

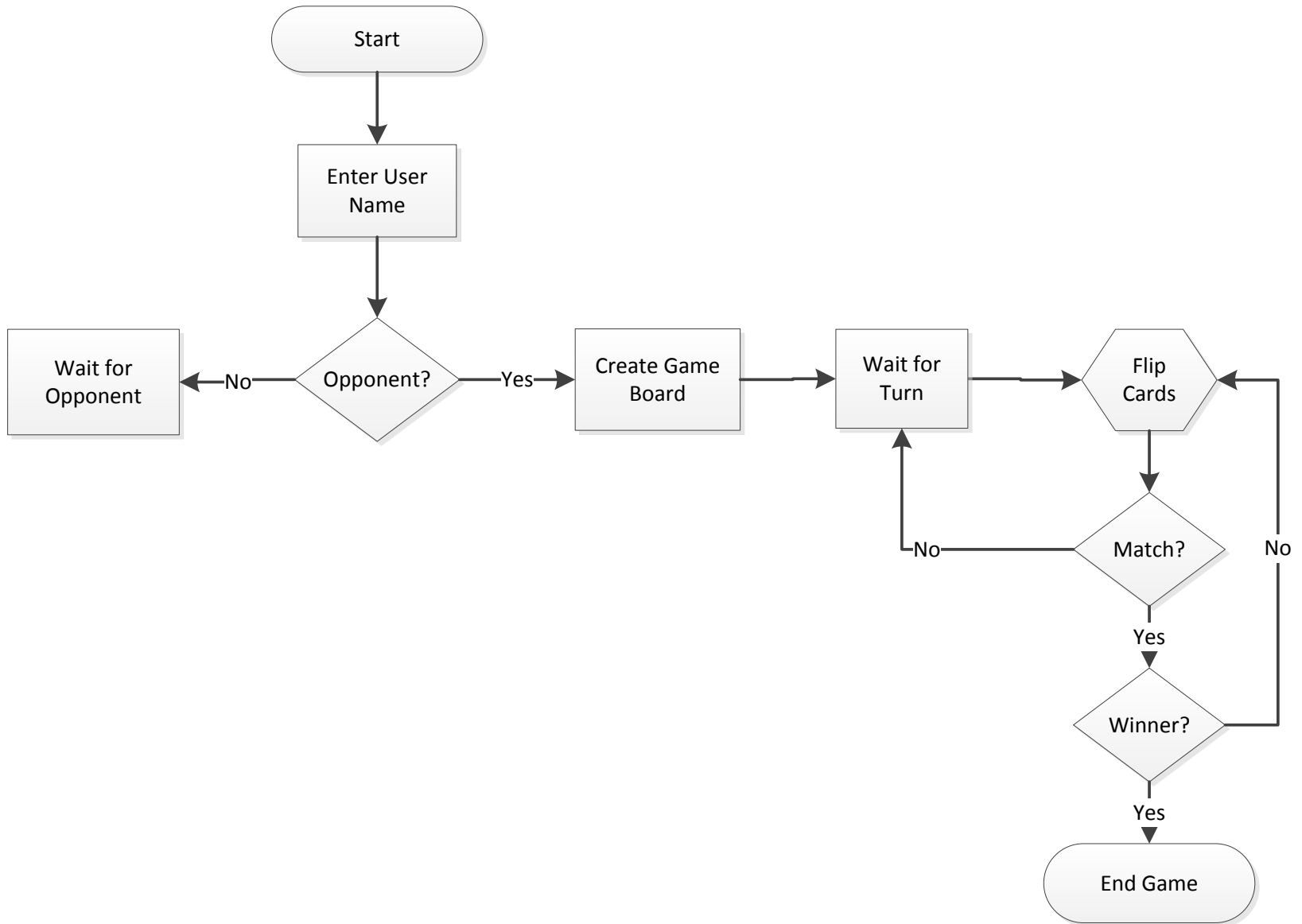
Designing the Game

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pluralsight 
hardcore developer training

Game Flow



Game Mechanics – Selecting Opponent

- Selecting an opponent
- Requirements:
 - Create a Model which represents a **Player**
 - Id
 - Name
 - Create a Model which represents a **Game**
 - Player1
 - Player2
 - Game Board



Game Mechanics – Construct Game Board

- **Game board**
 - 5 x 6 grid (15 pairs of cards)
- **Requirements:**
 - Create a Model which represents a **Game Board**
 - Collection of cards which have been placed in one of the 30 cells.
 - Create a Model which represents a **Card**
 - **Id**
 - **Pair (Id of its matching card)**
 - **Image**



Shuffling a Collection

```
static readonly Random Random = new Random();  
public static void Shuffle<T>(this IList<T> list)  
{  
    int n = list.Count;  
    while (n > 1)  
    {  
        n--;  
        var k = Random.Next(n + 1);  
        T value = list[k];  
        list[k] = list[n];  
        list[n] = value;  
    }  
}
```

The Design

{Game Title} / {Logo}

Your Matches:

A

B

C

F

Opponent:

D

A			C	
		A		F
	C			
			B	
	D	D		B
	F			

Frameworks

- **Bootstrap**

- <http://getbootstrap.com/>



- **Handlebar.js**

- <https://github.com/wycats/handlebars.js>



Handlebar Template

```
<script id="card-template" type="text/x-handlebars-template">
  <div class="row">
    {{#each Pieces}}
      <div id="{{Name}}" class="click panel col-lg-2">
        <div class="front">
          
        </div>
        <div class="back">
          
        </div>
      </div>
    {{#endRow @@index}} </div>
    <div class="row">
      {{/endRow}}
    {{/each}}
  </div>
</script>
```


Bootstrap Grid System

1	1	1	1	1	1	1	1	1	1	1	1
8								4			
4				4				4			
6						6					

```
<div class="row">
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
  <div class="col-lg-1">1</div>
</div>
<div class="row">
  <div class="col-lg-8">8</div>
  <div class="col-lg-4">4</div>
</div>
<div class="row">
  <div class="col-lg-4">4</div>
  <div class="col-lg-4">4</div>
  <div class="col-lg-4">4</div>
</div>
<div class="row">
  <div class="col-lg-6">6</div>
  <div class="col-lg-6">6</div>
</div>
```

Handlebar Template

```
<script id="card-template" type="text/x-handlebars-template">
  <div class="row">
    {{#each Pieces}}
      . . . .
    {{#endRow @@index}} </div>
    <div class="row">
      {{/endRow}}
    {{/each}}
  </div>
</script>
```

```
Handlebars.registerHelper('endRow', function (conditional, options) {
  if ((conditional + 1) % 5 == 0 && conditional > 0) {
    return options.fn(this);
  }
  return "";
});
```

Summary

- **Designed the flow and mechanics of our Game**
 - Defined required models
 - Determined how to pairing opponents
 - Designed a way to shuffling our cards
- **Created a proof of concepts for displaying our grid**
 - Understanding how to use Handlebar.jr
 - Bootstrap
 - Flipping our cards