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Overview

Game of Champions (*a.k.a GoC*), is a multi-character game that allows Player (*User*) and AI (*Computer*) to battle in an alternating manner until all the Units (*character*) of either parties are defeated and the other is declared as Winner. Each turn presents a variety of Actions for the Player/AI such as ATTACK opponent, HEAL Character or Skip turns for strategic game play.

This program demonstrates the knowledge gained by Group 3 members in regards to different concepts discussed in this course module using Object Oriented programming which includes Classes, Functions, Loops, Conditions, Variables, List and more.



Basic Features: Game Setup



Basic Features: Game Setup

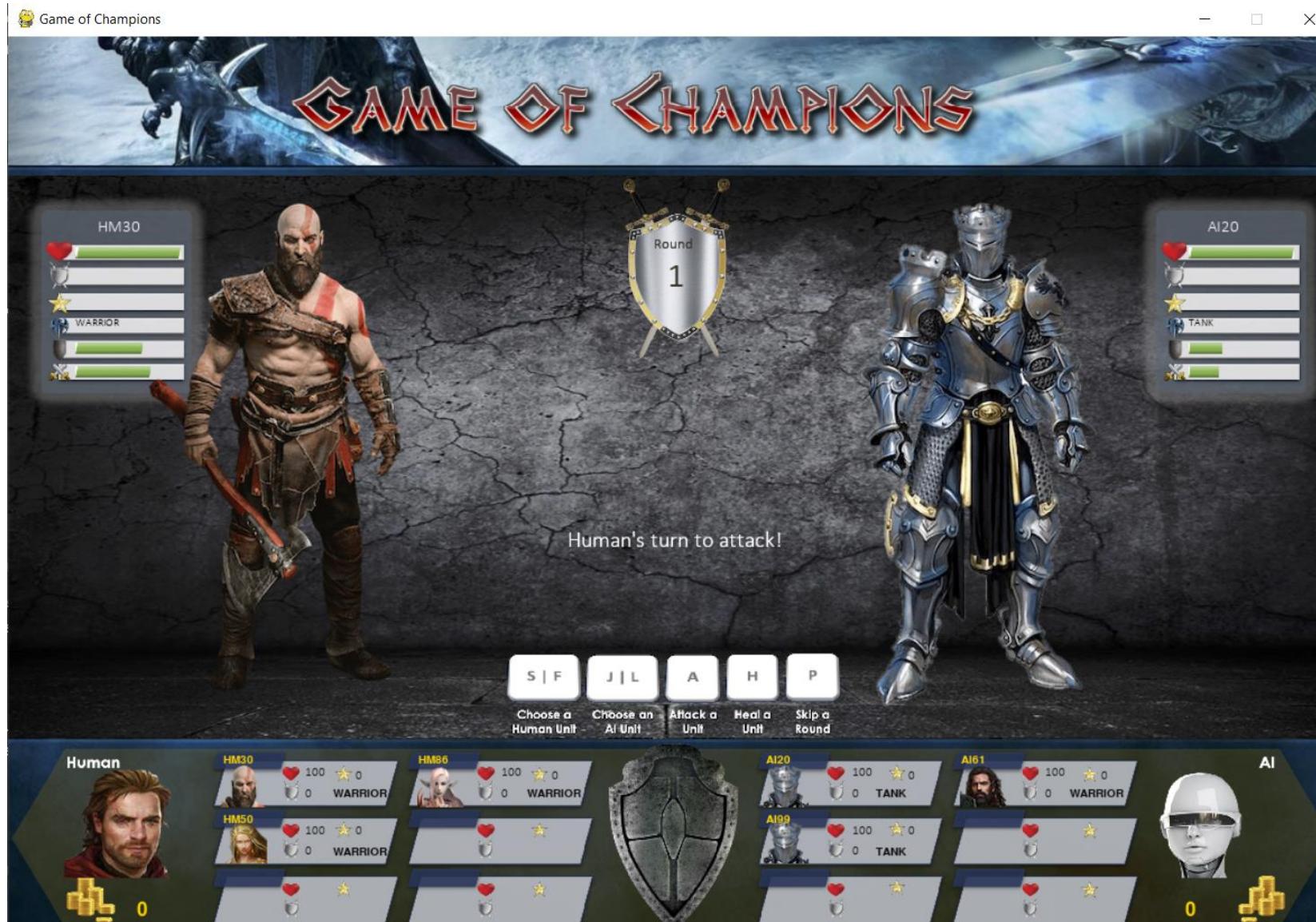
- Allows user to setup number of Units per game
- Allows user to choose Unit type between Tanker and Warrior.

- AI creates number of Unit(s) based on User's number of Unit(s)
- AI randomly choose Unit type between Tanker and Warrior.

- Fixed Initial points assigned as Health, Experience and Ranks for both AI and User
- Random Initial points assigned as Attack and Defense abilities for each Unit per game setup.



Basic Features: Game Scene



Basic Features: Game Scene

- Player and AI can select any own Unit to attack the opponent's unit
- Each attack deducts health points to the target unit
- Both Attacker unit and Target unit will gain experience points in each round
- The game allows a “take-turn” sequence between Player and AI.
- Unit with zero health points will be removed from the game(Marked as X)

- All events , timestamps and details are saved to an external file
- Events are also displayed in real-time within the console

- Action (Attack, Heal, Pass) is invalid if the selected unit either attacker or target unit is dead.



Enhanced Features:

- Using Keyboard based strokes for easy controls
- Created a GUI version for more enhanced game experience
- Program allows variable Units from 1 up to 6 units.
- Program allows to choose Male and Female units.
- Units can collect/earn coins based on the damage point incurred to the opponent
- Both AI and User has ability to heal it's own unit based on calculated algorithm.
- Both AI and User allows to "pass turn" as part of strategic game play.
- Used Object-Oriented Programming Paradigm: Classes, Functions, loops



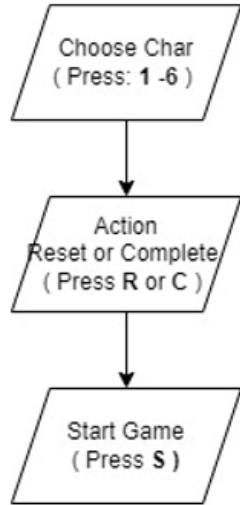
Program Specification

- Language: Python v 3.10.1 64bit
- GUI Module: Pygame 2021.3.1
- IDE Visual Studio Code / Pycharm
- Operating System Compatibility
 - Windows 10 Intel based processor
 - MAC 64bit Intel based processor

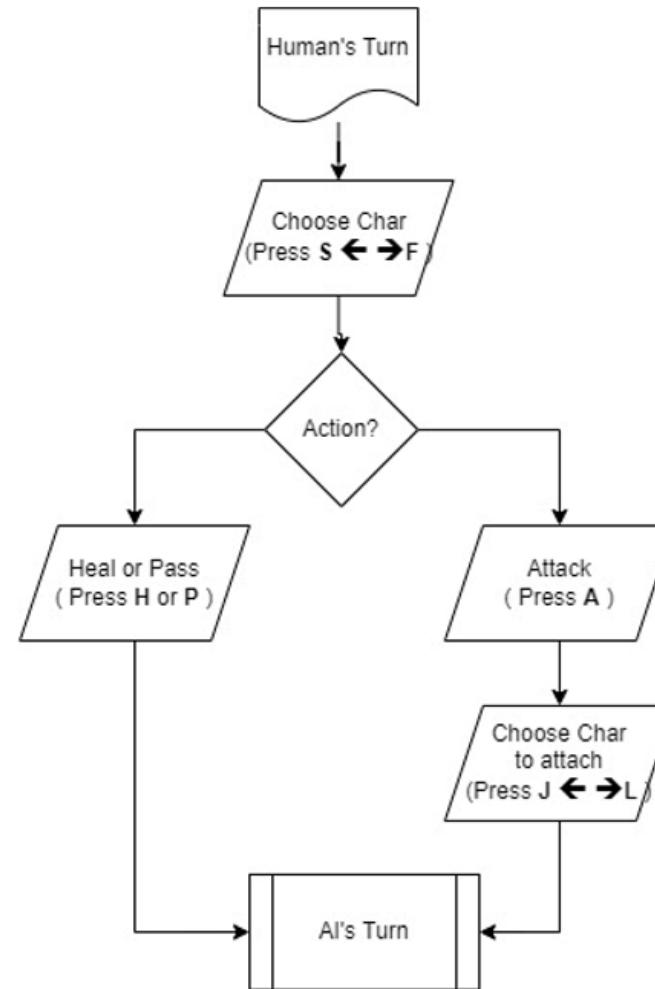
Note: Not compatible with MAC M1 due to pygame incompatibility.
- Keyboard-based game
- Available in Console-based and GUI-based version

Game Sequence: *Keyboard Keys*

Game Setup



Game Scene for User



Demo

Questions / Feedback ?

The End