

Overview of Leximon

**Software Engineering COMP 4110
University of Massachusetts Lowell
Fall 2025**

Team members:

Project Manager: Charlie Norton

Lead Developer: Samuel Stanley

Web Developer: Platon Supranovich

Game Developer: Christopher Nguyen

Game Developer: Evan Sykowski

Instructor: Dr. James Daly

Project Overview

- "Leximon" is a game that teaches 4th-5th graders about synonyms and antonyms
- Achieved with turned based combat by choosing the correct words as attacks
- Antonyms > Synonyms > No Relation
- Turn-based vocabulary combat reinforces memorization through immediate feedback & repetition

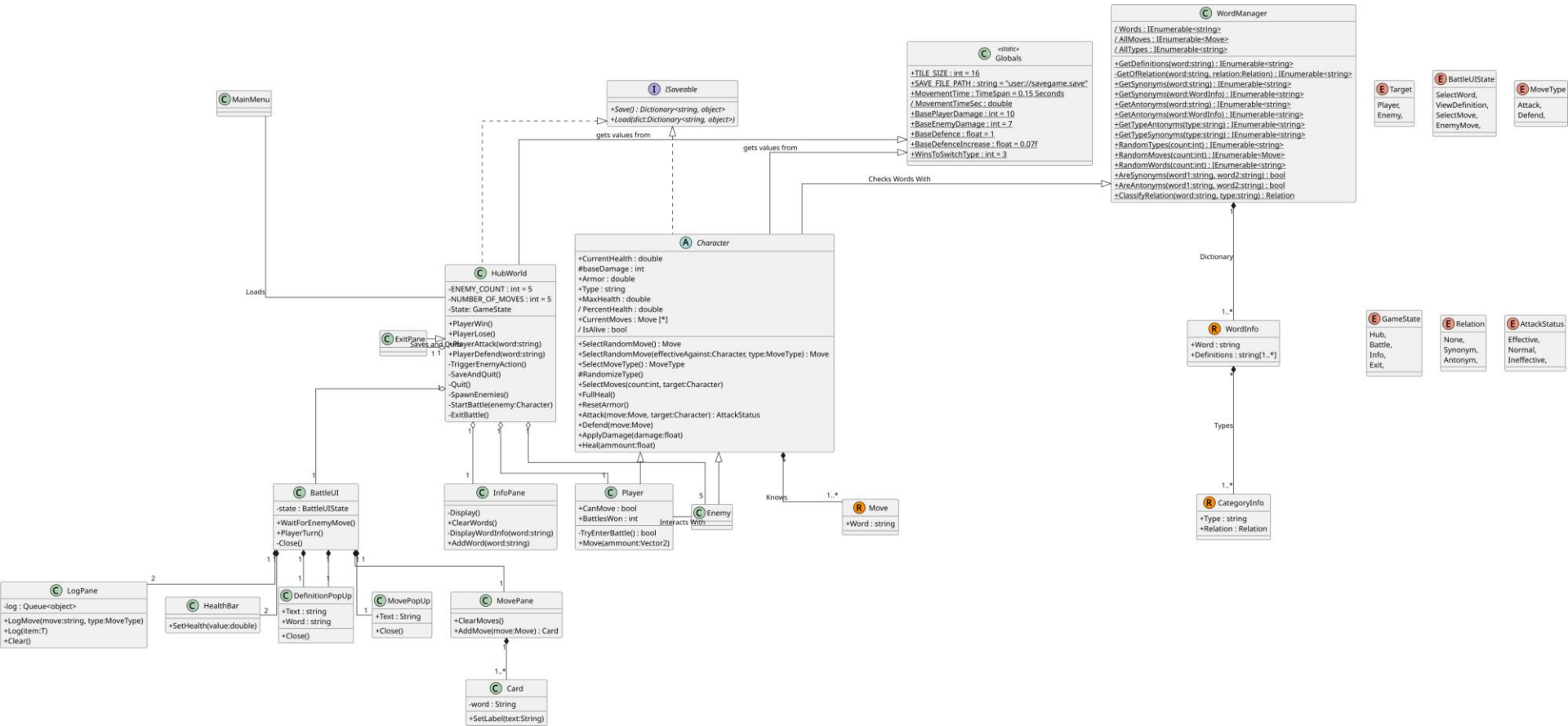
Overview of Features

- Player Movement
- Interaction with enemies
- Attack and defense with vocabulary
- Definitions of terms

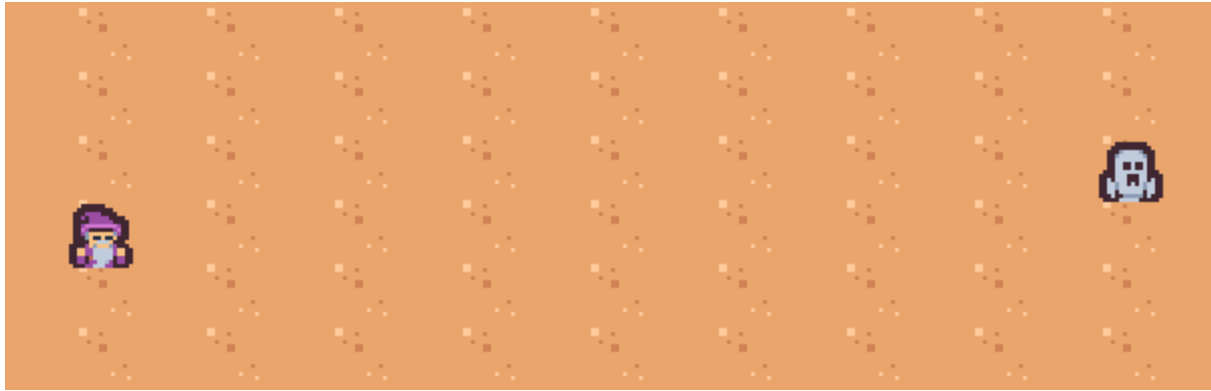
Domain Research

- Researched Massachusetts Curriculum Framework for English language arts at a 5th grade level
- Applies vocabulary usage found at 5th grade
- Project Constraints
 - Godot 4.5.1: Node-based scenes system supports rapid prototyping
 - C#: Allows strong typing & scalability
 - .NET 8.0 or later

Leximon's Class Diagram



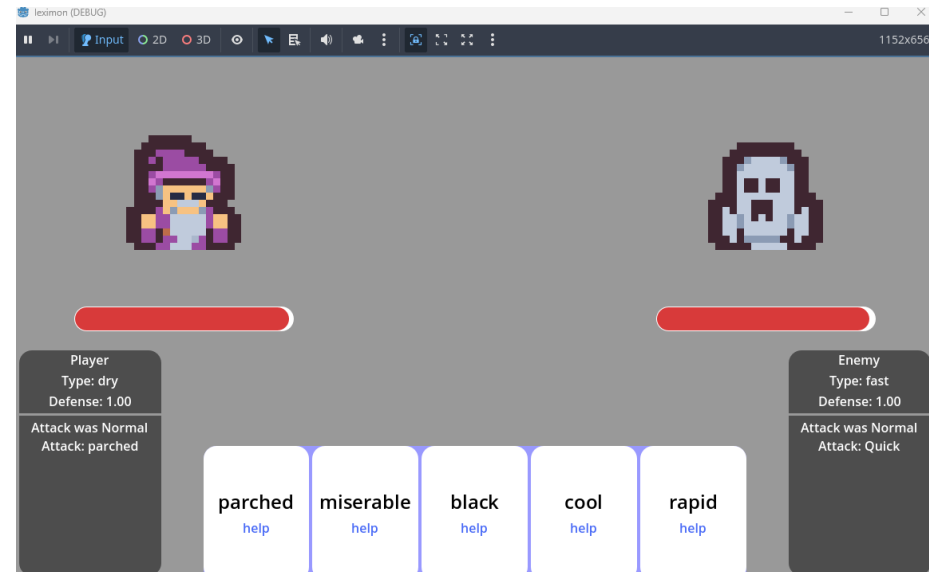
Player Moving Across the HubWorld



Interacting with enemy



Attack using Synonym



Attack using Antonym

Player
Type: dry
Defense: 1.00

Attack was Normal
Attack: parched
Attack was Effective
Attack: humid
Attack was Effective
Attack: soggy
Attack was Normal
Attack: parched

arid
help

soggy
help

cheerful
help

soggy
help

scorching
help

Enemy
Type: dry
Defense: 1.00

Attack was Normal
Attack: Quick
Defend: parched
Attack was Normal
Attack: Rapid
Defend: arid
Attack was Normal
Attack: Quick
Attack was Normal

Player
Type: dry
Defense: 1.00

Attack was Normal
Attack: parched
Attack was Effective
Attack: humid
Attack was Effective
Attack: soggy
Attack was Normal
Attack: parched

fantastic
help

dumb
help

quick
help

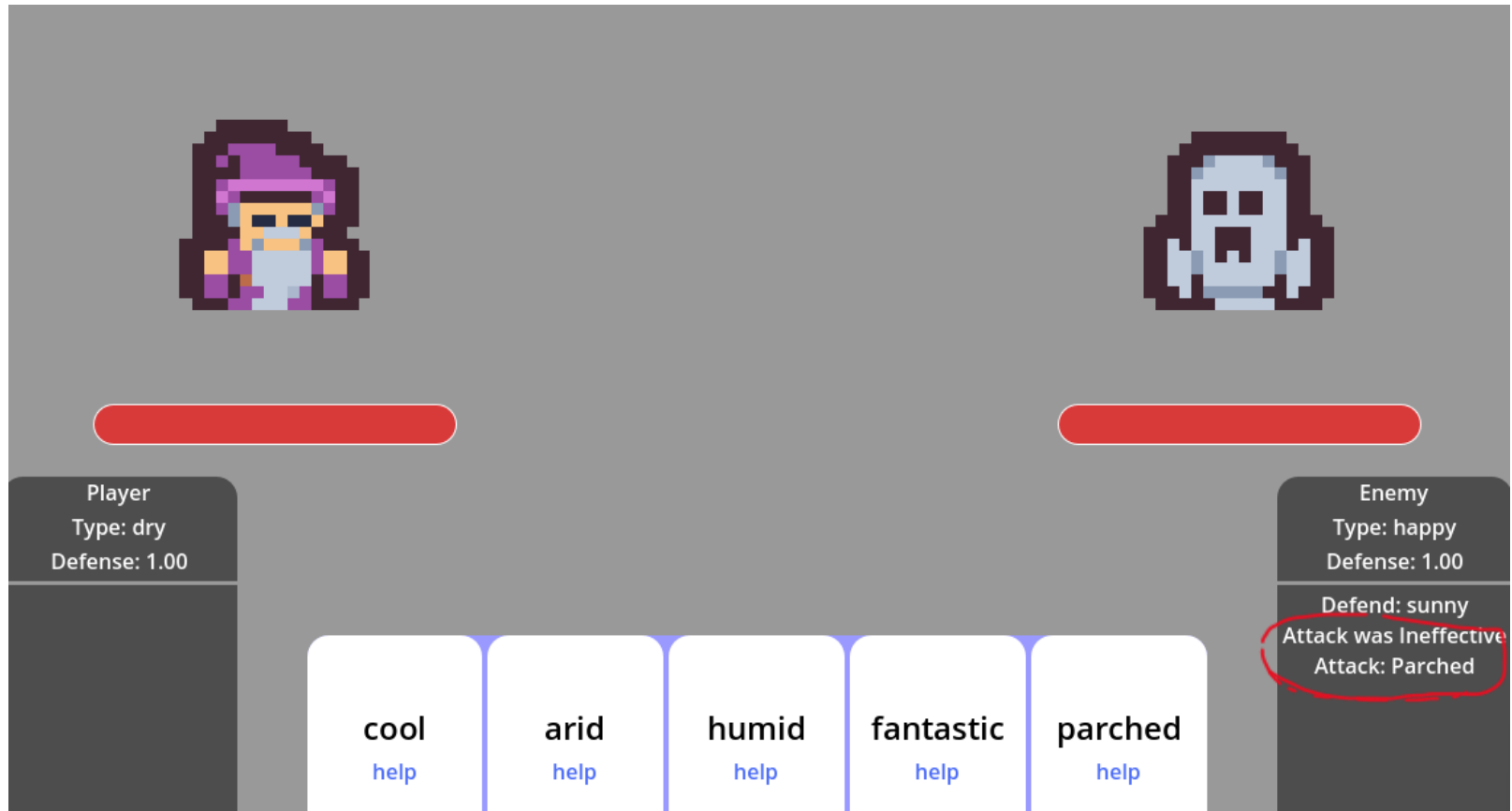
parched
help

arid
help

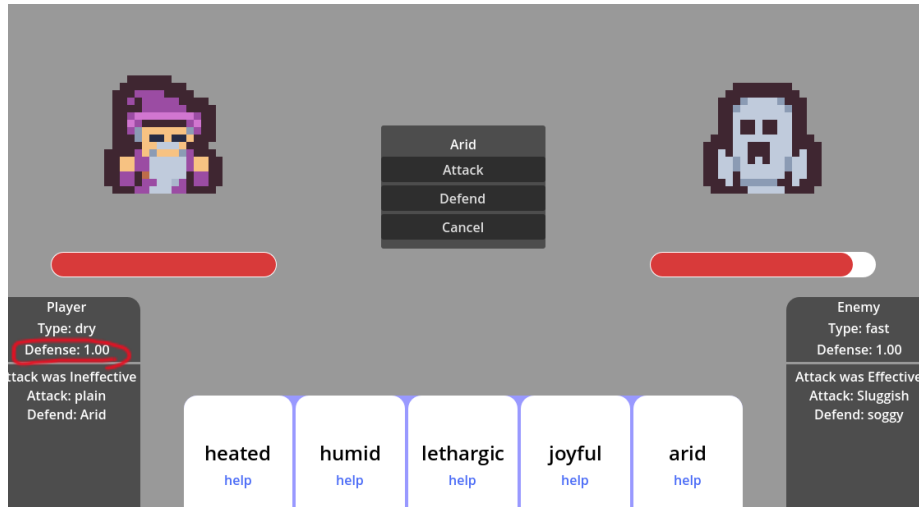
Enemy
Type: dry
Defense: 1.07

Defend: arid
Attack was Effective
Attack: Soggy
Attack was Normal
Attack: Quick
Defend: parched
Attack was Normal
Attack: Rapid
Defend: arid

Attack using Unrelated Word



Defend using Synonym



Player
Type: dry
Defense: 1.00

Attack was Ineffective
Attack: plain
Defend: Arid

Enemy
Type: fast
Defense: 1.00

Attack was Effective
Attack: Sluggish
Defend: soggy

heated
help

humid
help

lethargic
help

joyful
help

arid
help



Player
Type: dry
Defense: 1.07

Attack was Effective
Attack: humid
Defend: Arid
Attack was Ineffective
Attack: plain
Defend: Arid

Enemy
Type: fast
Defense: 1.00

Attack was Effective
Attack: Sluggish
Defend: soggy

humid
help



sluggish
help

clever
help

dull
help



warm
help

Definition of Word



Clever
Quick to understand,
learn, and devise or
apply ideas; intelligent.

Ok



Player
Type: dry
Defense: 1.04

Attack was Ineffective
Attack: ugly
Attack was Ineffective
Attack: black
Defend: Humid
Attack was Normal
Attack: parched
Defend: Frosty
Defend: Humid

dim
help

black
help

parched
help

clever
help

arid
help

Enemy
Type: dry
Defense: 1.14

Attack was Effective
Attack: Humid
Defend: arid
Attack was Normal
Attack: Parched
Defend: arid
Attack was Effective
Attack: Soggy
Attack was Normal

Inventory

Current type: dry

100/100 hp


cool	bright	black
joyful	clever	frosty
dim	unhappy	warm
scorching	fantastic	dull
mediocre	freezing	dumb
sunny	cheerful	sullen
miserable	glad	heated
frigid	arid	parched
humid	soggy	quick
rapid	sluggish	lethargic
beautiful	attractive	plain
ugly		

Joyful

Definitions: - Feeling or causing joy.

Synonym Types: happy

Antonym Types: sad



Improvements

- Clear moves log for each new battle
- More intuitive control options
- Damage balancing
- Better Enemy AI

Future Features

- Several enemy tiers where the player must defeat regular enemies before confronting special ones.
- Earnable in game achievements
- Ability for player to level up
- More floors to fight on

Thanks For Listening

Any Questions?