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Marvel: Ultimate War
Game Description

This document provides a detailed description of the game elements and gameplay. It does not contain any implementation or coding details.

Intro

*M*arvel: Ultimate War is a 2 player battle game. Each player picks 3 champions to form his team and fight the other player's team. The players take turns to fight the other player's champions. The turns will keep going back and forth until a player is able to defeat all of the other player's champions which will make him the winner of the battle.

During the battle, each player will use his champions to attack the opponent champions either by using normal attacks or using special attacks/abilities. The battle takes place on a 5x5 grid. Each cell in the grid can either be empty, or contain a champion or obstacle/cover. At the beginning of the battle, each team will stand at one of the sides/edges of the grid as a starting position.

Champions

Champions are the fighters that each player will form his team from. Each champion will have a certain type which influences how the champion deals damage to other types as well as how much damage it will receive from them. The available types are:-

- Heroes: they deal extra damage when attacking villains.

- Villains: they deal extra damage when attacking heroes.

- Anti-Heroes: when being attacked or attacking a hero or villain, the antihero will always act as the opposite type. If attacking an antihero, damage is calculated normally.

The available champions along with their corresponding type:-

Champion	Type	Champion	Type	Champion	Type
Captain America	Hero	Deadpool	Anti-Hero	Dr Strange	Hero
Electro	Villain	Ghost Rider	Anti-Hero	Hela	Villain
Hulk	Hero	Iceman	Hero	Ironman	Hero
Loki	Villain	Quicksilver	Villain	Spiderman	Hero
Thor	Hero	Venom	Anti-Hero	Yellow Jacket	Villain

Each champion has the following attributes and characteristics:-

- **Health points:** Represents the life of the champion. As long as the value of this attribute is bigger than zero, the champion will remain alive and can act in the game. Once the value of this attribute reaches zero, the champion is considered dead and hence, eliminated from the fight.

- **Mana:** a resource that a champion uses to use his abilities. Each time a player uses an ability, a certain amount of mana will be consumed. Once run out, the champion cannot use any of his abilities.

- **Normal attack damage:** The amount of damage that the champion will inflict upon the attacked champion while using a normal attack. This amount will be deducted from the attacked champion's health points.

- **Normal attack range:** The maximum number of cells that the attacker's normal attack can reach the attacked champion within. If the attacked champion is standing in distance greater than this range, the attacker can not use a normal attack on him.

  – Range is calculated by the Manhattan distance algorithm.

- **Speed**: Determines how fast the champion is. The faster the champion, the sooner he can carry out his actions before other champions.

- **Condition**: Represents the current ability/inability of the champion to act. The champion can be active (can do some actions), inactive (can not do any actions until he is back to active), or knocked out (defeated and can not do any action till the end of the game).

- **Actions per turn:** A number representing how many actions a player can do with the champion during each of his turns. Each action will consume a certain amount of this number. Once it reaches zero, no more actions can be done by this champion during this turn. This attribute resets each time the turn goes to the champion.
Possible actions that can be done by a champion during his turn:

– Move to an empty cell.

– Do a normal attack.

– Cast an ability.

– Use Leader Ability (only if champion is the player's chosen leader)
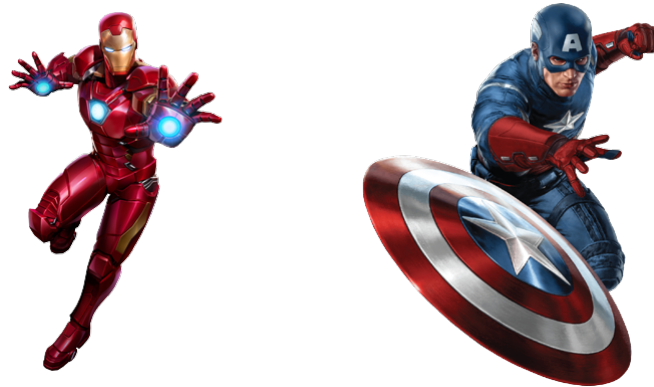
Abilities

These are special attacks that a champion can use. They are categorized under the following categories:-

- **Damaging abilities:** Abilities that deal damage to the opponent champion(s) or covers.

- **Healing abilities:** Abilities that restore health points to friendly champion(s).

- **Effect abilities:** Abilities that can empower or weaken their targets by applying different effects. These effects can last for multiple turns and will affect how the affected champion interacts or reacts to abilities or attacks.
  Example of some effects: stun, weaken, embrace, shield, silence, disarm.

  Abilities have different targets and ranges. Some abilities are single target abilities which affect only a single champion (or a cover in some cases) per use. Or can affect any champion standing in a certain area (area of effect). These areas can be directional (Horizontal or Vertical), or Circuilar (affect an area surrounding a central point). Finally, some abilities can affect all friendly or opposing champions.

  Each ability requires a certain amount of action points to be present in the champion casting them as well as some mana. Also, each ability has a specific range of cells that the target needs to be present in it in order for the ability to affect it.

Leader Abilities

At the beginning of the battle, each player promotes one of his champions to be the leader of his team. The leader will then receive a special ability based on his type that can be used only once per battle.

Gameplay Flow

Each player will select his three champions to form his team. The champions will take turns based on their speed. The champion with the highest speed (from all selected champions) will begin acting first followed by the champion with the second highest speed and so on. When the turn goes to a champion, the player controlling the champion can use him to carry out any action as long as the champion has enough action points needed for this action and also enough mana in case of using any of his abilities. After that, the champion can end his turn and the turn will go to the next champion.

The turns will keep passing over the living champions till a player is able to defeat all of the three champions of the opponent player. In this case, the game ends and the player with the living champion will be declared the winner.