**Frog Leap Problem Statement**

**Game Overview:**

This section provides a more detailed explanation of the game. It describes the game's concept, environment, characters, and any unique features that make it stand out. It helps the reader understand the core elements of the game.

Objective:

Here you clearly state the main goal that players need to achieve in the Frog Leap Puzzle Game. This could be solving a series of puzzles, reaching a destination, or accomplishing specific tasks. The objective is a crucial element that guides players throughout their gameplay.

Game Rules:

Outline the rules that players must adhere to during gameplay. This may include restrictions on the frog's movement, consequences for falling into water, or limitations on the number of moves allowed.

Penalties: Specify any penalties for breaking the rules. This could involve losing points, restarting a level, or encountering additional challenges.

Controls:

Comprehensive list of controls (keyboard, mouse, touchscreen).

Visual: Control scheme diagram with keybindings.

**How To Play:**

Open the Game:

Open the google collab file containing the Frog Leap Puzzle Game in a web browser of your choice.

Game Interface:

The game screen consists of a blue background representing water and a green square representing the frog. The frog is initially positioned on the left side of the screen.

Starting Position:

The frog is positioned at the left side of the screen.

Frog Movement:

Use the right arrow key on your keyboard to move the frog to the right.

Press the right arrow key multiple times to make the frog leap towards the right edge of the screen.

Monitor Frog's Position:

Watch the frog's position as it moves to the right. The goal is to reach the right edge of the screen.

Winning the Game:

Continue moving the frog to the right until it reaches the right edge of the screen.

Once the frog reaches the other side, a congratulatory message will appear, indicating that you have won the game.

Game Reset:

After winning, the game will automatically reset the frog's position to the starting point on the left side.

Restarting the Game:

If you wish to play again, you can restart by moving the frog to the right once more.

**Note**:

Control the Frog's Movement:

Be mindful of how many times you press the right arrow key to control the frog's movement.

Avoid Overshooting:

Be careful not to move the frog too fast, as it may overshoot the right edge.

Explore Enhancements:

The provided code is a basic demonstration. Consider adding more levels, obstacles, or challenges to make the game more interesting.

**Game Display:**

The game is displayed with green frogs ('🐸') on the left side, brown frogs ('🐬') on the right side, and empty spaces represented by leaves ('🍁'). The initial display is as follows:

Step To solve Problem:

Display green and brown frogs on the left and right sides initially.

Initial Display :-

[ 0 , 1 , 2 , 3 , 4 , 5 , 6 ]

['G', 'G', 'G', '-', 'B', 'B', 'B']

Here 'G' represents Green frogs on the left side and 'B' represents brown frogs on the right side. The '-' defines the position of the empty leaf. (You can change display according to your imagination or convenience)

Step2:-

Accept positions of the frog that you want to move.

Example: If we enter position 2 then the game will look like this:-

[ 0 , 1 , 2 , 3 , 4 , 5 , 6 ]

['G', 'G', '-', 'G', 'B', 'B', 'B']

Step3:-

Define Invalid moves and add conditional 'if' statements accordingly

Rules

Entered position should be between 0 to 6. Or a character 'q' to quit the game.

Entered position cannot be the position of an empty leaf.

If the selected frog position cannot perform the constraints given in rule 2 then the move is invalid.

Step4:-

Make the appropriate move by changing the game display.

[ 0 , 1 , 2 , 3 , 4 , 5 , 6 ]

['🐸', '🐸', '🐸', '🍁', '🐬', '🐬', '🐬']

Press q to quit else

Enter position of piece:2

Press q to quit else

Enter position of piece:4

Press q to quit else

Enter position of piece:5

Press q to quit else

Enter position of piece:3

Press q to quit else

Enter position of piece:1

Press q to quit else

Enter position of piece:0

Press q to quit else

Enter position of piece:2

Press q to quit else

Enter position of piece:4

Press q to quit else

Enter position of piece:6

Press q to quit else

Enter position of piece:5

Press q to quit else

Enter position of piece:3

Press q to quit else

Enter position of piece:1

Press q to quit else

Enter position of piece:2

Press q to quit else

Enter position of piece:4

Press q to quit else

Enter position of piece:3

**Game Overview:**

In the Frog Leap Puzzle Game, players guide a frog across a series of leaves to reach the other side. The game's charm lies in its simplicity and strategic thinking.

**Objective:**

Guide the frog to the right edge of the screen by leaping over leaves, avoiding obstacles, and making strategic moves.

**Game Rules:**

* Use the right arrow key to move the frog right.
* Be cautious of overshooting to prevent the frog from falling into the water.
* The game resets after winning, positioning the frog back on the starting side.
* Restart the game by moving the frog to the right again.

**Penalties:**

* No specific penalties, but moving too fast might lead to overshooting.

**Controls:**

* Right arrow key: Move the frog right.

**How To Play:**

* Open the game in a web browser.
* The screen has a blue background (water) and a green square (frog) on the left.
* Use the right arrow key to make the frog leap right.
* Continue until the frog reaches the right edge to win.
* Watch for the congratulatory message upon winning.
* To restart, move the frog right again.

Game Display:

* Green frogs ('🐸') on the left, brown frogs ('🐱') on the right, and empty spaces represented by leaves ('🦋').

Step To Solve Problem:

* Initial Display:
* css
* Copy code

[ 0 , 1 , 2 , 3 , 4 , 5 , 6 ]

['🐸', '🐸', '🐸', '🦋, '🐱', '🐱', '🐱']

* Accept Positions:
  + Enter the position of the frog you want to move (e.g., 2).
* Define Invalid Moves:
  + Position should be between 0 to 6 or 'q' to quit.
  + The selected position can't be an empty leaf.
  + Ensure the move adheres to constraints.
* Make Appropriate Move:
  + Display updates after each move.

Example Gameplay:

less

Copy code

Enter position of piece: 2

[ 0 , 1 , 2 , 3 , 4 , 5 , 6 ]

['🐸', '🐸', '🦋', '🐸', '🐱', '🐱', '🐱']

Enter position of piece: 4

[ 0 , 1 , 2 , 3 , 4 , 5 , 6 ]

['🐸', '🐸', '🐱', '🐸', '🦋', '🐱', '🐱']

Note:

* Avoid fast moves to prevent overshooting.
* Explore enhancements like additional levels or obstacles for a more challenging game.