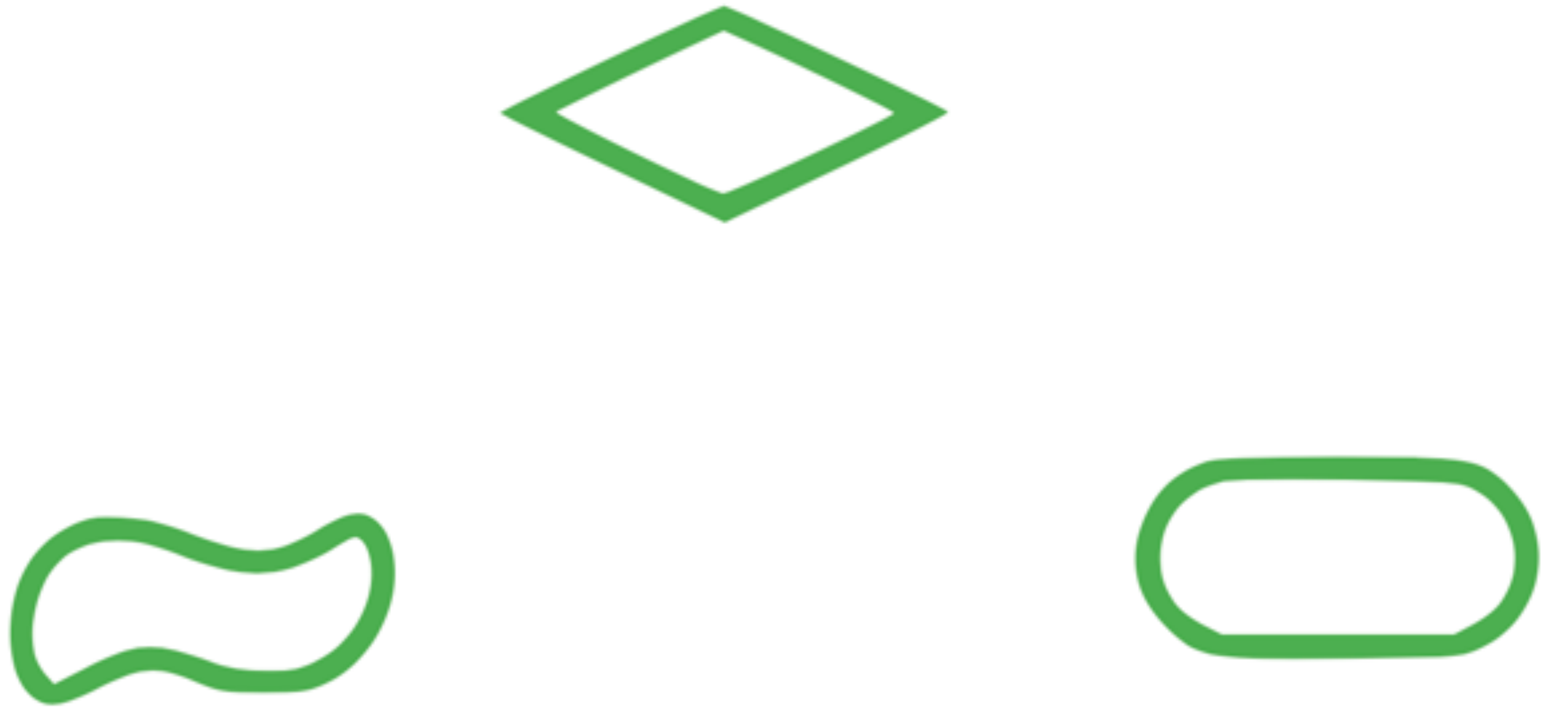
SET

SET
THE CARD GAME

By Anne-Greeth Schot-van Herwijnen



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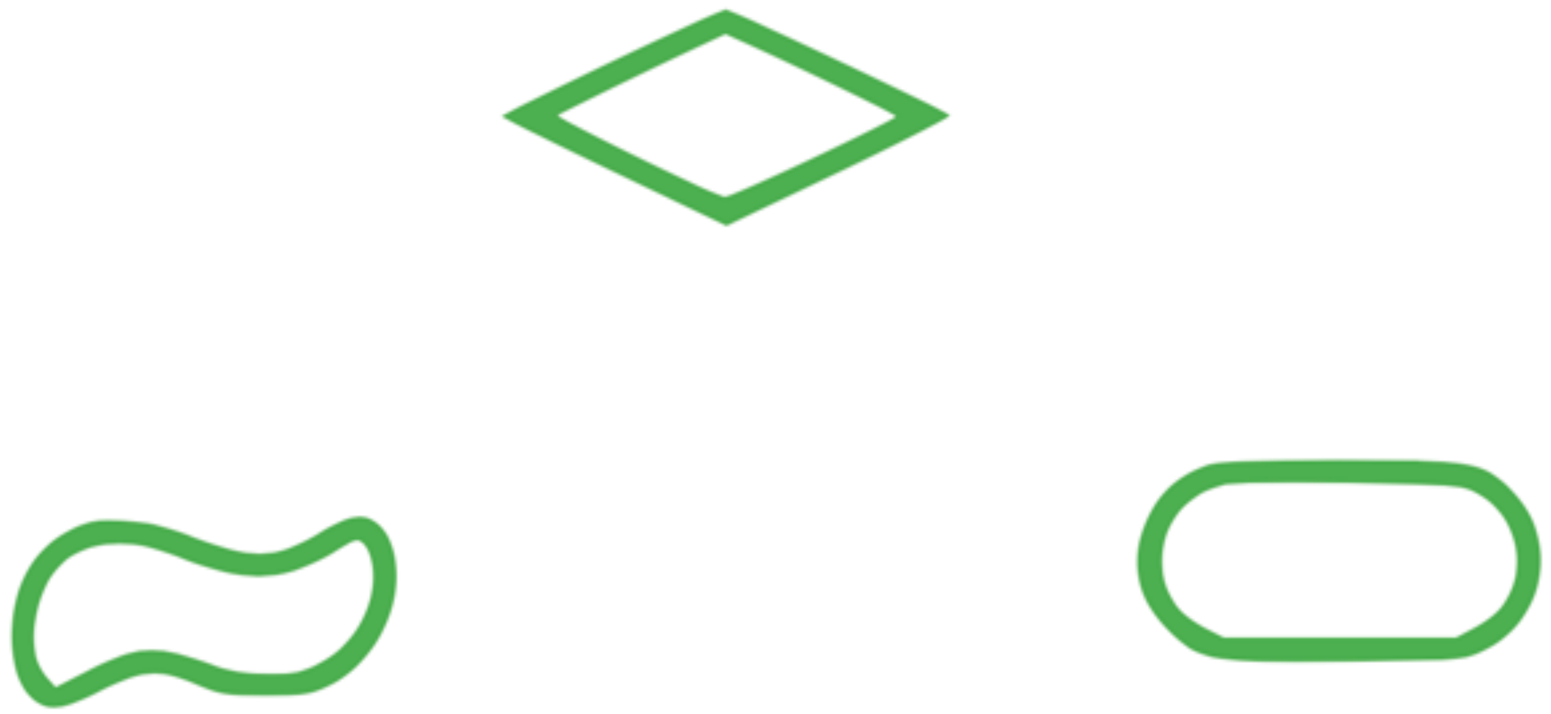

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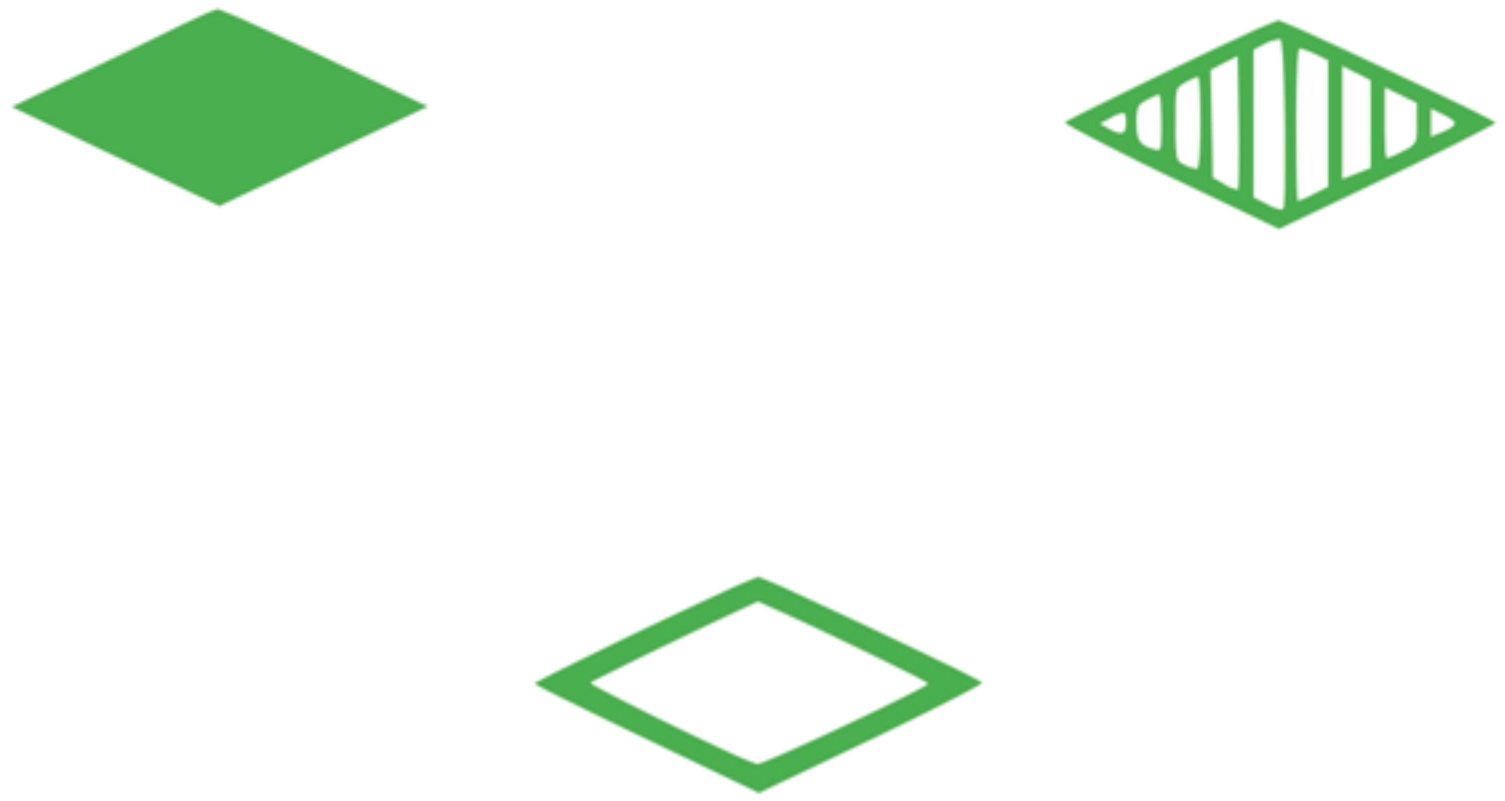
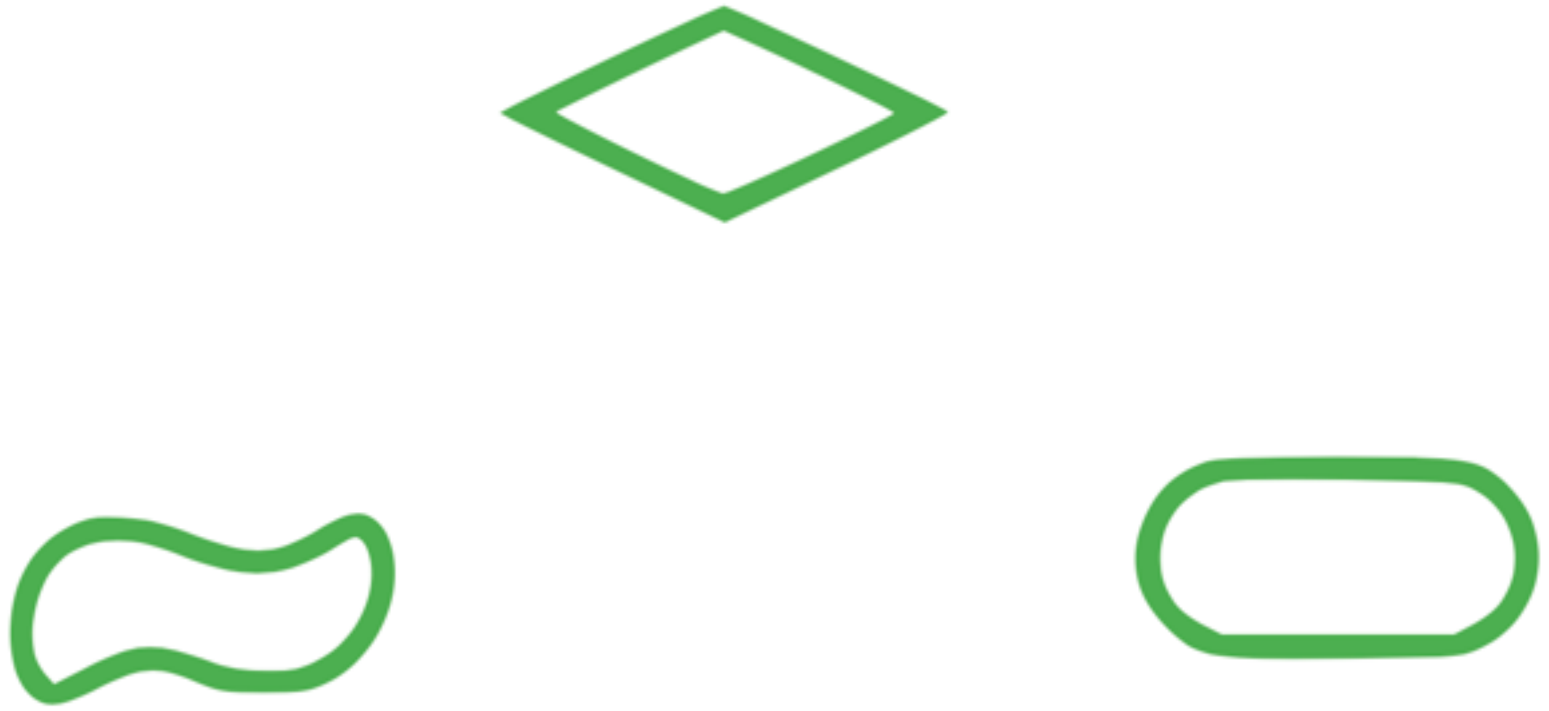


FILLING



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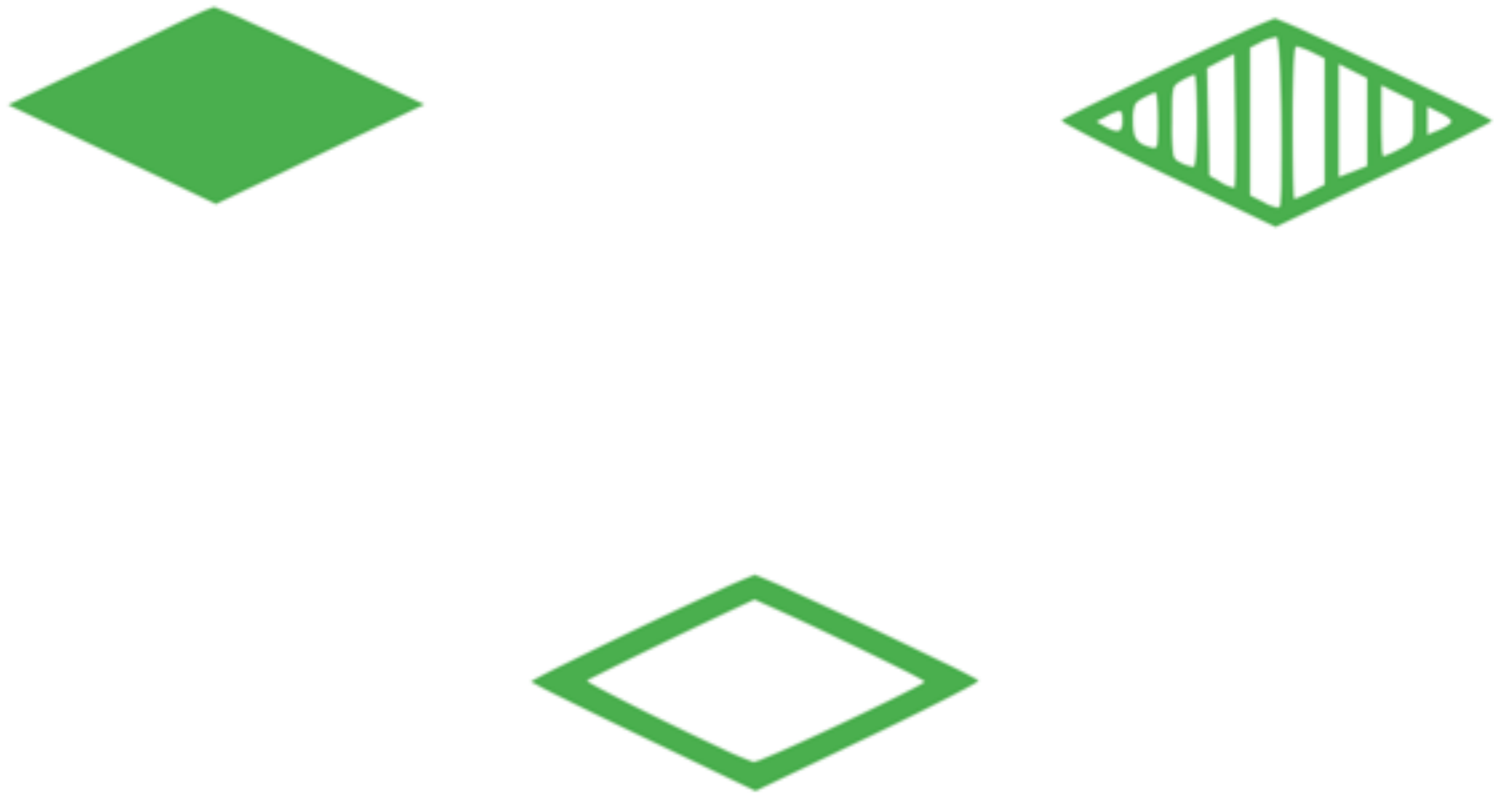
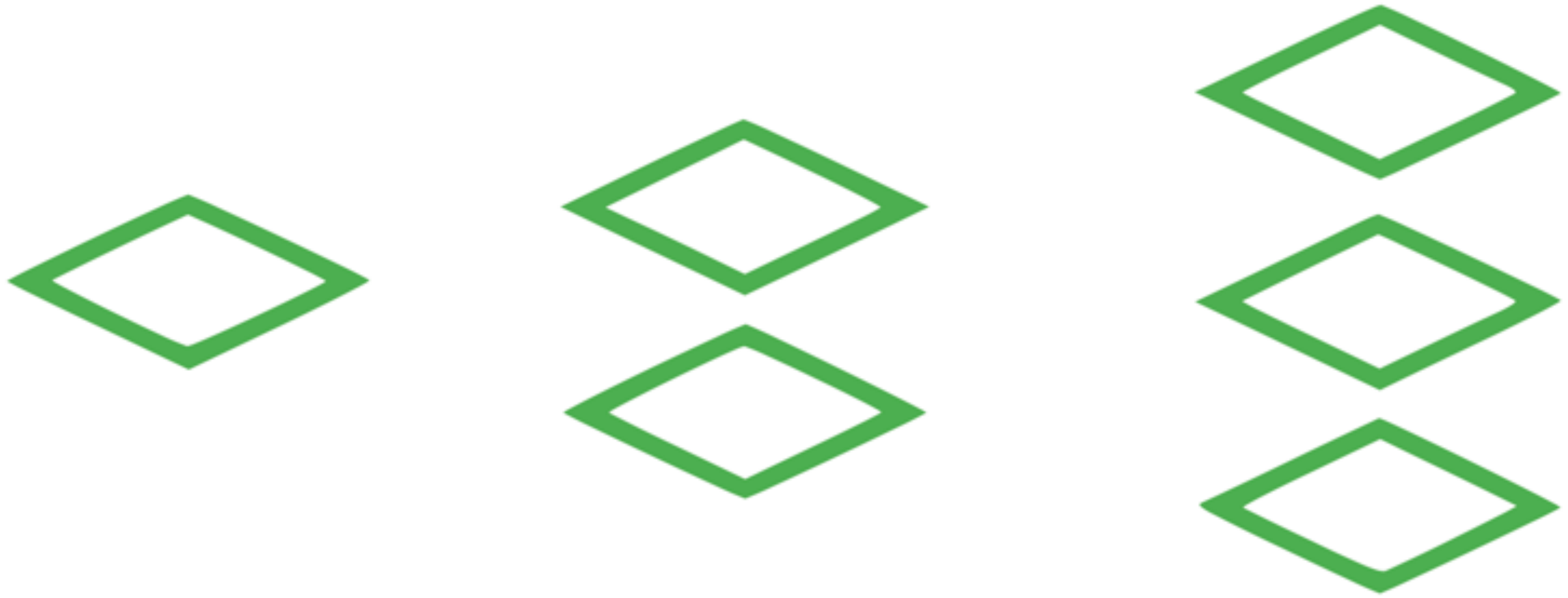
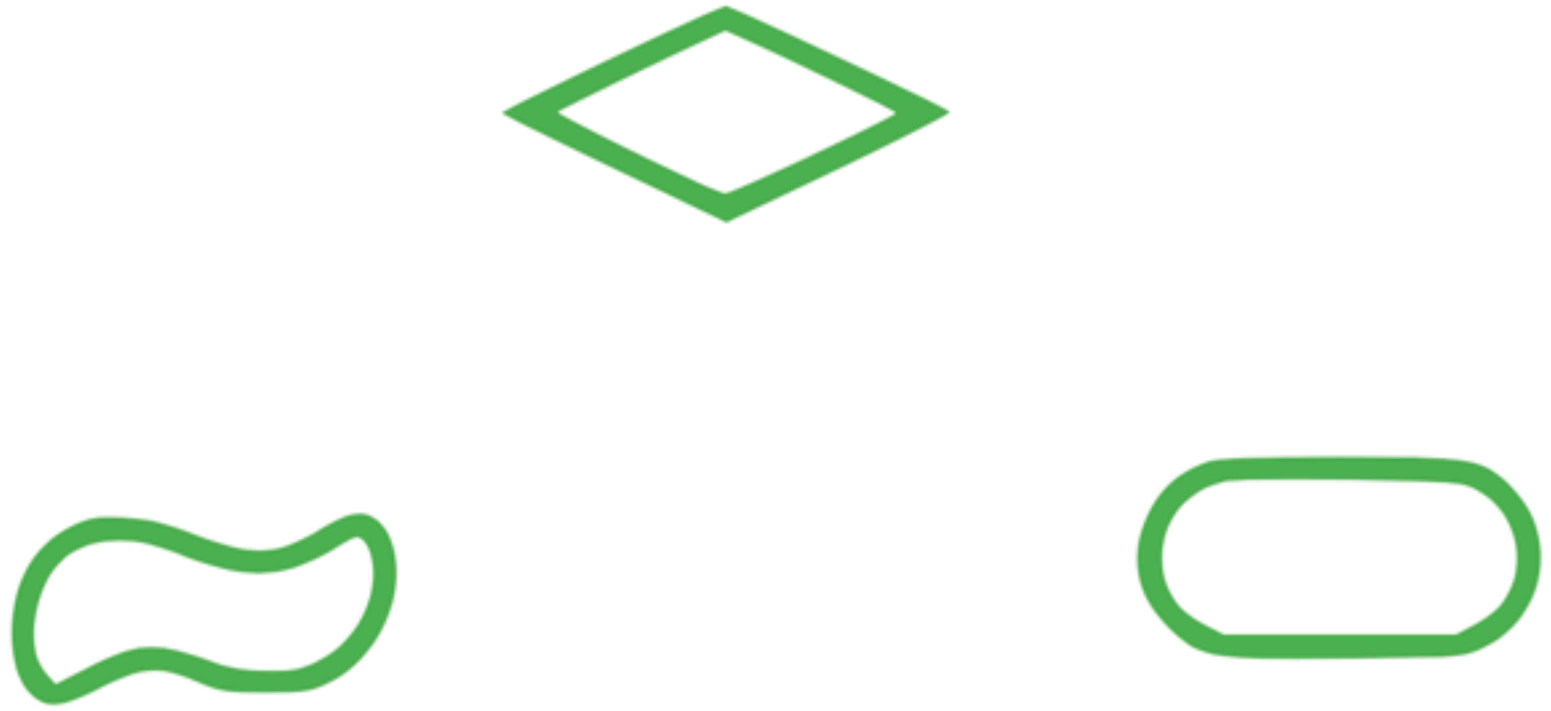


FILLING

AMOUNT





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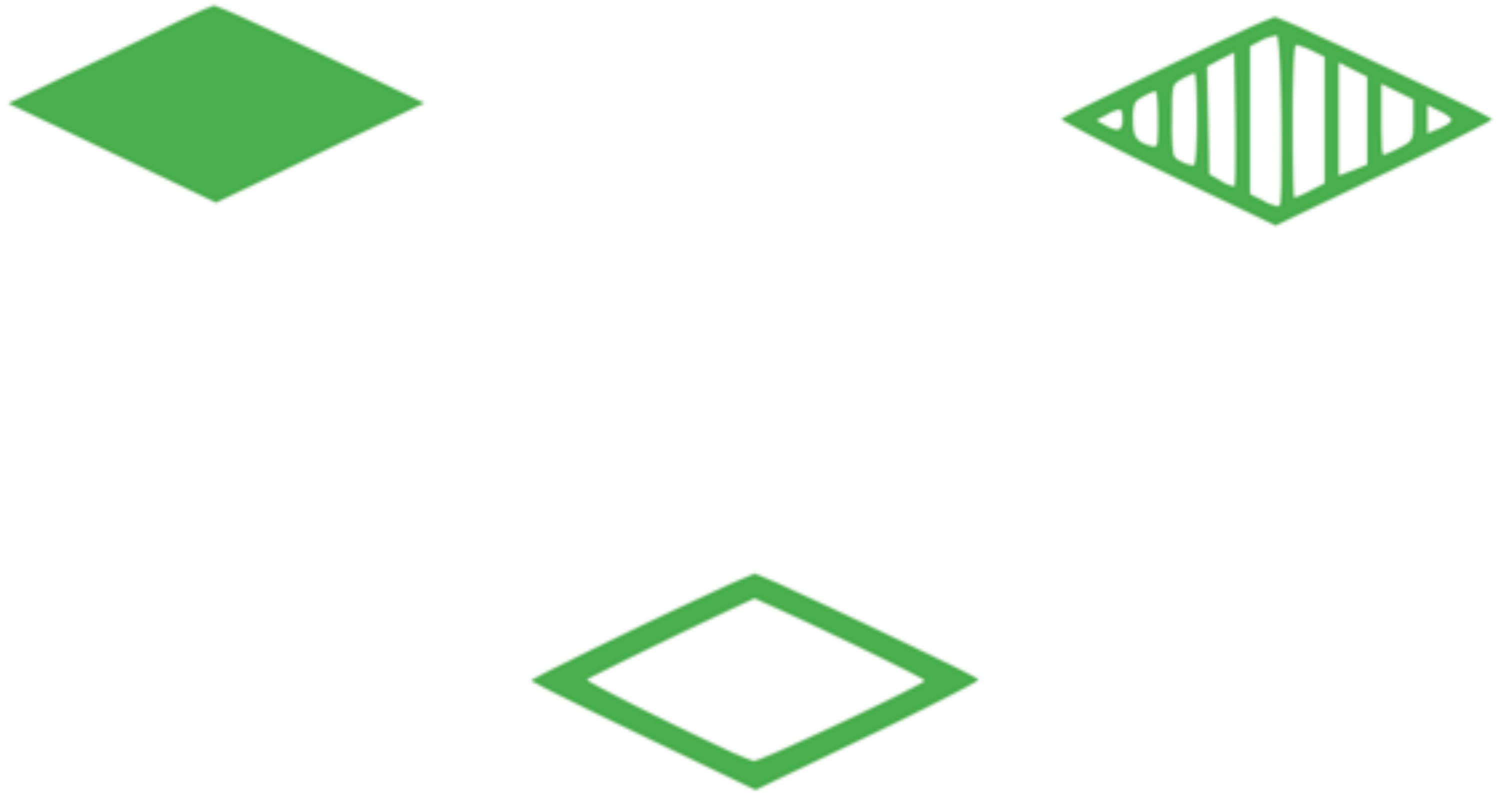
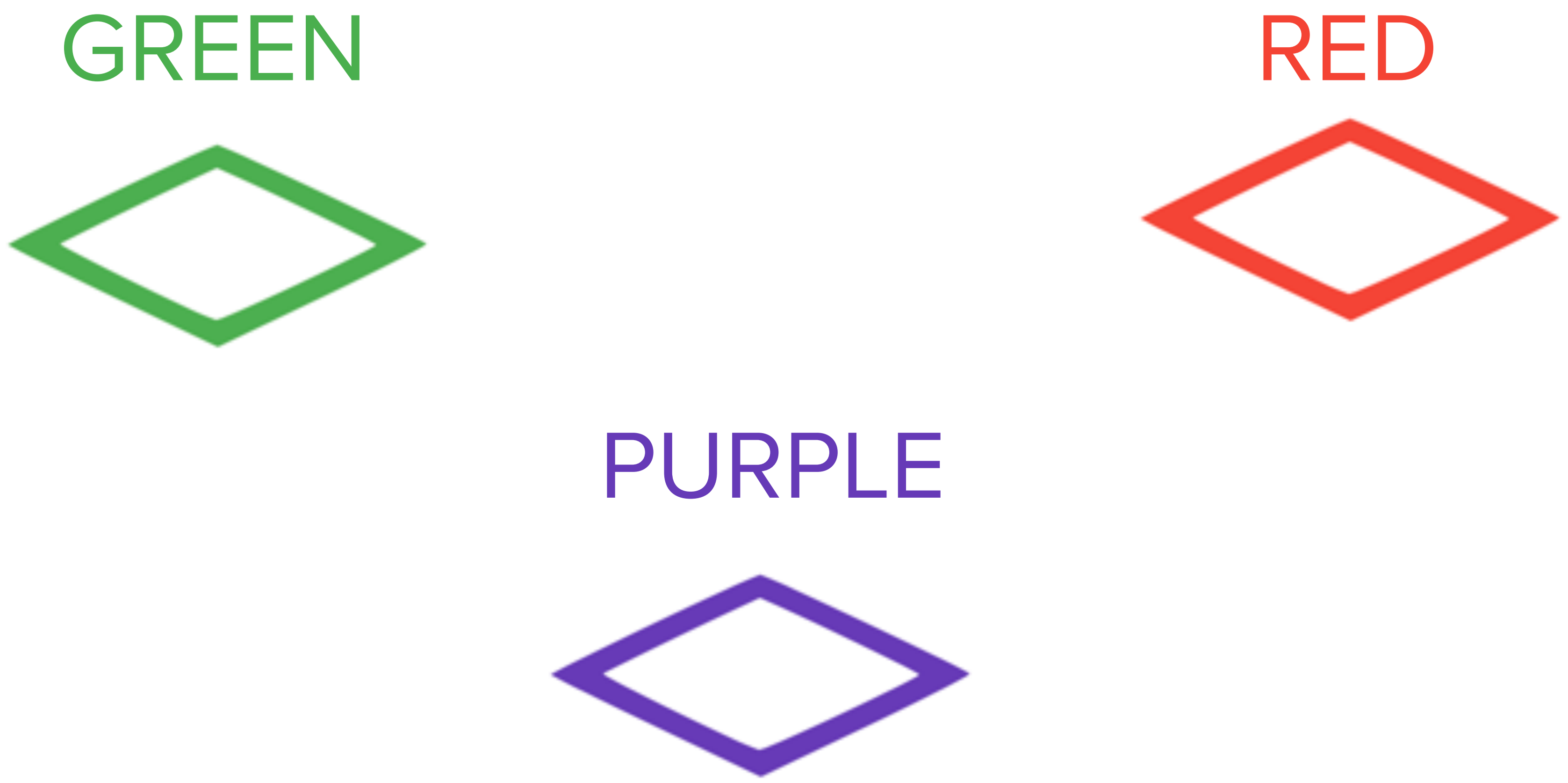


FILLING

COLOR



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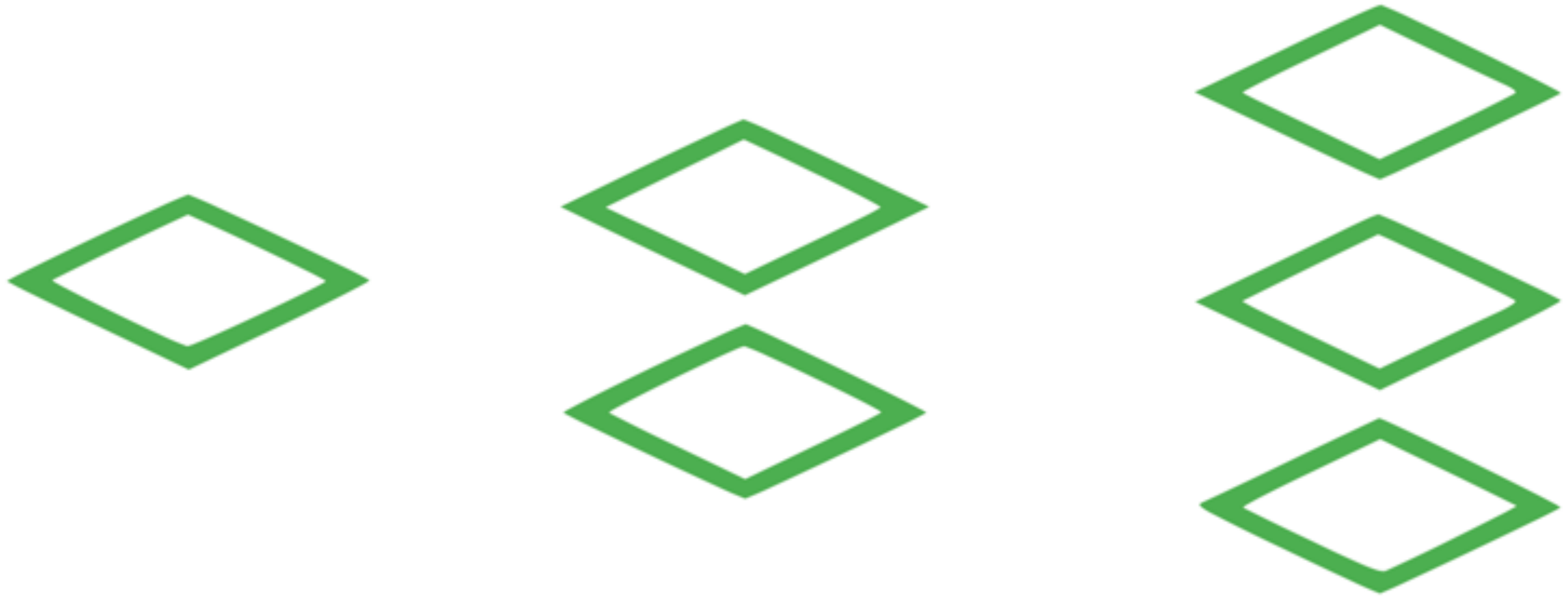

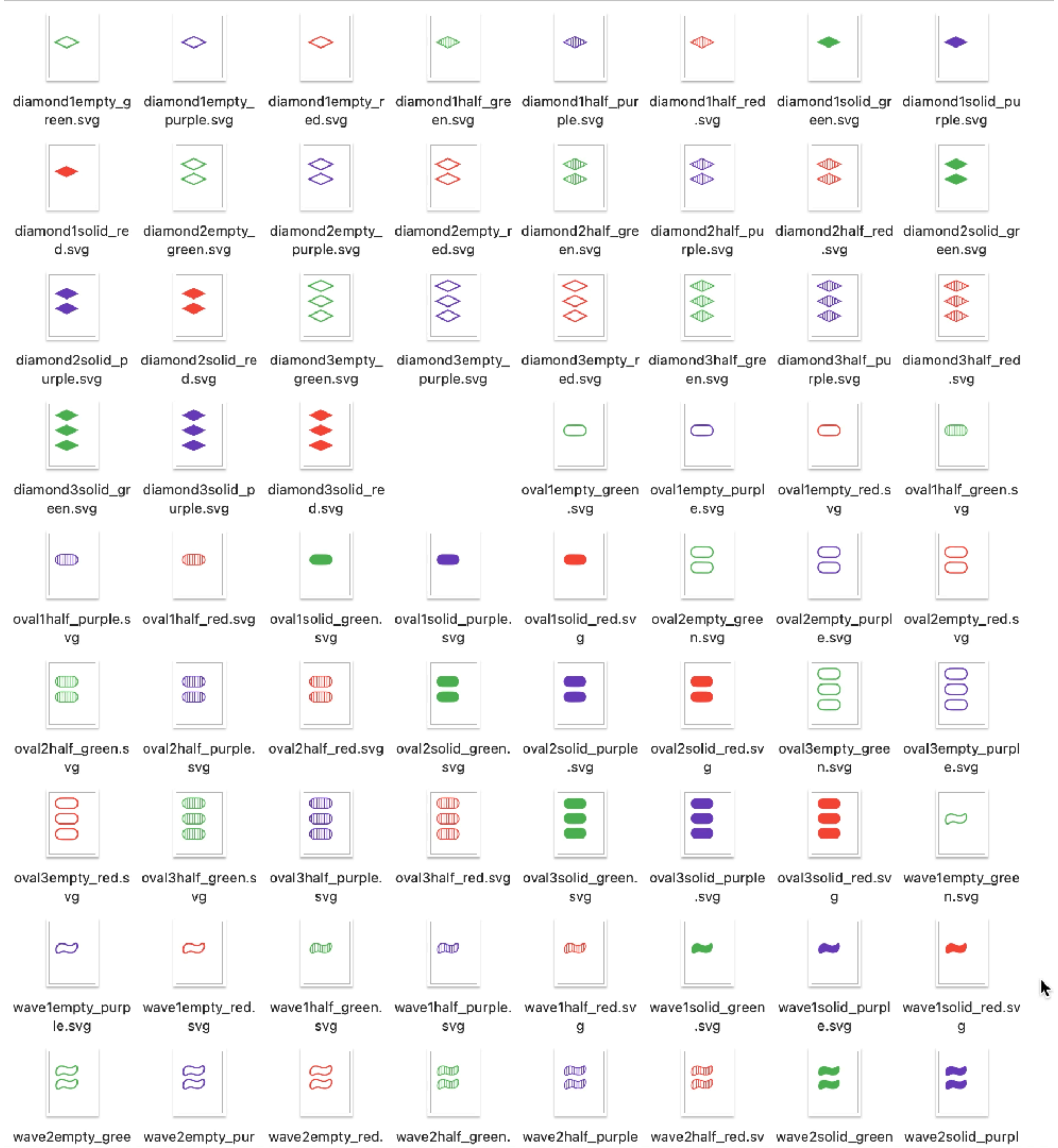

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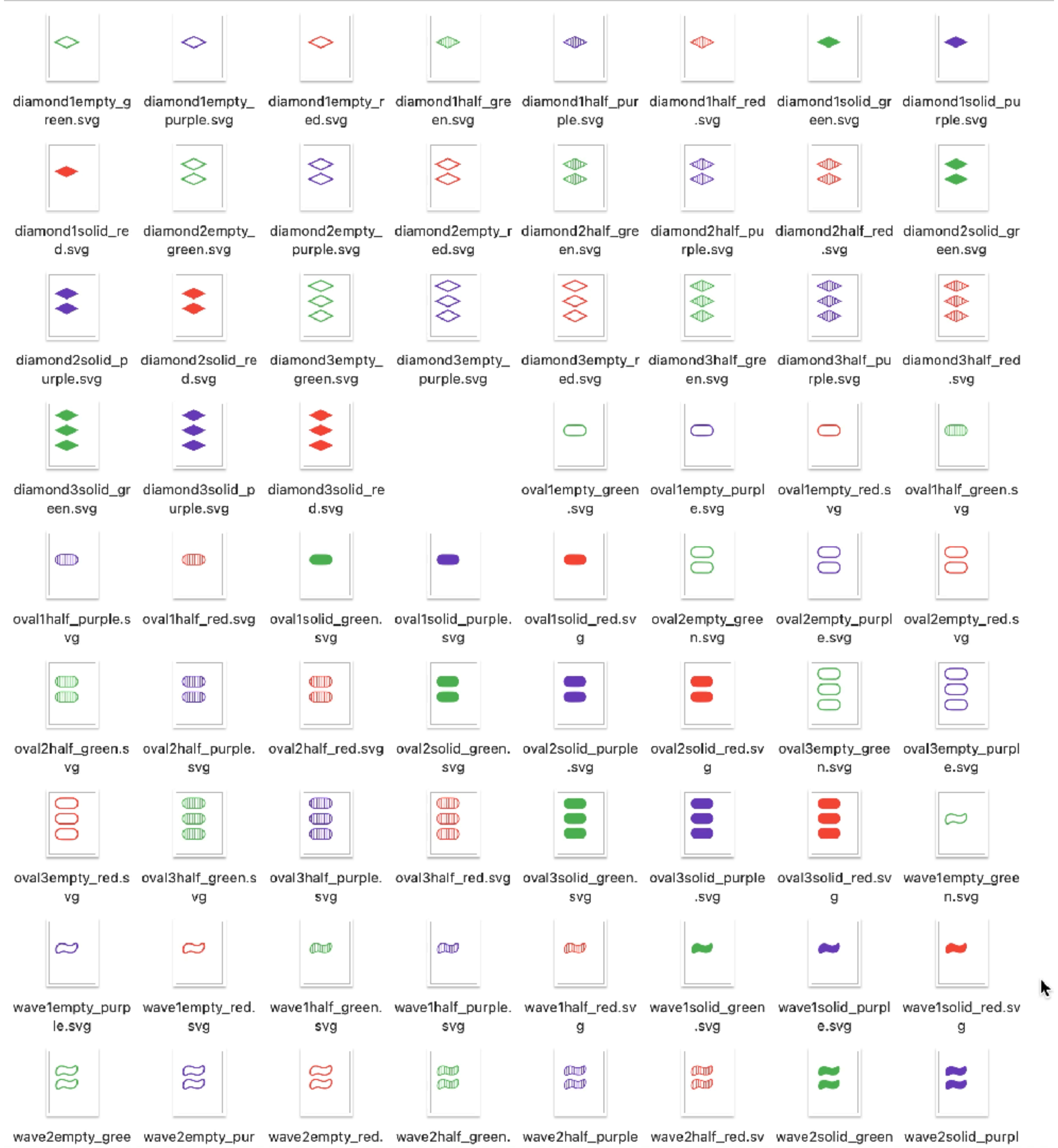

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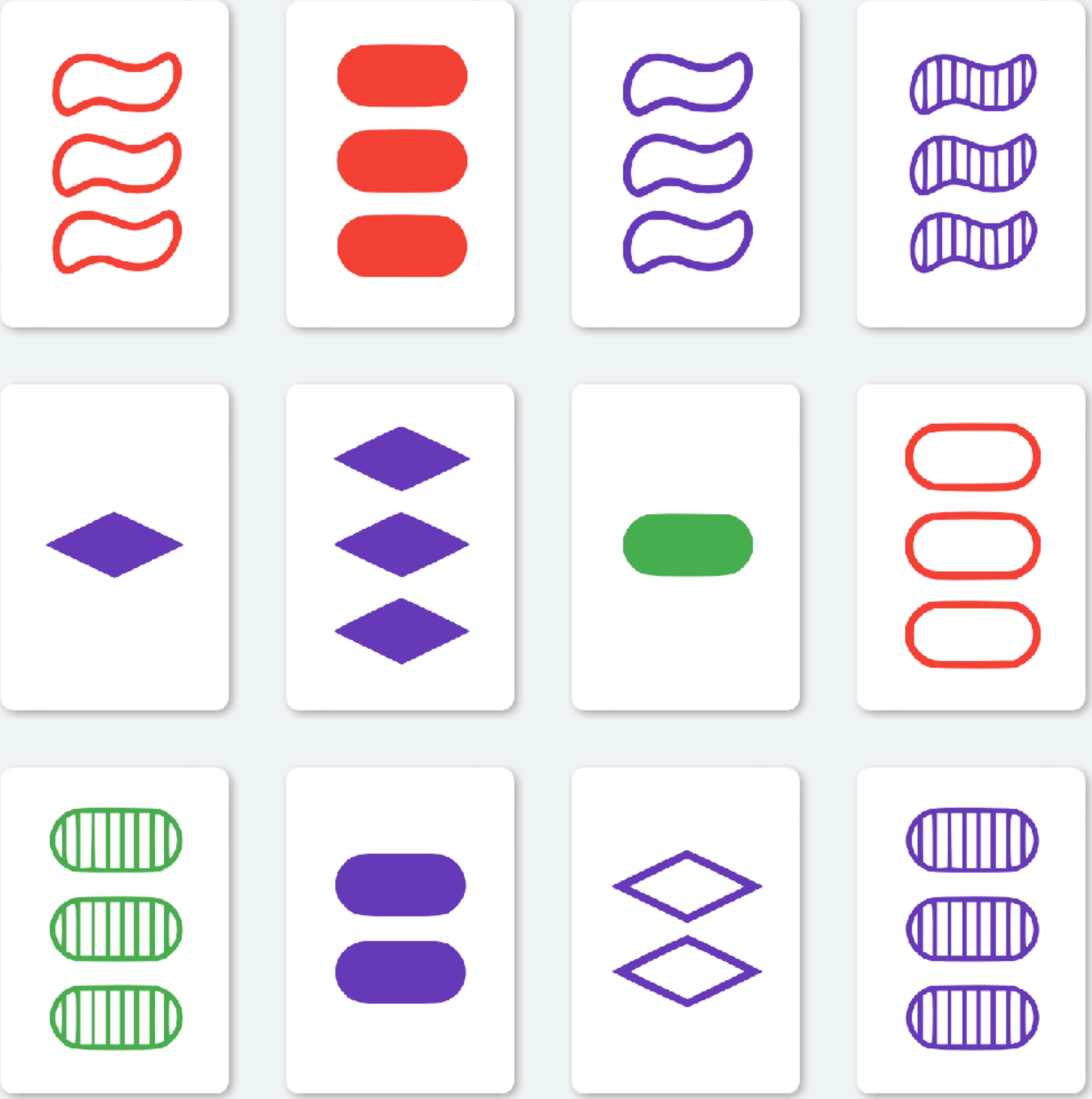
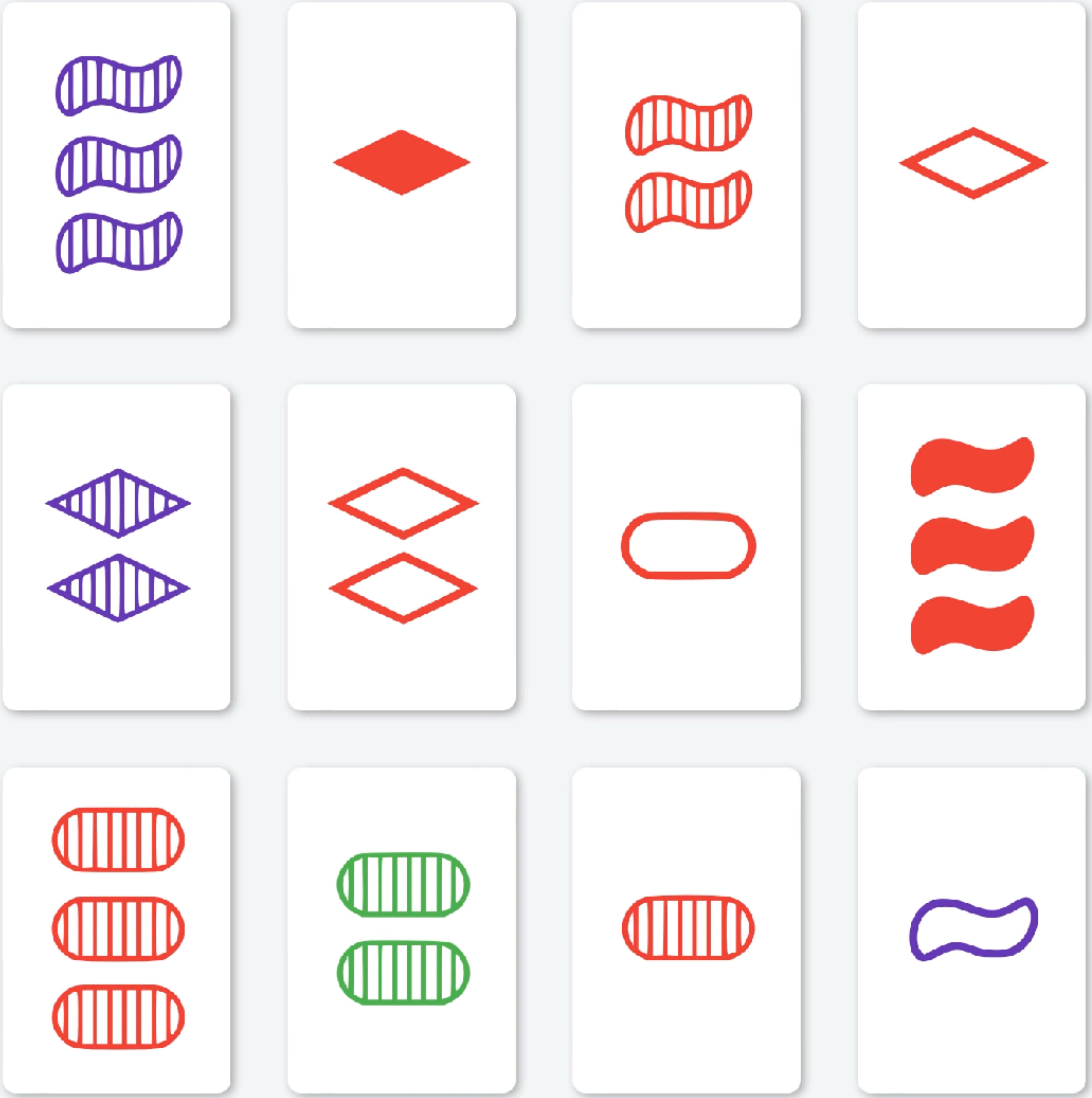
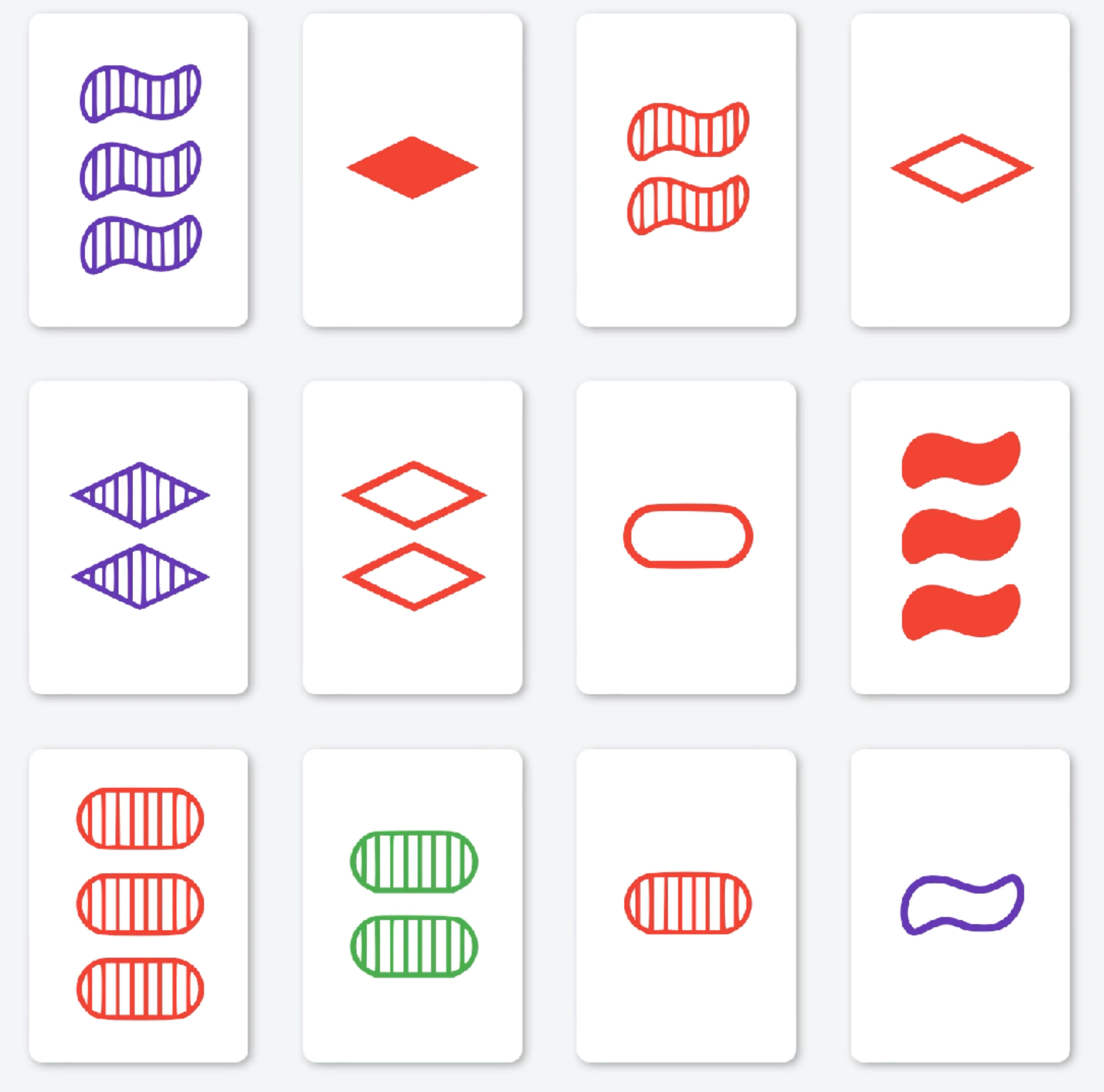


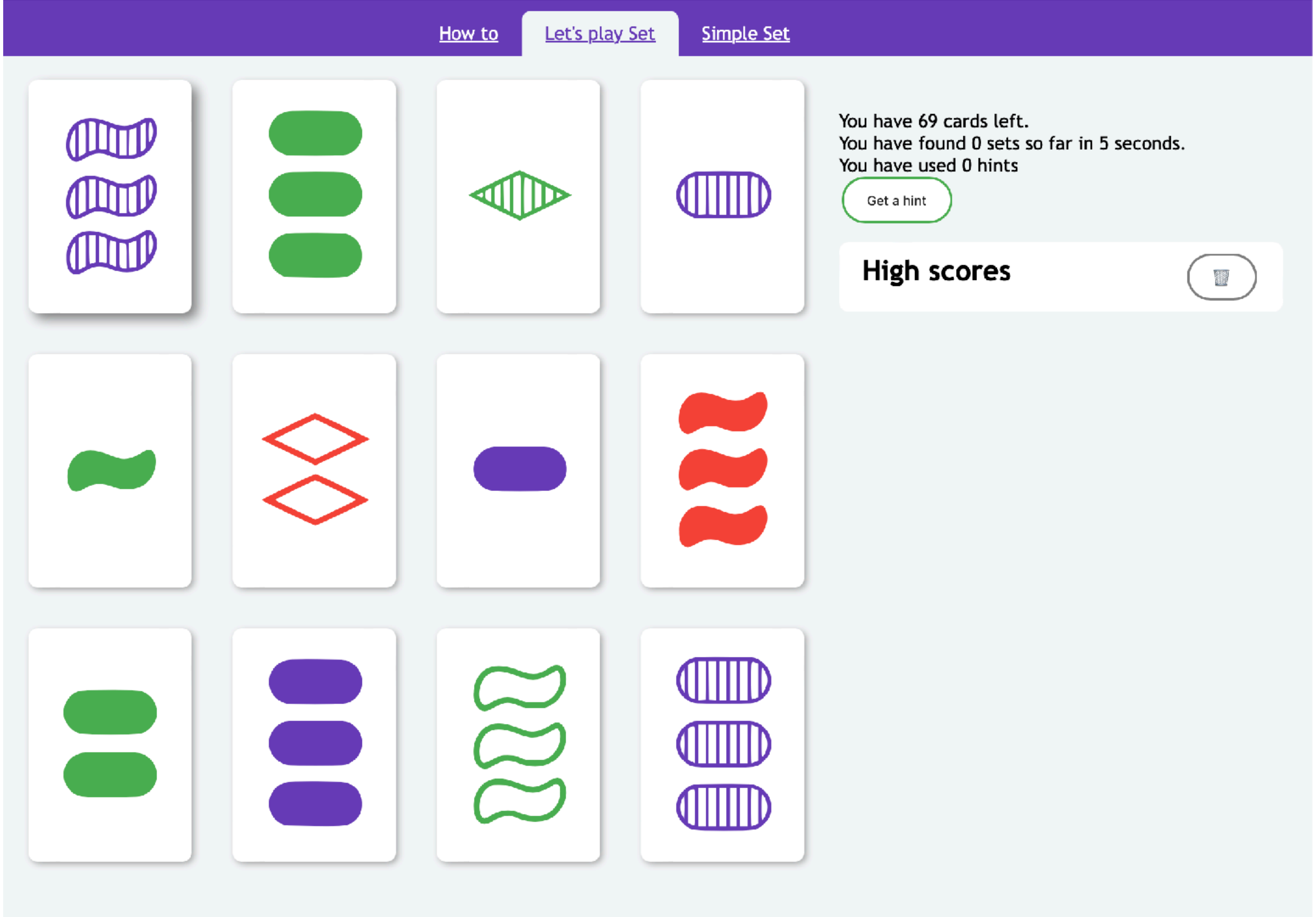
SO WHAT’S A SET?

```
isSet(cardA, cardB, cardC) {
    return (
      this.validateProps(cardA.shape, cardB.shape, cardC.shape) &&
      this.validateProps(cardA.amount, cardB.amount, cardC.amount) &&
      this.validateProps(cardA.filling, cardB.filling, cardC.filling) &&
      this.validateProps(cardA.color, cardB.color, cardC.color)
    );
  }
```

```
validateProps(propCardA, propCardB, propCardC) {
    return (propCardA === propCardB && propCardB === propCardC)
    || (propCardA !== propCardB && propCardA !== propCardC &&
        propCardB !== propCardC);
}
```







You have 69 cards left.
You have found 0 sets so far in 5 seconds.
You have used 0 hints

High scores

```
~% EMBER GENERATE
COMPONENT CARD
```

```
<button ...attributes data-test-card type="button"
  {{on "click" (fn this.handleClick @image) }}
  local-class="button
  {{if @selected "selected" ""}}
  {{if @wrong "wrong"}}
  {{if @hint "hint"}}">
  <img src={{@image}} alt={{@image}} local-class="img"/>
</button>
```

```
<button ...attributes data-test-card type="button"
  {{on "click" (fn this.handleClick @image) }}
  local-class="button
  {{if @selected "selected" ""}}
  {{if @wrong "wrong"}}
  {{if @hint "hint"}}">
  <img src={{@image}} alt={{@image}} local-class="img"/>
</button>
```

```
.button.hint {
  border: 3px dashed #4caf50;
}
.button.selected {
  border: 3px solid orange;
}
.button.wrong {
  border: 3px solid red;
  animation: shake …
  transform: translateX(0, 0, 0);
}
```

```
<button ...attributes data-test-card type="button"
  {{on "click" (fn this.handleClick @image) }}
  local-class="button
  {{if @selected "selected" ""}}
  {{if @wrong "wrong"}}
  {{if @hint "hint"}}">
  <img src={{@image}} alt={{@image}} local-class="img"/>
</button>
```

```
.button.hint {
  border: 3px dashed #4caf50;
}
.button.selected {
  border: 3px solid orange;
}
.button.wrong {
  border: 3px solid red;
  animation: shake …
  transform: translateX(0, 0, 0);
}
```

```
@keyframes shake {
  10%, 90% {
    transform: translateX(-1px);
  }
  20%, 80% {
    transform: translateX(2px);
  }
  30%, 50%, 70% {
    transform: translateX(-4px);
  }
  40%, 60% {
    transform: translateX(4px);
  }
}
```

```
~% EMBER GENERATE COMPONENT PLAYINGFIELD
```

```
<div local-class="playing-field">
  {{#each this.field as |card|}}
    <Card @image={{card.image}} @selected={{card.selected}}
@wrong={{card.wrong}} @hint={{card.hint}}
@onSelect={{this.selectCard}}/>
  {{/each}}
</div>
```

```
<div local-class="playing-field">
  {{#each this.field as |card|}}
    <Card @image={{card.image}} @selected={{card.selected}}
@wrong={{card.wrong}} @hint={{card.hint}}
@onSelect={{this.selectCard}}/>
  {{/each}}
</div>
```

```
if (this.args.easy) {
   this.cards = this.getSimpleDeck();
   this.field = [...this.getCards(9)];
   while (!this.hasSet) {
    this.cards = this.getSimpleDeck();
    this.field = [...this.getCards(9)];
   }
  } else {
   this.cards = this.getDeck();
   this.field = [...this.getCards(12)];
   while (!this.hasSet) {
    this.cards = this.getDeck();
    this.field = [...this.getCards(12)];
   }
  }
```

```
<div local-class="playing-field">
  {{#each this.field as |card|}}
    <Card @image={{card.image}} @selected={{card.selected}}
@wrong={{card.wrong}} @hint={{card.hint}}
@onSelect={{this.selectCard}}/>
  {{/each}}
</div>
```

```
getRandomCard(cards) {
    const randomIndex = Math.floor(Math.random() * cards.length);
    let randomCard = cards[randomIndex];
    cards.splice(randomIndex, 1);
    return { rc: randomCard, cards: cards };
  }
```

```
if (this.args.easy) {
      this.cards = this.getSimpleDeck();
      this.field = [...this.getCards(9)];
      while (!this.hasSet) {
        this.cards = this.getSimpleDeck();
        this.field = [...this.getCards(9)];
      }
    } else {
      this.cards = this.getDeck();
      this.field = [...this.getCards(12)];
      while (!this.hasSet) {
        this.cards = this.getDeck();
        this.field = [...this.getCards(12)];
      }
    }
```

```
@task *timerTask() {
    while (true) {
      yield new Promise((resolve) => setTimeout(resolve, 1000));
      this.time = Math.floor((Date.now() - this.startTime) / 1000);
    }
  }
```

```
@action getHint() {
    const combinations = this.k_combinations(this.field, 3);
    let foundSet = combinations.find((comb) => this.isSet(...comb));
    foundSet[Math.floor(Math.random() * 3)].hint = true;
    if (this.hintsActive < 3) {
      this.hintCounter++;
      this.hintsActive++;
    }
  }
```

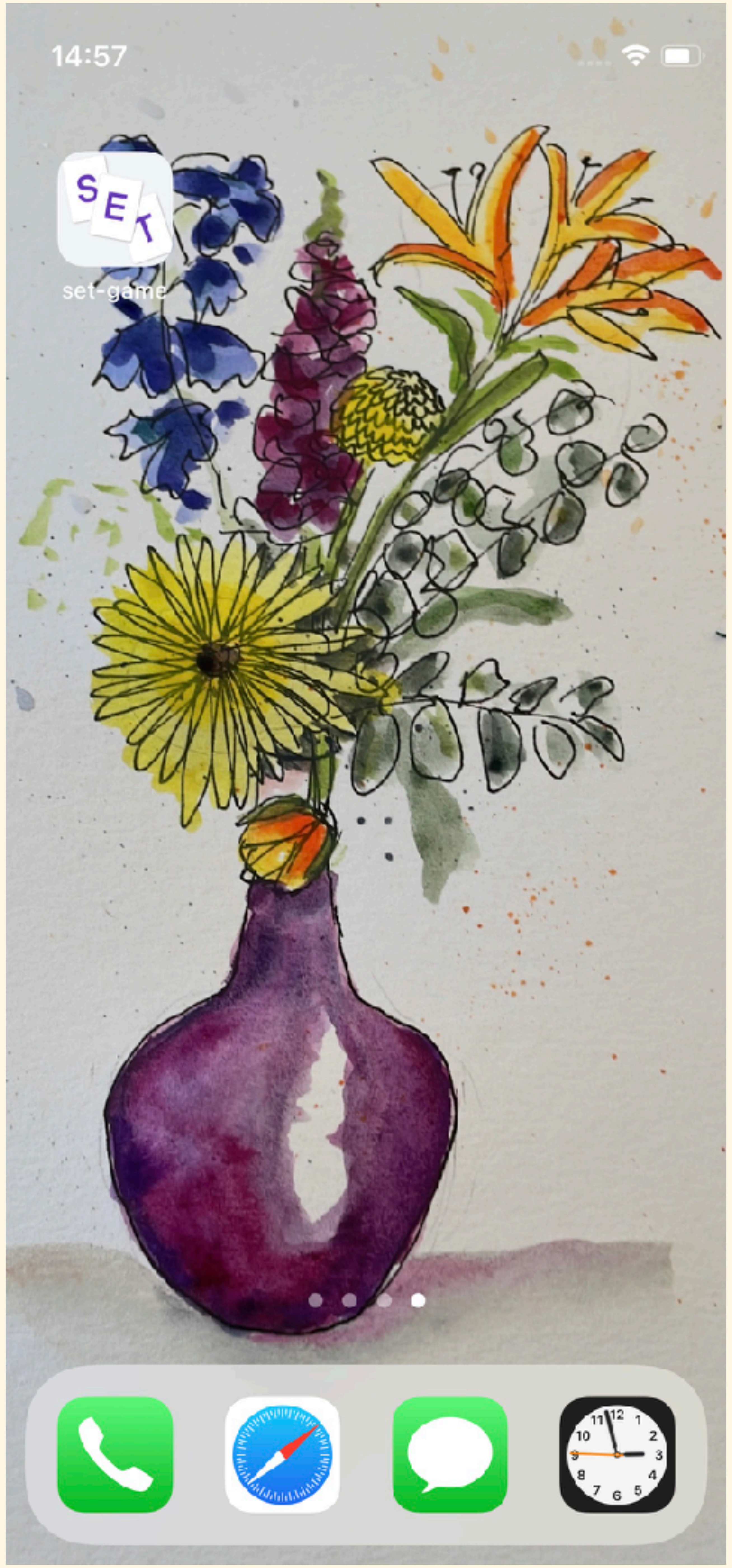
```
let highscoresString = localStorage.getItem('highscores');
this.highscores = JSON.parse(highscoresString)?.sort((a, b) => a > b)

localStorage.setItem(‘highscores', JSON.stringify(this.highscores));

localStorage.clear();
```

```
"ember-web-app": "^5.0.1"
```

"ember-web-app"



How to
Let's play Set
Simple Set
Get a hint

You have 18 cards left.
You have found 0 sets so far in 5 seconds.
You have used 0 hints

High scores

How to
Let's play Set
Simple Set
Get a hint

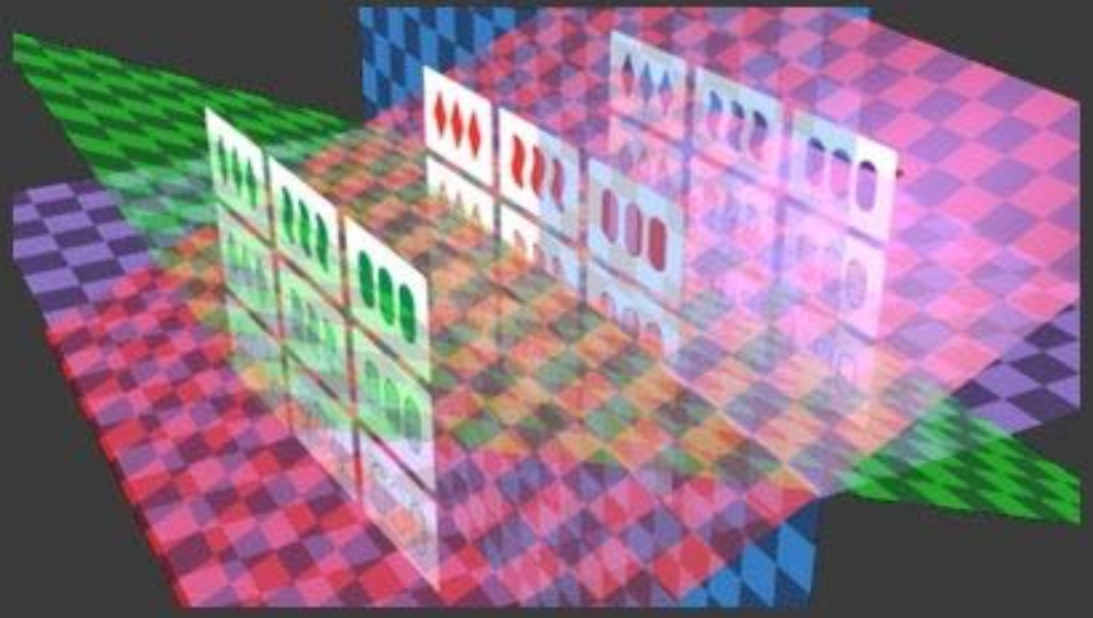
You have 18 cards left.
You have found 0 sets so far in 5 seconds.
You have used 0 hints

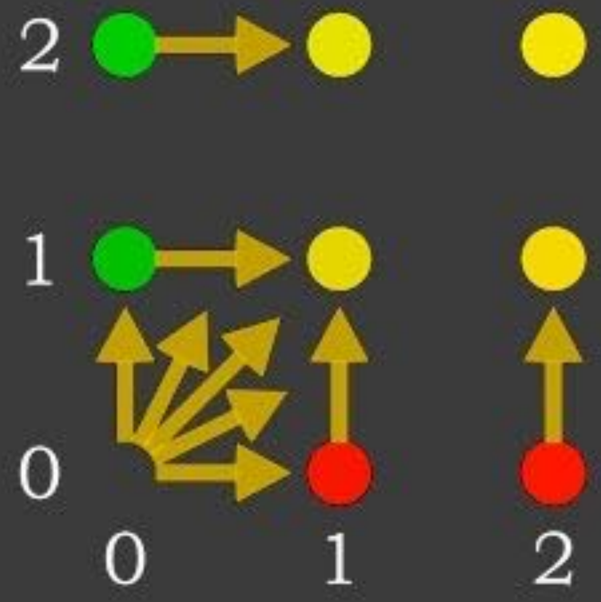
High scores

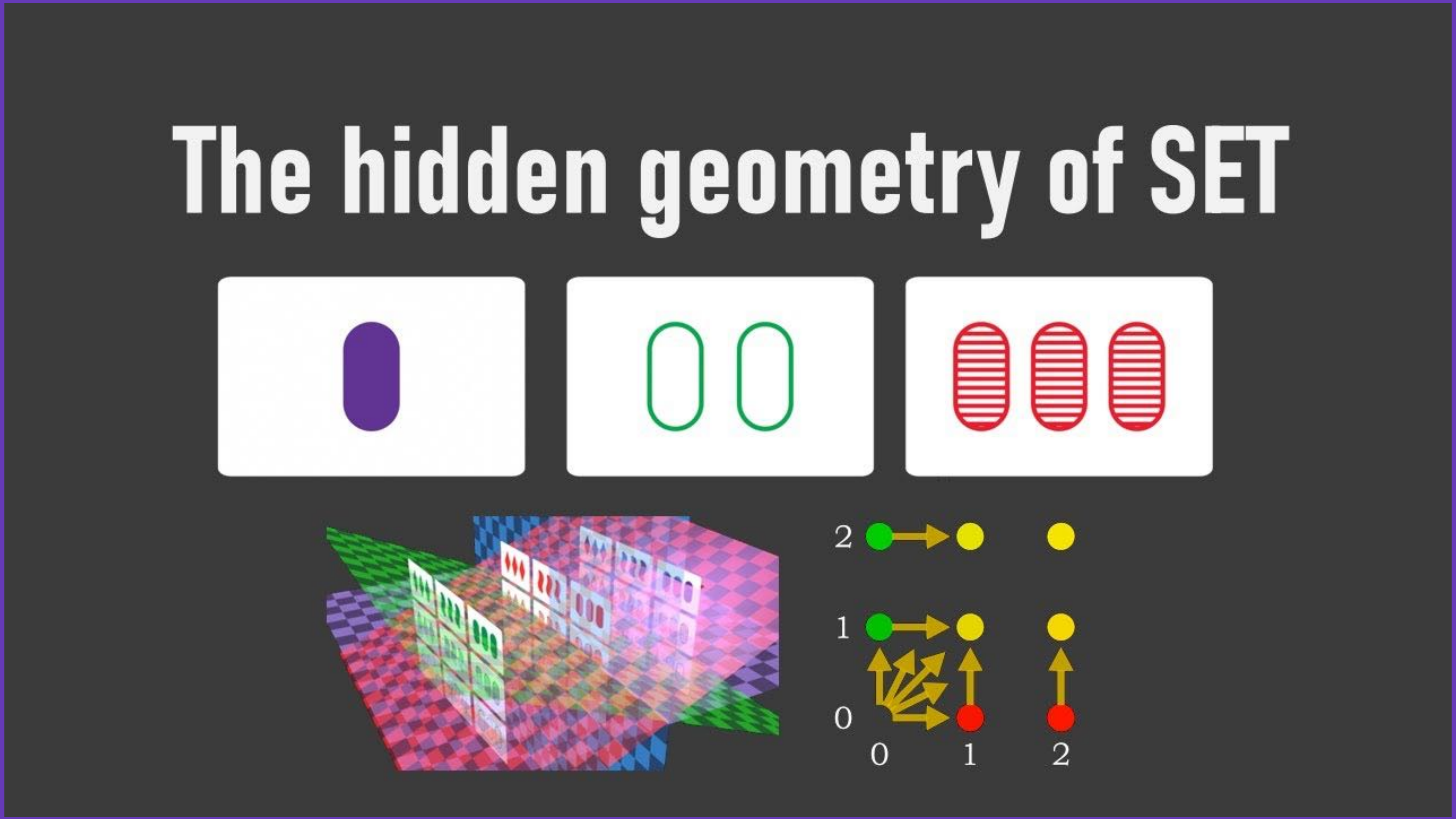
MULTIPLAYER

COLOR PICKING

The hidden geometry of SET







The hidden geometry of SET

SET-THE-GAME.NETLIFY.APP

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NOTIST: NOTI.ST/MINTHAMIE