# Dragon Battle Report

## List of Components in Dragon Battle

* The main menu form allows players to leave, start a new game, and browse instructions.
* Character Selection Panels: Shows the four possibilities (Earth, Fire, Wind, and Ice) so that players can select their dragon.
* Battle Arena Form serves as the main gaming screen where dragons fight.
* Health Bars and Status Indicators: Displays each dragon's health, attack power, and status effects.
* Attack Buttons: A range of dragon-specific assaults are available to players.
* The player's turn is indicated by the turn indicator.
* Victory Screen: Displays the winner after the battle.

## Outline of how Dragon Battle works

The main menu serves as a point where players can choose to play the game or exit it. It will have interactive buttons that navigate to different sections like going to the settings screen, FAQ screen or Credits screen etc. The Character Selection panels display the dragons available. Each of these dragons have different and unique abilities and represent the four elements:

* Ice Dragon
* Fire Dragon
* Wind Dragon
* Earth Dragon

Each dragon will have a unique description highlighting its strengths and weaknesses. The Battle Arena makes turn based combat between the chosen dragons easier. In this screen, health bars, attack or combat options and a battle log. The victory screen displays the winning dragon and an option to restart. It may also show battle statistics such as total damage dealt and turns taken. Players can interact with the game by choosing their dragon from the character selection panels. They can choose an attack move on their turn by using the attack button or special attack button. Players can choose to either exit or restart the game at the end of the battle. The game can create outputs based on the interaction like taking damage affects the status of the health bar. When a dragon’s health reaches zero the system will declare a winner. The game will also provide notifications on special move activations and increasers in damage. Outputs are important for keeping clarity and engagement. Health bars help players to keep track of their dragon’s health and come up with strategies using the health they have left. The battle log provides clarity on the actions that are taking place during the battle, including the special moves and status effects. An announcement for a winner will offer closure to the match and possibly, players will want to do a rematch.

## Character Selection Panels

In the Character Selection Panels, players get to choose which dragon they want to play with. Once selecting a dragon, there will be a form that shows the details and specifications of that dragon.

## Logic and Rules

In this game, players take turns attacking, which follows a turn-based game. Each dragon has unique attacks, a unique special move and other abilities which can add strategic depth.

The **Fire Dragon** has a high attack damage and the highest special attack damage with the cost of having a low health bar. The Fire Dragon’s special attack will be called ***Flame Burst*** which can cause a massive amount damage to its opponent but at the cost of lowering its defence.

The **Ice Dragon** has the second highest attack damage and special attack damage. Like the Fire Dragon having a high attack and low health bar, this will also apply to the **Ice Dragon**, having the second lowest health bar. The special attack of the **Ice Dragon** will be called ***Frostbite***, which can freeze an opponent and provide damage while the opponent is affected by ***Frostbite*** similar to a typical frostbite. ***Frostbite*** can also skip an opponent’s turn giving the **Ice Dragon** another turn.

The **Wind Dragon** specialises in fast attacks and quick evasions giving this dragon Quick Time Events when its being attacked. The special attack of the **Wind Dragon** will be called ***Gale Strike*** which can increase speed of attacks giving it two attacks in one turn

The **Earth Dragon** has the highest health bar and block damage making it a defensive type dragon. The special attack of the **Earth Dragon** is going to be called ***Stone Shield*** which can be used as both offensive and defensive move. In the offensive, the **Earth Dragon** can use the shield to push players back and stun them.

Damage can be calculated based on attack power, dragon weaknesses and special abilities. Special abilities have cooldown periods to avoid misuse and are activated based on attack choices. When one dragon's health drops to zero, the match is over, and the victor is proclaimed the victor.

The following is a flowchart explaining the selection procedure of players choosing their dragons: A diagram of a diagram

AI-generated content may be incorrect.

The following pseudocode is on how the combat system will work:

Set both dragons' health to 100

Set currentPlayer = Player1

while Player1.health > 0 and Player2.health > 0:

output “currentPlayer's turn”

input currentPlayer selects attack

if attack is a special move:

Check cooldown

if cooldown is ready:

Apply special effect

Reset cooldown

else:

Inform player and choose a regular attack

Calculate damage based on attack and opponent's weakness/resistance

Subtract damage from opponent's health

Output “damage and updated health bars”

Check if opponent's health <= 0:

Declare currentPlayer as winner

End game

else:

Switch currentPlayer to other player

## Game Balance

To ensure fair play, each dragon has both strengths and weaknesses. The Fire Dragon is strong against Wind but weak against Earth. The Ice Dragon is strong against Fire but weak against Wind. The Wind Dragon is strong against Ice but weak against Fire. The Earth Dragon is strong against Fire but weak against Ice.

Game balance is maintained through extensive testing, adjusting damage values, cooldowns, and health pools to create a fair and engaging gameplay experience. Player must strategically plan their attacks and defences in order to maximise their dragon’s strengths while avoiding situations that will put them in a disadvantage. There are possibilities that dragons with disadvantages can win against the dragon with the upper hand. This can happen through the use of strategies and weak points. Game balance also includes how the attacks work with the environment. If future updates include arenas like lava pits or ice caves, they could give certain dragons small advantages. For example, a Fire Dragon could do more damage in a lava pit. But even with this, the game should stay fair, so we might also give an Ice Dragon better defence in snowy arenas. It's important to balance the game for beginners and experienced players. Easy controls and clear attack descriptions help new players, while deeper strategies keep advanced players interested. Good balance means everyone can enjoy the game, no matter how long they’ve been playing. There is another aspect of balance: ensuring that special moves do not unfairly tilt the game. Imagine if the Ice Dragon froze opponents too frequently. Other players might just wait and never get turns. So, we limit the number of times it can freeze others or reduce chance of freezing. Cooldown timers are also crucial; they block the same strong moves being used again and again. This pushes players to try different strategies to keep the game exciting. Balancing is about running the game with different players reporting which dragons seem unfair in power. If people keep saying that the fiery dragons always win, for example, we might reduce their special moves a bit we could also give them more needed energy to cost more resources. Also, we look at how many times each dragon wins in tests. If one too far outbalances another, we tweak numbers to make results more even.

## User Interface and Experience

The game will include an instinctive player interface with clear indicators for health status, attack options and turn order. Tooltips or brief descriptions will be included to explain each attack and special ability, ensuring easy accessibility for new players. The settings menu will provide players with customisation options. A well-designed UI ensures smooth gameplay and an enjoyable experience for players of all skill levels.

In the form (specifically the **Character Selection Form**), the outputs generated when users pick a dragon would typically include:

**Form Outputs After Dragon Selection**

**Selected Dragon Name**

* + Example: “Fire Dragon”

**Dragon Stats Display**

* + Health, Attack Power, Defence, Speed
  + Example: “Health: 100, Attack: High, Defence: Low”

**Dragon Description**

* + A short paragraph or tooltip about the dragon’s abilities
  + Example: “Fire Dragon specializes in powerful offensive moves. Weak against Earth.”

**Confirmation Message or Button**

* + “You have selected Fire Dragon. Confirm?” with a “Continue” button

**Internal Data Binding**

* + The form stores the chosen dragon type for later use in combat logic

These outputs help transition from selection to battle, giving both feedback and confirmation of choice to the player.

When a user selects a dragon in the Character Selection Form, the system immediately generates multiple outputs to create a responsive and immersive user experience. These outputs are essential because they provide instant feedback and help guide the player through the game’s flow. For example, once a dragon is selected, the form displays the dragon’s name and key stats like health, attack power, and defence. This is important because it informs the player about the dragon’s strengths and weaknesses, which directly influence strategic decisions during the battle. Additionally, a short description of the dragon’s abilities helps new players understand what to expect in gameplay, such as whether the dragon is better suited for offense or defence, or what type of special ability it can use. Finally, a confirmation message or “Continue” button appears to let the user review their choice before moving forward. This ensures players don't accidentally select the wrong dragon and feel frustrated later. Behind the scenes, the system also binds this selection data to the player’s profile so it can be used when initializing the combat screen. Together, these outputs not only help the game function correctly, but also contribute to a seamless, informative, and enjoyable player experience.

The game will also include a battle log at the bottom of the screen that lists the most recent moves. If a player chose **Fire Dragon**, it would display things like “Player 1 used ***Flame Burst***. Player 2 has lost 20 health,” or if it is the **Wind Dragon** “Player 1 has used ***Gale Strike***, they can attack 2 times.” This helps the players remember what has already happened and it makes t easier to plan their next moves. A turn indicator at the top of the screen can show whose turn it is, so players always know when to attack.

The whole game will be able to work on mouse and keyboard, and for later developments even touchscreen for mobile players. That way, people can play the game any way they see fit for their comfortability. When players pause the game, they should see a small menu with options like “Resume”, “Restart” or ”Exit to Main Menu.” This makes sure that players can take a break whenever they need to.

To help even more, the game can include a tutorial that runs the first time you play this game. It would walk players through the controls, how to pick a dragon, the logic around the game, how attacks works and how to win. A good user interface helps the game feel welcoming, fun and user friendly, even for someone who has never played a game before. It turns the game into something that’s not just easy to use, but also enjoyable from start to finish making them want to play more matches in the future.

## Data Storage

Saving game data is important so players don’t lose their progress. The game will be able to save player settings, like volume and difficulty, so that each time the player comes back, their game feels just the way they like it. It will also save information about which dragons players choose most, how many games they’ve won or lost, and which achievements they’ve earned. This data helps players track their progress over time.

The game could also use cloud saving, which allows players to pick up where they left off, even if they switch devices. For example, someone might start a game on a laptop and finish it later on a phone or tablet. This makes the game more flexible and easier to enjoy in different situations. Storing data the right way also keeps everything safe, so players don’t lose their records or settings.

## Testing and Debugging

It is very important to test everything before releasing the game to ensure that it works properly. The team has to test every little part of the game, such as how attacks deal damage, health bars being updated appropriately and thousands of other things. Next, they want to see how all the different parts of the game come together, such as choosing dragons and launching a fight. Testers should also play the game in the way an ordinary player would, to see whether it’s fun, fair and easy to understand. And if things go wrong, if the game crashes or an attack does too much damage, the team will repair it.” This is called debugging. Testing and debugging are about getting the game satisfying, fun and accessible to everyone.

## Strategic Values

Even though this game is mainly used to have fun, it can also help players learn important and critical thinking skills. When players are choosing their dragons and attacks, they have to think carefully and critically about what their opponent might do and plan their moves. Each dragon has its own strengths and weakness, so players have to understand how to use them the best, similar to Overwatch 2, characters have different weapons, skill sets and power moves. This teaches players to properly think ahead, solve problems in the best ways and make good decisions. Some players might even start to recognise patterns or come up with their own strategies over time. These are useful skills that can help players in other games that require strategic thinking and also in real life too. If players pick a dragon randomly or based on what element they like, there wouldn’t be much of a development in their critical thinking and in the end, they will end up losing matches in this game and in other strategic games

## Future Considerations and Enhancements

In the future, there are many cool ideas that could be added to make the game even better. More Dragons with unique moves and abilities could be added to make the game give players more options and strategies. For example, later in the game, we could add a Lightning Dragon or a Water Dragon. Adding a leaderboard or a battle record will give players a goal to aim for being the best, promoting a killer type of persona. Adding a battle record can also bring a sense of achievement to players. It would be also fun to let players customise their dragons by changing not only their colours but also giving them cool effects. Another great idea is adding new battle environments, like volcanoes or icy caves. These environments can boost the dragons’ special abilities dependin on what element they represent, for example, when a **Fire Dragon** is in a volcano based environment or when the **Ice Dragon** is in an icy based environment. These upgrades would make the game more interesting and exciting and give payers more of the reason to keep playing.