NORTH SHORE .NET USER GROUP

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Massey University

USING AN EVENT STORE

REACT JS

WEB API AND SIGNALR

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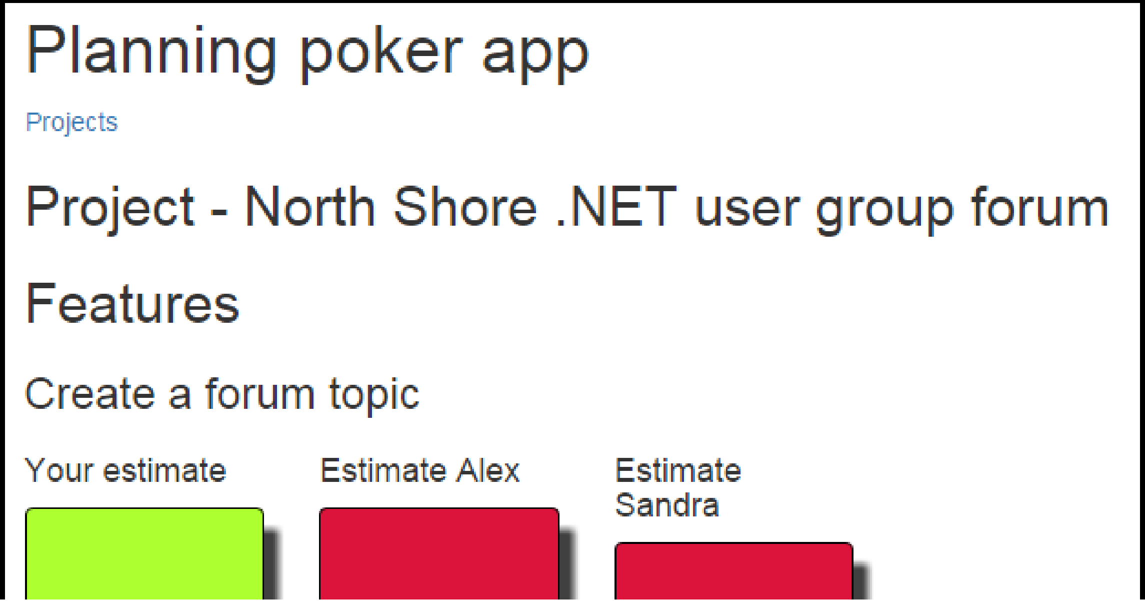
PLANNING POKER APP



Planning poker app

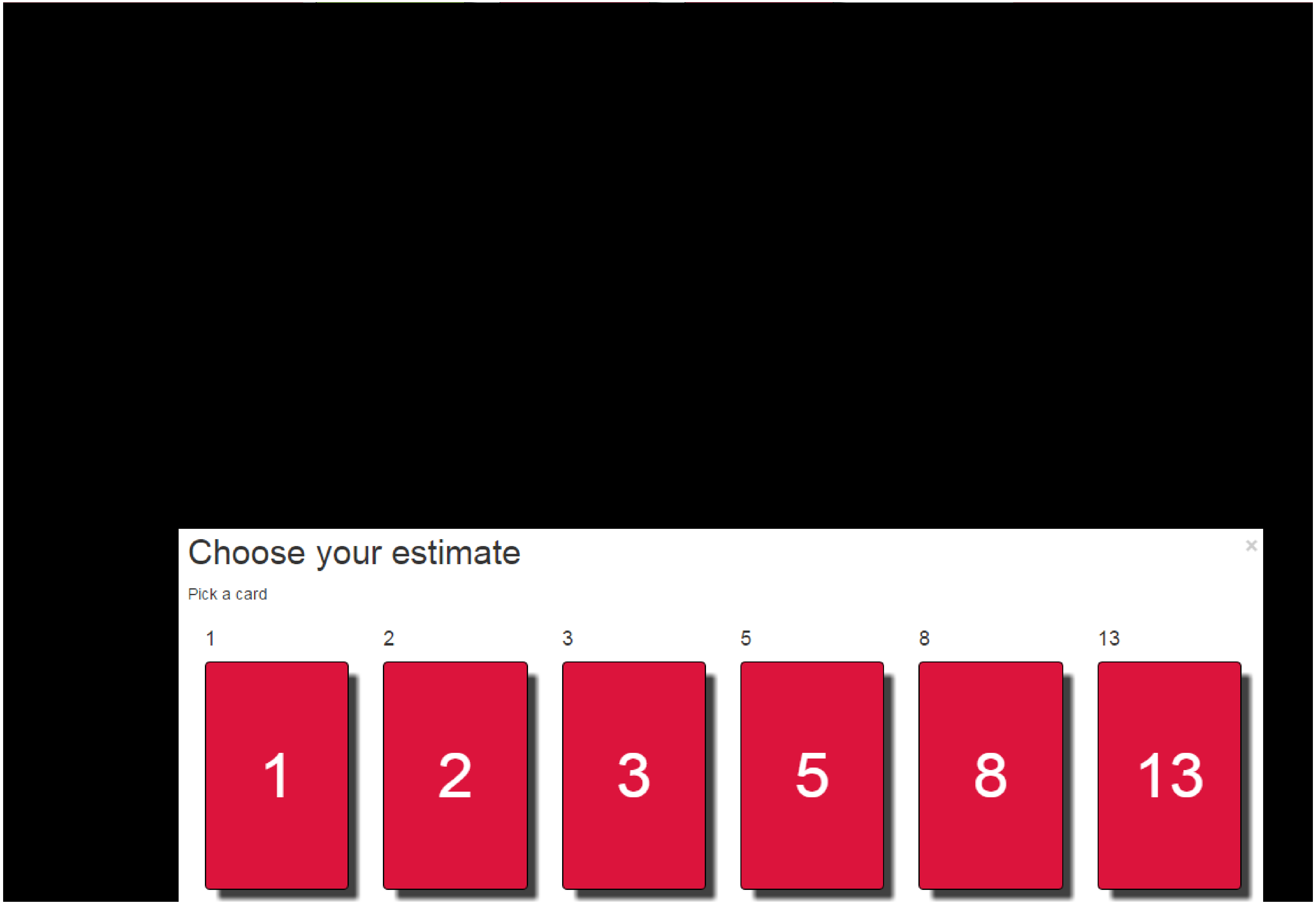
Projects

Project - North Shore .NET user group forum

Features

Create a forum topic

Your estimate	Estimate Alex	Estimate Sandra
🟩	🟥	🟥



Choose your estimate

Pick a card

WHAT WE'LL COVER

- Basic introduction to React JS
- The Flux pattern
- Event sourcing concept
- SignalR integration
- The planning poker app - putting it all together

REACT

SIMPLE

DECLARATIVE

When the data changes, React conceptually hits the "refresh" button, and knows to only update the changed parts.

COMPOSABLE COMPONENTS

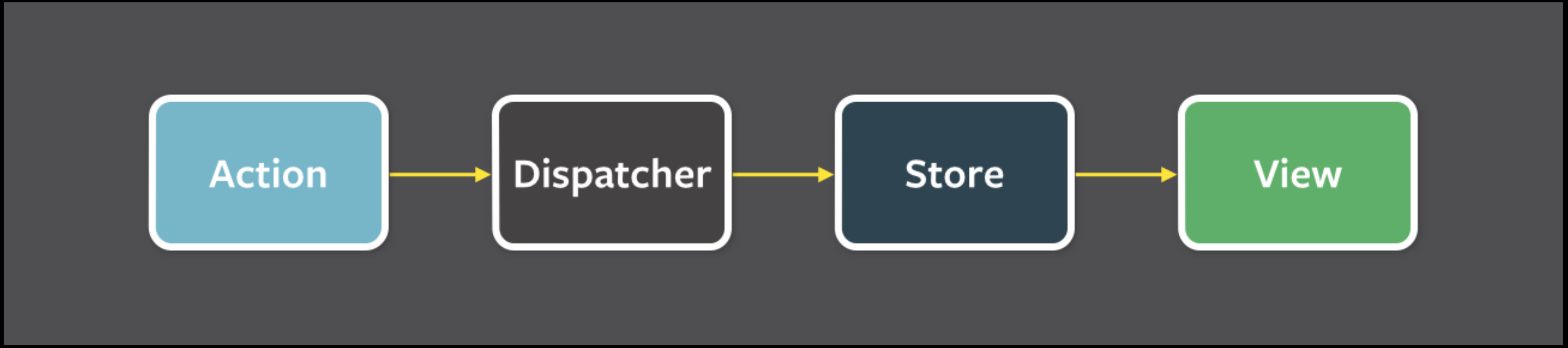
With React the only thing you do is build components. Components are encapsulated and make code reuse, testing, and separation of concerns easy.

JSX - <WhatIsThisHTMLDoingInMyJavaScript />

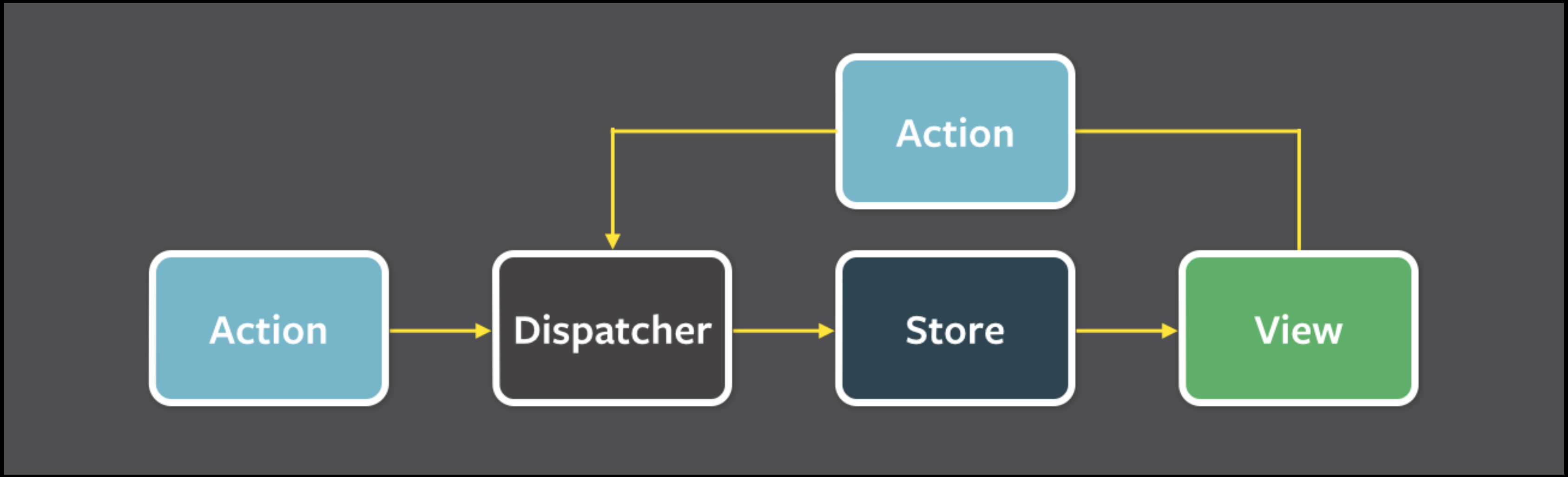
Jump to code (card.jsx) ...

FLUX

UNIDIRECTIONAL DATA FLOW



FLUX
USER INTERACTION VIA VIEW



Let's take a look

Jump to code ...

EVENT STORE / EVENT SOURCING

Observable persisted sequence of events.

KEY FEATURES

- Stored in linear fashion
- Replayed in linear fashion

- Use to deterministically create domain model
- Acts as a log of activity
- Works well with event driven architectures (CQRS, Flux)

MORE INFO

MSDN > Solution Development Fundamentals > CQRS Journey > Reference 3: Introducing Event Sourcing

https://msdn.microsoft.com/en-us/library/jj591559.aspx

Let's take a look

Jump to code ...

SignalR

- Simple API for creating server-to-client remote procedure calls
- API for connection management (connect and disconnect events, grouping connections)

- Abstraction over some of the transports required for real-time communication between client and server.
- Persistent connection between the client and server
- Invokes JavaScript functions in client browsers

MORE INFO

ASP.NET > Learn > SignalR > Introduction to SignalR

http://www.asp.net/signalr/overview/getting-started/introduction-to-signalr

Using SignalR to tie it all together

```
// server
public IHttpActionResult Post(ModelEvent modelEvent)
{
    new AddEventCommand(modelEvent).Handle();

    Hub.Clients.All.raiseEvent(modelEvent);

    return Ok();
}
```

```
// client
$(function() {
    var connection = $.hubConnection();

    var proxy = connection.createHubProxy('eventHub');

    proxy.on('raiseEvent', function (modelEvent) {

        console.log('eventHub.raiseEvent', modelEvent);

        ModelActions.applyEvent(modelEvent);
    });

    connection.start();
});
```

Using SignalR to tie it all together

Player makes an estimate

↓

ModelActions.setValues

↓

POST → addEvent

↓

SignalR → raiseEvent

↓

ModelActions.applyEvent

↓

ModelStore.applyEvent

↓

ModelStore.emitChange

Thanks

North Shore .NET User Group http://northshore.netusergroup.org.nz/

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