Tests define behavior, not implementation
- Inheritance reduces duplication **only when used carefully**
- Clean OOP makes the War class surprisingly small

Demo



```
python3.11.exe c:/Users/Alex/Documents/Ironhack/Week1/mini-project-vik
round: 1 // Viking army: 4 warriors and Saxon army: 4 warriors
Vikings and Saxons are still in the thick of battle.
round: 2 // Viking army: 4 warriors and Saxon army: 3 warriors
Vikings and Saxons are still in the thick of battle.
round: 3 // Viking army: 3 warriors and Saxon army: 3 warriors
Vikings and Saxons are still in the thick of battle.
round: 4 // Viking army: 3 warriors and Saxon army: 3 warriors
Vikings and Saxons are still in the thick of battle.
round: 5 // Viking army: 2 warriors and Saxon army: 3 warriors
Vikings and Saxons are still in the thick of battle.
round: 6 // Viking army: 1 warriors and Saxon army: 3 warriors
Vikings and Saxons are still in the thick of battle.
round: 7 // Viking army: 0 warriors and Saxon army: 3 warriors
Saxons have fought for their lives and survive another day...
PS C:\Users\Alex\Documents\Ironhack\Week1\mini-project-vikings-en>
```

Thanks!