KIDDIE FLIP GAME
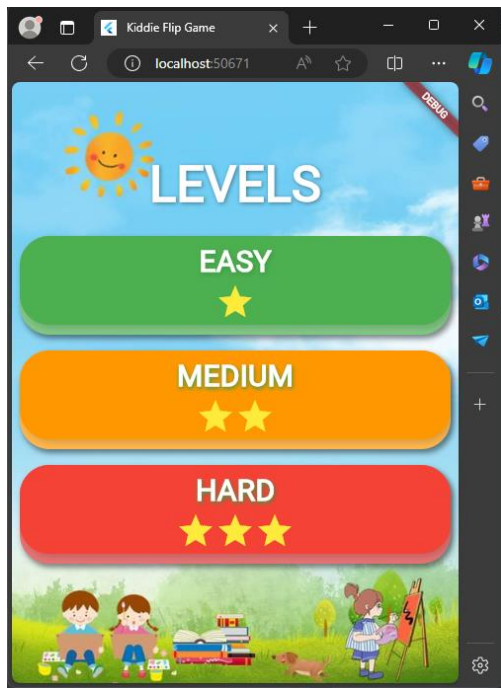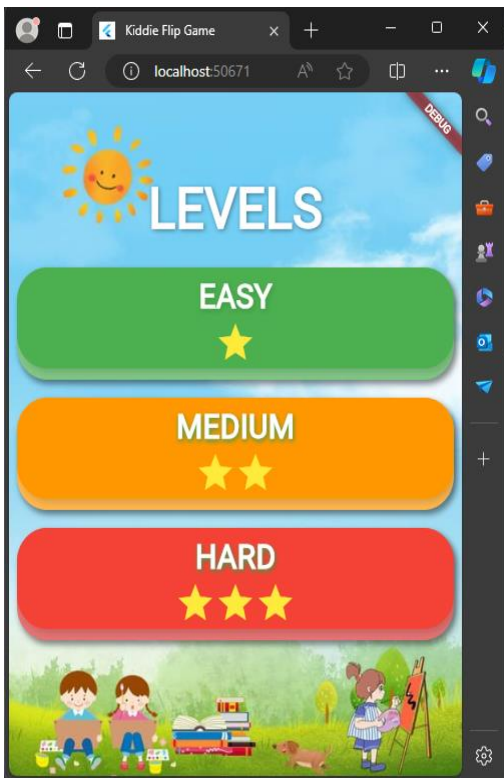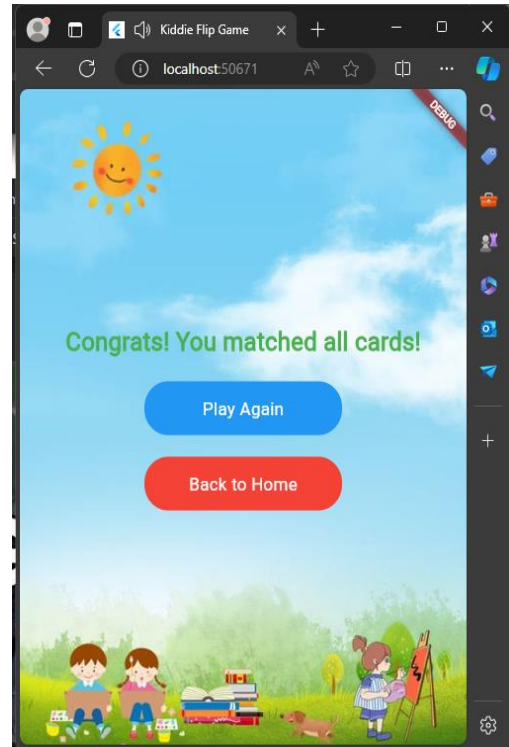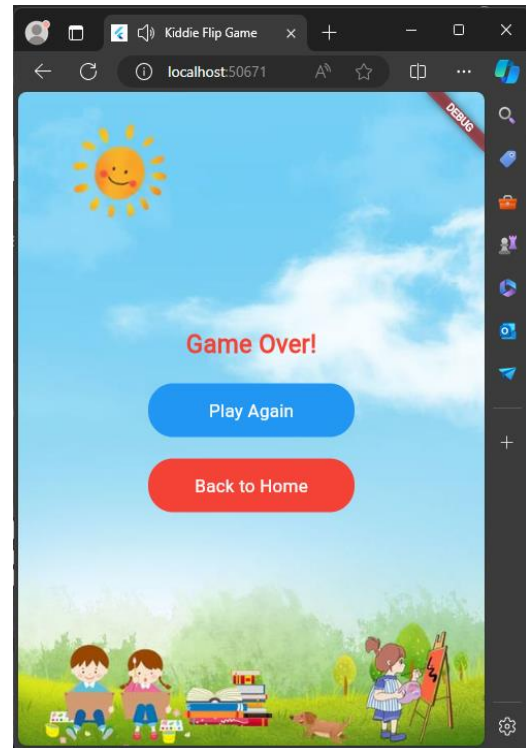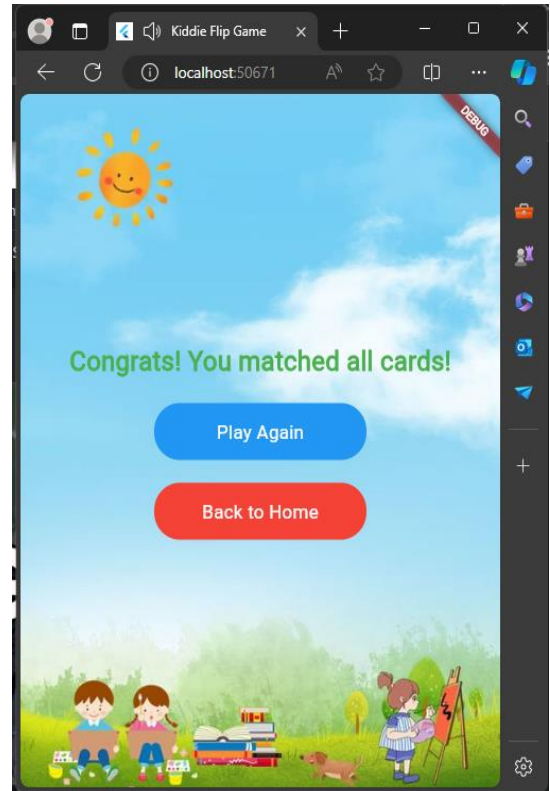# Flip Your Way to Sharper Memory!

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Attempts left: 3

Game Over!

Play Again

Back to Home

LEVELS

EASY

MEDIUM

HARD

3

Attempts left: 3

Congrats! You matched all cards!
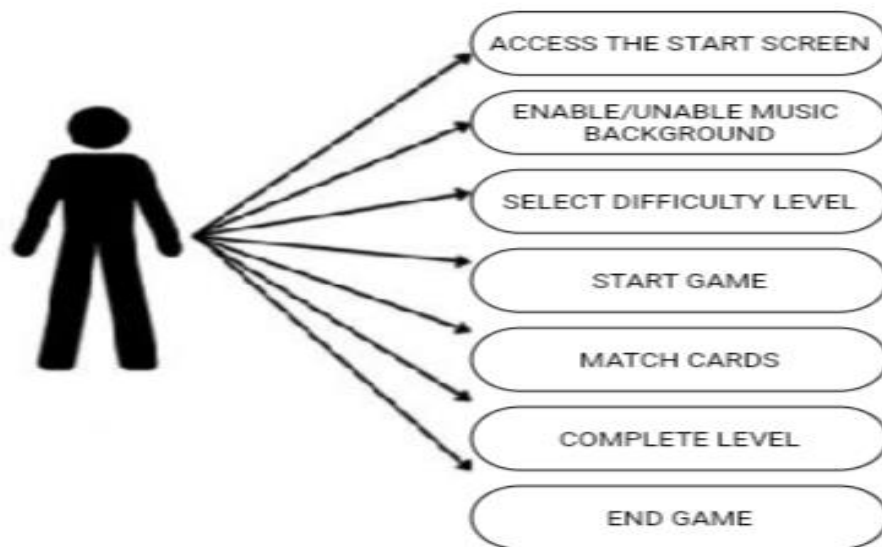
Play Again

Back to Home

Kiddie Flip Game is a fun and engaging memory game designed for players of all ages. It offers a simple yet challenging experience that sharpens your memory and reflexes. The game features three levels: easy, medium and hard. Each level comes with different card flip speeds, challenging you to rely on your quick reflexes and sharp memory to match the identical images before they disappear. The game also includes features such as the ability to turn the sound on or off, and the option to flip the logo on the front page of the application, adding a touch of customization to your gameplay.

- ACCESS THE START SCREEN
- ENABLE/UNABLE MUSIC BACKGROUND
- SELECT DIFFICULTY LEVEL
- START GAME
- MATCH CARDS
- COMPLETE LEVEL
- END GAME

First screenshot (main.dart):

```dart
import 'package:flutter/material.dart';
import 'frontpage.dart'; // Import the FrontPage widget

void main() {
  runApp(MyApp());
}

class MyApp extends StatefulWidget {
  @override
  _MyAppState createState() => _MyAppState();
}

class _MyAppState extends State<MyApp> {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Kiddie Flip Game,
      theme: ThemeData(
        primarySwatch: Colors.blue,
        visualDensity: VisualDensity.adaptivePlatformDensity,
      ),
      home: FrontPage(), // Use FrontPage widget here
    );
  }
}
```

Second screenshot (frontpage.dart):

```dart
import 'package:flutter/material.dart';
import 'package:flip_card/flip_card.dart';
import 'homepage.dart';

class FrontPage extends StatefulWidget {
  const FrontPage({super.key});

  @override
  State<FrontPage> createState() => _FrontPageState();
}

class _FrontPageState extends State<FrontPage> {
  final GlobalKey<FlipCardState> _cardKey = GlobalKey<FlipCardState>();

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Stack(
        fit: StackFit.expand,
        children: [
          // Background image
          Image.network(
            'assets/asd.jpg', // Your background image path
            fit: BoxFit.cover, // Cover the entire screen
          ), // Image.network
```

```dart
25          ),  // Image.network
26          // Foreground content
27          Center(
28            child: Column(
29              mainAxisAlignment: MainAxisAlignment.center,
30              children: <Widget>[
31                FlipCard(
32                  key: _cardKey,
33                  direction: FlipDirection.HORIZONTAL,
34                  front: Image.network(
35                    'assets/artwork3.png', // Your front image path
36                    width: 300, // Adjust the width as needed
37                    height: 300, // Adjust the height as needed
38                  ),  // Image.network
39                  back: Image.network(
40                    'assets/logo-back.png', // Your back image path
41                    width: 300, // Adjust the width as needed
42                    height: 300,
43                  ),  // Image.n    Type: List<Widget>
44                  onFlip: () {
45                    print('Card          devs_bless_degs              ip event
46                  },
47                ),  // FlipCard
48                SizedBox(height: 20),
49                Text(
```

```dart
49          Text(                                              ⚠ 13  ✓ 1  ^  ∨
50            'Flip Your Way to Sharper Memory!',
51            style: TextStyle(
52              fontSize: 20,
53              color: Colors.yellow,
54              fontWeight: FontWeight.bold,
55              shadows: [
56                Shadow(
57                  color: Colors.white.withOpacity(0.8),
58                  offset: Offset(2, 2),
59                  blurRadius: 2,
60                ),  // Shadow
61                Shadow(
62                  color: Colors.black.withOpacity(0.8),
63                  offset: Offset(-2, -2),
64                  blurRadius: 2,
65                ),  // Shadow
66                Shadow(
67                  color: Colors.black.withOpacity(0.8),
68                  offset: Offset(2, -2),
69                  blurRadius: 2,
70                ),  // Shadow
71                Shadow(
72                  color: Colors.black.withOpacity(0.8),
73                  offset: Offset(-2, 2),
74                  blurRadius: 2,
```

```dart
                      color: Colors.black.withOpacity(0.8),
                      offset: Offset(2, -2),
                      blurRadius: 2,
                    ), // Shadow
                    Shadow(
                      color: Colors.black.withOpacity(0.8),
                      offset: Offset(-2, 2),
                      blurRadius: 2,
                    ), // Shadow
                  ],
                ), // TextStyle
                textAlign: TextAlign.center,
              ), // Text
              SizedBox(height: 20),
              ElevatedButton(
                onPressed: () {
                  Navigator.push(
                    context,
                    MaterialPageRoute(
                      builder: (context) => HomePage(),
                    ), // MaterialPageRoute
                  );
                },
                child: Text(
                  'Start Game',
                  style: TextStyle(
                    fontSize: 18,
                    color: Colors.blue, // Text color
                    fontFamily: 'Knewave', // Custom font family
                    fontWeight: FontWeight.bold, // Optional: change font weight
                  ), // TextStyle
                ), // Text
                style: ElevatedButton.styleFrom(
                  padding: EdgeInsets.symmetric(horizontal: 30, vertical: 15),
                  backgroundColor: Colors.yellow, // Background color
                  shape: RoundedRectangleBorder(
                    side: BorderSide(color: Colors.blue, width: 2), // Border color and width
                    borderRadius: BorderRadius.circular(12), // Border radius
                  ), // RoundedRectangleBorder
                ),
              ), // ElevatedButton
            ], // <Widget>[]
          ), // Column
        ), // Center
      ],
    ), // Stack
  ); // Scaffold
  }
}
```

```dart
import 'package:flutter/material.dart';
import 'flipcardgame.dart';
import 'data.dart';

class HomePage extends StatefulWidget {
  const HomePage({super.key});

  @override
  State<HomePage> createState() => _HomePageState();
}

class _HomePageState extends State<HomePage> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Stack(
        children: [
          // Background image
          Positioned.fill(
            child: Image.network(
              'assets/asd1.jpg', // Path to your background image
              fit: BoxFit.cover, // Cover the entire screen
            ), // Image.network
          ), // Positioned.fill
          // Main content
          Padding(
```

```dart
                        ), // Padding
                        // ListView to display items
                ┌ Expanded(
                └ child: ListView.builder(
                    itemCount: detailsList.length,
                    itemBuilder: (context, index) {
                      final detail = detailsList[index];
                 ┌ return GestureDetector(
                 │   onTap: () {
                 │     Navigator.push(
                 │       context,
                 │       MaterialPageRoute(
                 │         builder: (context) => detail.goto!,
                 │       ), // MaterialPageRoute
                 │     );
                 │   },
                 └ child: Padding(
                     padding: const EdgeInsets.only(top: 16.0), // Top margin for each item
                  ┌ child: Center(
                  └ child: Container(
                      height: 100,
                      width: double.infinity,
                      decoration: BoxDecoration(
                        color: detail.secondaryColor,
                        borderRadius: BorderRadius.circular(30),
                        boxShadow: const [
```
```dart
                      width: double.infinity,
                      decoration: BoxDecoration(
                        color: detail.secondaryColor,
                        borderRadius: BorderRadius.circular(30),
                        boxShadow: const [
                          BoxShadow(
                            blurRadius: 4,
                            color: Colors.black45,
                            spreadRadius: 0.5,
                            offset: Offset(3, 4),
                          ), // BoxShadow
                        ],
                      ), // BoxDecoration
                   ┌ child: Stack(
                   │   children: [
                   └─ Container(
                        height: 90,
                        width: double.infinity,
                        decoration: BoxDecoration(
                          color: detail.primaryColor,
                          borderRadius: BorderRadius.circular(30),
                          boxShadow: const [
                            BoxShadow(
                              blurRadius: 4,
                              color: Colors.black12,
                              spreadRadius: 0.7,
```

```dart
                              color: Colors.black12,
                              spreadRadius: 0.3,
                              offset: Offset(3, 4),
                            ),  // BoxShadow
                          ],
                        ),  // BoxDecoration
                        child: Column(
                          mainAxisAlignment: MainAxisAlignment.center,
                          children: [
                            Center(
                              child: Text(
                                detail.name,
                                style: const TextStyle(
                                  color: Colors.white,
                                  fontSize: 30,
                                  fontWeight: FontWeight.bold,
                                  shadows: [
                                    Shadow(
                                      color: Colors.black26,
                                      blurRadius: 2,
                                      offset: Offset(1, 2),
                                    ),  // Shadow
                                    Shadow(
                                      color: Colors.green,
                                      blurRadius: 2,
                                      offset: Offset(0.5, 2),
                                    ),  // Shadow
                                  ],
                                ),  // TextStyle
                              ),  // Text
                            ),  // Center
                            Row(
                              mainAxisAlignment: MainAxisAlignment.center,
                              children: generateStars(detail.noOfStars),
                            ),  // Row
                          ],
                        ),  // Column
                      ),  // Container
                    ],
                  ),  // Stack
                ),  // Container
              ),  // Center
            ),  // Padding
```

```dart
                  ),  // Padding
                );  // GestureDetector
              },
            ),  // ListView.builder
          ),  // Expanded
        ],
      ),  // Column
    ),  // Padding
  ],
),  // Stack
);  // Scaffold
}

List<Widget> generateStars(int? noOfStars) {
  return List.generate(
    noOfStars ?? 0,
    (index) => const Icon(Icons.star, color: Colors.yellow, size: 40),
  );  // List.generate
}
}

class Details {
  final String name;
  final Color primaryColor;
  final Color secondaryColor;
  final Widget? goto;
  final int? noOfStars;

  Details({
    required this.name,
    required this.primaryColor,
    required this.secondaryColor,
    this.goto,
    this.noOfStars,
  });
}

List<Details> detailsList = [
  Details(
    name: "EASY",
    primaryColor: Colors.green,
    secondaryColor: Colors.green[300]!,
    noOfStars: 1,
    goto: FlipCardGame(Level.Easy),
  ),  // Details
  Details(
    name: "MEDIUM",
    primaryColor: Colors.orange,
    secondaryColor: Colors.orange[300]!,
```

```dart
      name: "EASY",
      primaryColor: Colors.green,
      secondaryColor: Colors.green[300]!,
      noOfStars: 1,
      goto: FlipCardGame(Level.Easy),
    ),  // Details
    Details(
      name: "MEDIUM",
      primaryColor: Colors.orange,
      secondaryColor: Colors.orange[300]!,
      noOfStars: 2,
      goto: FlipCardGame(Level.Medium),
    ),  // Details
    Details(
      name: "HARD",
      primaryColor: Colors.red,
      secondaryColor: Colors.red[300]!,
      noOfStars: 3,
      goto: FlipCardGame(Level.Hard),
    ),  // Details
  ];
```

```dart
import 'package:flutter/material.dart'; // Import this for GlobalKey
import 'package:flip_card/flip_card.dart';

List<String> fillSourceArray() {
  return [
    'assets/eggplant.jpg',
    'assets/cucumber.jpg',
    'assets/pumpkin1.jpg',
    'assets/carrot.jpg',
    'assets/bellpepper.jpg',
    'assets/bear.jpg',
    'assets/hippo.jpg',
    'assets/lion.jpg',
    'assets/monkey.jpg',
    'assets/rhino.jpg',
    'assets/zebra.jpg',
    'assets/banana.jpg',
    'assets/lemon.jpg',
    'assets/apple.jpg',
    'assets/orange.jpg',
    'assets/pear.jpg',
    'assets/straberry.jpg',
    'assets/watermelon.jpg',
    'assets/grapes.jpg',
```

```dart
    ];
}

enum Level { Hard, Medium, Easy }

List getSourceArray(Level level) {
  List<String> levelList = [];
  List sourceArray = fillSourceArray();

  if (level == Level.Hard) {
    for (int i = 11; i < 19; i++) {
      levelList.add(sourceArray[i]);
    }
  } else if (level == Level.Medium) {
    for (int i = 5; i < 11; i++) {
      levelList.add(sourceArray[i]);
    }
  } else if (level == Level.Easy) {
    for (int i = 0; i < 4; i++) {
      levelList.add(sourceArray[i]);
    }
  }

  levelList.shuffle();
  return levelList;
```

```dart
  levelList.shuffle();
  return levelList;
}

List<bool> getInitialItemState(Level level) {
  List<bool> initialItemState = [];

  if (level == Level.Hard) {
    for (int i = 0; i < 18; i++) {
      initialItemState.add(true);
    }
  } else if (level == Level.Medium) {
    for (int i = 0; i < 12; i++) {
      initialItemState.add(true);
    }
  } else if (level == Level.Easy) {
    for (int i = 0; i < 6; i++) {
      initialItemState.add(true);
    }
  }

  return initialItemState;
}

List<GlobalKey<FlipCardState>> getCardStateKeys(Level level) {
```

```
72    }

73    List<GlobalKey<FlipCardState>> getCardStateKeys(Level level) {
74      List<GlobalKey<FlipCardState>> cardStateKeys = [];

75

76      if (level == Level.Hard) {
77        for (int i = 0; i < 18; i++) {
78          cardStateKeys.add(GlobalKey<FlipCardState>());
79        }
80      } else if (level == Level.Medium) {
81        for (int i = 0; i < 6; i++) {
82          cardStateKeys.add(GlobalKey<FlipCardState>());
83        }
84      } else if (level == Level.Easy) {
85        for (int i = 0; i < 6; i++) {
86          cardStateKeys.add(GlobalKey<FlipCardState>());
87        }
88      }

89

90      return cardStateKeys;
91    }
```

```
1     import 'package:flip_card/flip_card.dart';
2     import 'package:flutter/cupertino.dart';
3     import 'package:flutter/material.dart';
4     import 'package:audioplayers/audioplayers.dart'; // Import audioplayers package
5     import 'data.dart';
6     import 'dart:async';

7

8     class FlipCardGame extends StatefulWidget {
9       final Level level;
10      FlipCardGame(this.level);

11

12      @override
13      _FlipCardGameState createState() => _FlipCardGameState(level);
14    }

15

16    class _FlipCardGameState extends State<FlipCardGame> {
17      _FlipCardGameState(this.level);

18

19      final Level level;
20      int _previousIndex = -1;
21      bool _flip = false;
22      bool _start = false;
23      bool _wait = false;
24      Timer? _timer;
25      int _time = 5;
```

```dart
    int _time = 5;
    int? _left;
    int _remainingAttempts = 3; // Default attempts
    bool _isFinished = false;
    String _resultMessage = ''; // Added for result message
    late List<String> _data;
    late List<bool> _cardFlips;
    late List<GlobalKey<FlipCardState>> _cardStateKeys;

    final AudioPlayer _audioPlayer = AudioPlayer(); // Initialize audio player
    bool _isPlaying = false; // Track if the sound is playing

    @override
    void initState() {
      super.initState();
      restart();
    }

    @override
    void dispose() {
      _timer?.cancel();
      _audioPlayer.dispose(); // Dispose the audio player
      super.dispose();
    }

    Widget getItem(int index) {
```

```dart
    Widget getItem(int index) {
      return Container(
        decoration: BoxDecoration(
          color: Colors.grey[100],
          boxShadow: [
            BoxShadow(
              color: Colors.black45,
              blurRadius: 3,
              spreadRadius: 0.8,
              offset: Offset(2.0, 1),
            ), // BoxShadow
          ],
          borderRadius: BorderRadius.circular(5),
        ), // BoxDecoration
        margin: EdgeInsets.all(4.0),
        child: Image.asset(_data[index]),
      ); // Container
    }

    void startTimer() {
      _timer = Timer.periodic(Duration(seconds: 1), (t) {
        setState(() {
          if (_time > 0) {
            _time--;
```

```dart
              _time--;
            } else {
              _timer?.cancel();
            }
          });
        });  // Timer.periodic
      }

      void restart() {
        startTimer();

        // Duplicate each image to create pairs
        _data = getSourceArray(level).cast<String>();
        _data = List.from(_data)..addAll(_data); // Duplicate images

        _data.shuffle(); // Shuffle to randomize the positions

        _cardFlips = List<bool>.filled(_data.length, true);
        _cardStateKeys = List.generate(_data.length, (index) => GlobalKey<FlipCardState>());
        _time = 5;
        _left = (_data.length ~/ 2);

        // Set attempts based on level
        _remainingAttempts = level == Level.Easy ? 5 : 3; // Default attempts for other levels
```

```dart
        _isFinished = false;
        _resultMessage = ''; // Reset result message

        Future.delayed(const Duration(seconds: 6), () {
          setState(() {
            _start = true;
            _timer?.cancel();
          });
        });  // Future.delayed
      }

      void _handleCardFlip(int index) {
        if (_wait || _remainingAttempts <= 0) return;

        setState(() {
          if (!_flip) {
            _flip = true;
            _previousIndex = index;
          } else {
            _flip = false;
            if (_previousIndex != index) {
              if (_data[_previousIndex] != _data[index]) {
                _wait = true;
                _remainingAttempts--; // Decrement attempts here
```

```dart
            _remainingAttempts--; // Decrement attempts here
          Future.delayed(const Duration(milliseconds: 1500), () {
            _cardStateKeys[_previousIndex].currentState?.toggleCard();
            _cardStateKeys[index].currentState?.toggleCard();
            _previousIndex = index;
            setState(() {
              _wait = false;
              if (_remainingAttempts <= 0) {
                _isFinished = true; // End the game if no attempts are left
                _start = false;
                _audioPlayer.stop(); // Stop the sound when game ends
                if (_cardFlips.every((t) => !t)) {
                  _resultMessage = 'Congrats! You matched all cards!';
                  _playApplause(); // Play applause sound on win
                } else {
                  _resultMessage = 'Game Over!';
                  _playLossSound(); // Play loss sound on game over
                }
              }
            });
          }); // Future.delayed
        } else {
          _cardFlips[_previousIndex] = false;
          _cardFlips[index] = false;
          setState(() {
```

```dart
          setState(() {
            _left = (_left ?? 0) - 1;
            if (_cardFlips.every((t) => !t)) {
              Future.delayed(const Duration(milliseconds: 160), () {
                setState(() {
                  _isFinished = true;
                  _start = false;
                  _audioPlayer.stop(); // Stop the sound when game ends
                  _resultMessage = 'Congrats! You matched all cards!';
                  _playApplause(); // Play applause sound on win
                });
              }); // Future.delayed
            }
          });
        }
      }
    }
  });
}

void _toggleSound() async {
  try {
    if (_isPlaying) {
      await _audioPlayer.pause(); // Pause if playing
      setState(() {
```

```dart
                setState(() {
                    _isPlaying = false;
                });
            } else {
                await _audioPlayer.play('assets/audio/kid.mp3', isLocal: true); // Play if paused
                setState(() {
                    _isPlaying = true;
                });
            }
        } catch (e) {
            print('Error toggling sound: $e');
        }
    }

    void _playApplause() async {
        try {
            await _audioPlayer.play('assets/audio/applause.mp3', isLocal: true); // Play applause sound
        } catch (e) {
            print('Error playing applause sound: $e');
        }
    }

    void _playLossSound() async {
        try {
            await _audioPlayer.play('assets/audio/sad.mp3', isLocal: true); // Play loss sound
```

```dart
                            "Back to Home",
                                style: TextStyle(
                                    color: Colors.white,
                                    fontSize: 17,
                                    fontWeight: FontWeight.w500,
                                ), // TextStyle
                            ), // Text
                        ), // Container
                    ), // GestureDetector
                ], // <Widget>[]
            ), // Column
        ) // Center
            : SafeArea(
                child: SingleChildScrollView(
                    child: Column(
                        children: <Widget>[
                            Padding(
                                padding: const EdgeInsets.all(16.0),
                                child: _time > 0
                                    ? Text(
                                        '$_time',
                                        style: Theme.of(context)
                                            .textTheme
                                            .headlineMedium
                                            ?.copyWith(color: Colors.white), // Ensure text is visible on background
```

```
289                           ?.copyWith(color: Colors.white), // Ensure text is visible
290                       )  // Text
291                     :  Text(
292                       'Attempts left: $_remainingAttempts',
293                       style: Theme.of(context)
294                           .textTheme
295                           .headlineMedium
296                           ?.copyWith(color: Colors.white), // Ensure text is visible on background
297                   ),  // Text
298               ),  // Padding
299           Padding(
300             padding: const EdgeInsets.all(4.0),
301             child: IconButton(
302               icon: Icon(
303                 _isPlaying ? Icons.volume_up : Icons.volume_off,
304                 size: 48.0,
305                 color: Colors.blue,
306               ),  // Icon
307               onPressed: _toggleSound, // Toggle sound when pressed
308             ),  // IconButton
309           ),  // Padding
310           Padding(
311             padding: const EdgeInsets.all(4.0),
312             child: GridView.builder(
313               shrinkWrap: true,
314               physics: NeverScrollableScrollPhysics(),
315               gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(
316                 crossAxisCount: level == Level.Easy ? 3 : level == Level.Medium ? 4 : 4,
317                 crossAxisSpacing: 4.0,
318                 mainAxisSpacing: 4.0,
319               ),  // SliverGridDelegateWithFixedCrossAxisCount
320               itemBuilder: (context, index) => _start
321                   ? FlipCard(
322                 key: _cardStateKeys[index],
323                 onFlip: () => _handleCardFlip(index),
324                 flipOnTouch: !_wait && _cardFlips[index],
325                 direction: FlipDirection.HORIZONTAL,
326                 front: Container(
327                   decoration: BoxDecoration(
328                     color: Colors.cyan,
329                     borderRadius: BorderRadius.circular(5),
330                     boxShadow: [
331                       BoxShadow(
332                           color: Colors.black45,
333                           blurRadius: 3,
334                           spreadRadius: 0.8,
335                           offset: Offset(2.0, 1),
336                       ),  // BoxShadow
337                     ],
```

```
337                                                              ],
338                                                   ),  // BoxDecoration
339                                                   margin: EdgeInsets.all(4.0),
340                                                   child: Padding(
341                                                     padding: const EdgeInsets.all(8.0),
342                                                     child: Image.network(
343                                                       'assets/artwork3.png',
344                                                     ),  // Image.network
345                                                   ),  // Padding
346                                                 ),  // Container
347                                               back: getItem(index),
348                                             )  // FlipCard
349                                               : getItem(index),
350                                           itemCount: _data.length,
351                                         ),  // GridView.builder
352                                       ),  // Padding
353                                     ],  // <Widget>[]
354                                   ),  // Column
355                                 ),  // SingleChildScrollView
356                               ),  // SafeArea
357                             ],
358                           ),  // Stack
359                         ),  // SizedBox.expand
360                       );  // Scaffold
361                     }
```