


```
In [*]: class FrogJumpingPuzzle:
    def __init__(self, initial_state, target_state):
        self.current_state = initial_state
        self.target_state = target_state

    def display_game(self):
        print("Current State:", self.current_state)
        print("Target State:", self.target_state)

    def is_valid_move(self, start_index, end_index):
        return (
            0 <= start_index < len(self.current_state)
            and 0 <= end_index < len(self.current_state)
            and self.current_state[start_index] == 1
            and self.current_state[end_index] == 0
            and abs(start_index - end_index) == 1
        )

    def make_move(self, start_index, end_index):
        if self.is_valid_move(start_index, end_index):
            self.current_state[start_index], self.current_state[end_index] = (
                self.current_state[end_index],
                self.current_state[start_index],
            )
        else:
            print("Invalid move. Try again.")

    def is_winner(self):
        return self.current_state == self.target_state

def main():
    initial_state = [1, 1, 1, 0, 0, 0]
    target_state = [0, 0, 0, 1, 1, 1]
    game = FrogJumpingPuzzle(initial_state, target_state)

    while not game.is_winner():
        game.display_game()
        start_index = int(input("Enter the position of the frog to jump (0-5): "))
        end_index = int(input("Enter the position to jump to (0-5): "))

        game.make_move(start_index, end_index)

    print("Congratulations! You've solved the puzzle.")

if __name__ == "__main__":
    main()
```

```
Current State: [1, 1, 1, 0, 0, 0]
Target State: [0, 0, 0, 1, 1, 1]
Enter the position of the frog to jump (0-5): 3
Enter the position to jump to (0-5): 4
Invalid move. Try again.
Current State: [1, 1, 1, 0, 0, 0]
Target State: [0, 0, 0, 1, 1, 1]
Enter the position of the frog to jump (0-5): 3
Enter the position to jump to (0-5): 2
Invalid move. Try again.
Current State: [1, 1, 1, 0, 0, 0]
Target State: [0, 0, 0, 1, 1, 1]

Enter the position of the frog to jump (0-5):
```

In []: