

Front to Back Never Back to Front



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online
business systems



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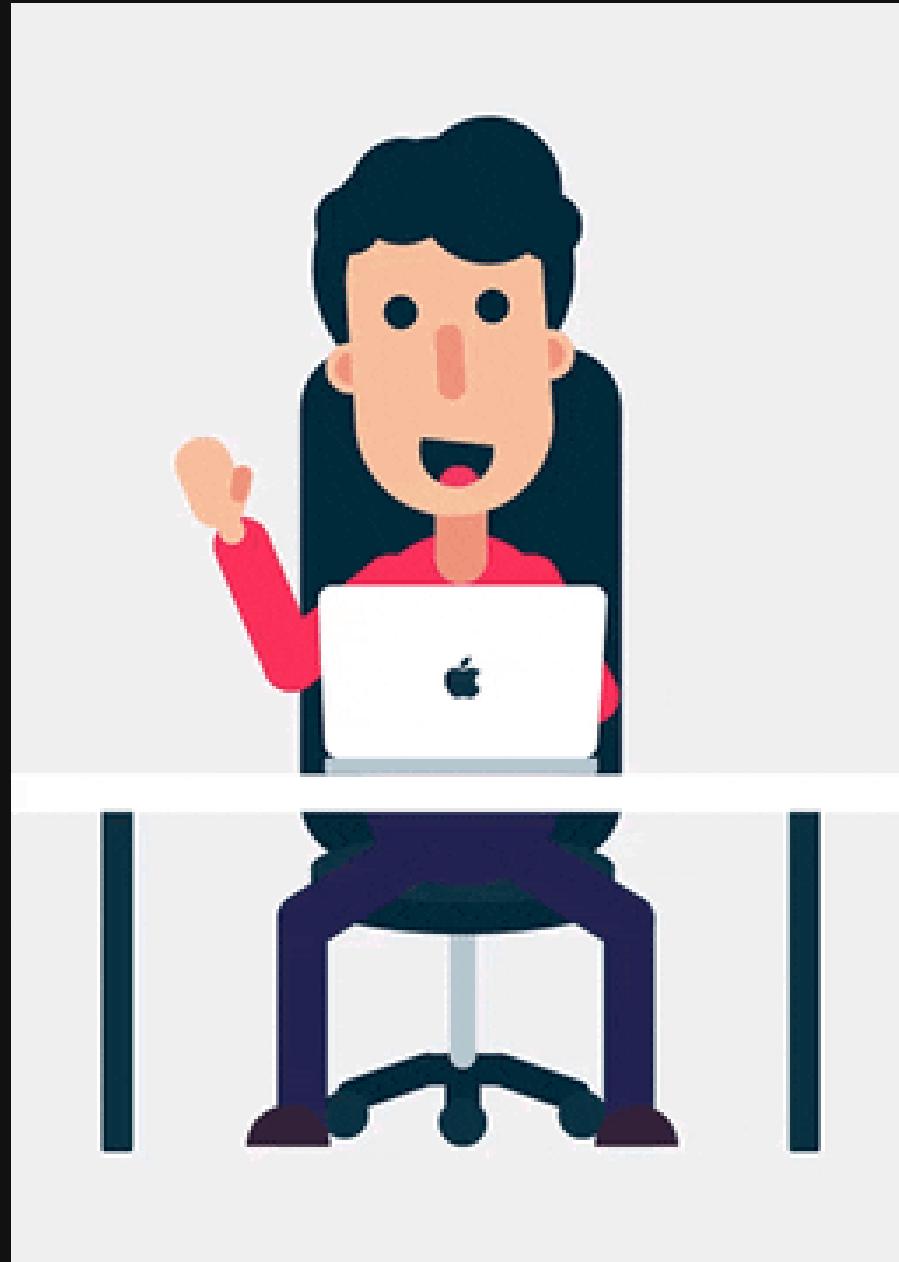


POLLARD
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Software Development



Big Companies and Small





PEBCAK



Front to Back
Never Back to Front

Never
Back
to Front

AWS Console

The screenshot shows the AWS CloudFormation console with the following details:

CloudFormation > **Stacks** > **SFSetup-Go7Pd2UE8**

CloudFormation sidebar:

- Stacks **Stack details** (selected)
- Drifts
- StackSets
- Exports
- Infrastructure Composer
- IaC generator
- Hooks overview [New](#)
- Hooks [New](#)
- Registry
 - Public extensions
 - Activated extensions
 - Publisher
- Spotlight
- Feedback

Introducing the new Hooks experience and capabilities: The Hooks' new console workflow simplifies how you author your Hooks by using Lambda functions or Guard domain-specific language (DSL). You can also learn more about the expanded evaluation targets.

Stacks (2)

- Serverless-Inc-Role-Stack
 - 2022-11-16 15:19:43 UTC-0500
 - CREATE_COMPLETE**
- SFSetup-Go7Pd2UE8**
 - 2022-08-16 16:38:19 UTC-0400
 - CREATE_COMPLETE**

SFSetup-Go7Pd2UE8 Stack info tab:

- Stack ID**: arn:aws:cloudformation:us-east-1:943171012855:stack/SFSetup-Go7Pd2UE8/56ee0e70-1da3-11ed-9e66-0a8b29982015
- Description**: This stack creates an IAM role that can be used by Serverless Framework for use in deployments.
- Status**: **CREATE_COMPLETE**
- Status reason**: -
- Parent stack**: -
- Created time**: 2022-08-16 16:38:19 UTC-0400
- Updated time**: -
- Deleted time**: -
- Drift status**: NOT_CHECKED
- Last drift check time**: -
- Termination protection**: Deactivated
- IAM role**: -

Bottom navigation: CloudShell, Feedback, © 2025, Amazon Web Services, Inc. or its affiliates., Privacy, Terms, Cookie preferences



It's happening.
It's happening.

peacock

Submit to whom?

The button with the text "submit", though a known design anti-pattern, is so common that people have no problem with it, but it is still a good example of how thinking of the implementation works its way forward to the User Experience

Username:

Email:

Password:

Submit

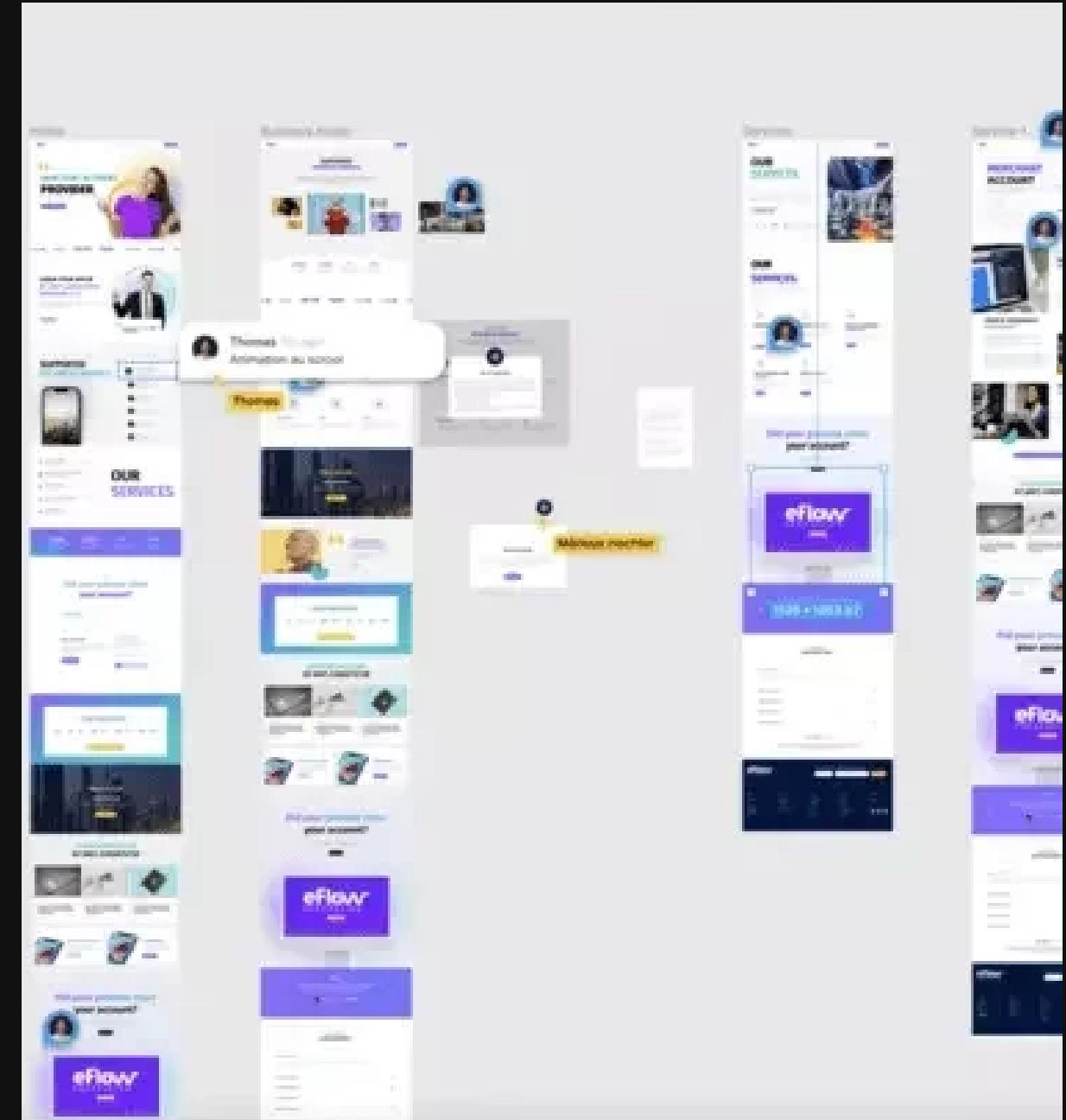




So how do we do this?
(the whole front-to-back thing)

Ask yourself...

- What can the user see?
- What can the user do?



What can the user see?

Where can I get the info I need?

What can the user do?

What are all the different interactions?



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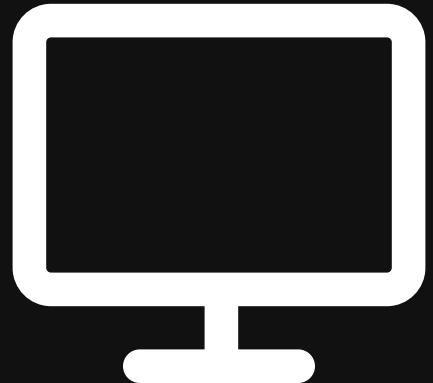
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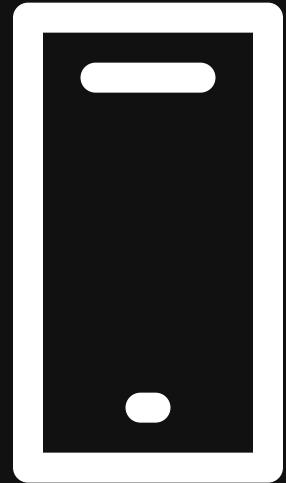
UI Events

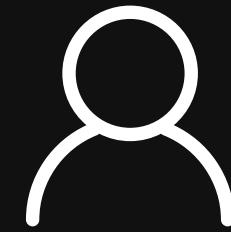
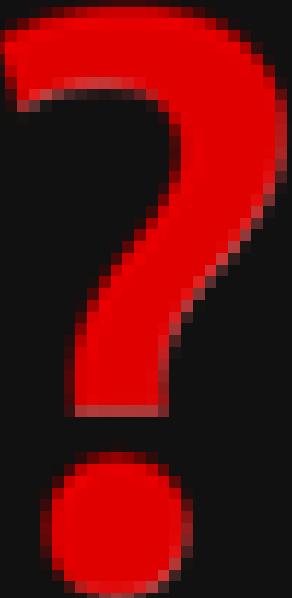
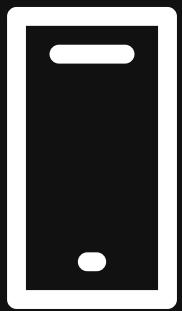


User Interactions



System Actions





/place-order



CRUD APIS SUCK!

*...for a consumer api

{ }

```
1 class Cart {  
2     addProduct(product, quantity = 1) { /*...*/ }  
3  
4     removeProduct(product) { /*...*/ }  
5  
6     changeQuantity(product, quantity) { /*...*/ }  
7  
8     addPromotionCode(code) { /*...*/ }  
9  
10    subscribe(callback) { /*...*/ }  
11  
12    getData() { /*...*/ }  
13 }
```

Swagger Petstore

1.0.0

OAS3

This is a sample Petstore server. You can find out more about Swagger at <http://swagger.io> or on [irc.freenode.net, #swagger](#).

[Terms of service](#)[Contact the developer](#)[Apache 2.0](#)[Find out more about Swagger](#)**Servers**<https://petstore.swagger.io/v2>[Authorize](#)

pet Everything about your Pets

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Schemes

HTTPS



Authorize



Cart Everything about your Carts

[Find out more](#)



POST

/cart/add-product



POST

/cart/remove-product



GET

/cart Get this users stored cart



POST

/cart/add-promotion-code Promotion codes generally lead to discounts



DELETE

/cart/{cartId} Deletes a Cart



store Access to Petstore orders



GET

/store/inventory Returns pet inventories by status



POST

/store/order Place an order for a pet



GET

/store/order/{orderId} Find purchase order by ID



What can the user see?

What can the user do?

What data do I need?

What actions can I take?

Your REST APIs don't have to mirror your DB tables....

The image shows a split-screen application. On the left, a browser window displays the Petstore Swagger API documentation at <https://petstore.swagger.io/v2>. It lists several endpoints for managing pets:

- POST /pet**: Add a new pet to the store.
- PUT /pet**: Update an existing pet.
- GET /pet/findByStatus**: Finds Pets by status.
- GET /pet/findByTags**: Finds Pets by tags.
- GET /pet/{petId}**: Find pet by ID.
- POST /pet/{petId}**: Updates a pet in the store with form data.
- DELETE /pet/{petId}**: Deletes a pet.

On the right, the pgAdmin interface is shown, connected to a PostgreSQL 14 database named 'test'. The 'Browser' pane shows the database structure, including the 'departments' and 'consultants' tables. The 'Query' pane displays the SQL code used to create these tables:

```
1 CREATE TABLE departments(
2   id serial NOT NULL,
3   department_name varchar(100),
4   CONSTRAINT departments_pkey PRIMARY KEY(id)
5 );
6
7 CREATE TABLE consultants(
8   id serial NOT NULL,
9   first_name varchar(100) NOT NULL,
10  last_name varchar(100) NOT NULL,
11  email varchar(200),
12  departments_id integer NOT NULL,
13  contract_date date
14  CONSTRAINT check_contract_date CHECK ((contract_date <= CURRENT_DATE)),
15  CONSTRAINT consultants_pkey PRIMARY KEY(id),
16  CONSTRAINT email UNIQUE(email)
17 );
18
19 CREATE INDEX consultants_last_name_idx ON consultants(last_name);
20
21 ALTER TABLE consultants
22   ADD CONSTRAINT consultants_departments_id_fkey
23     FOREIGN KEY (departments_id) REFERENCES departments (id);
```

The status bar at the bottom of the pgAdmin window indicates: "Query returned successfully in 67 msec."



What data do they need?

What actions can they take?

When designing modules try and remember the 80/20 rule of design. Cover the most common actions with direct functions or methods, but possibly allow for more complicated actions too

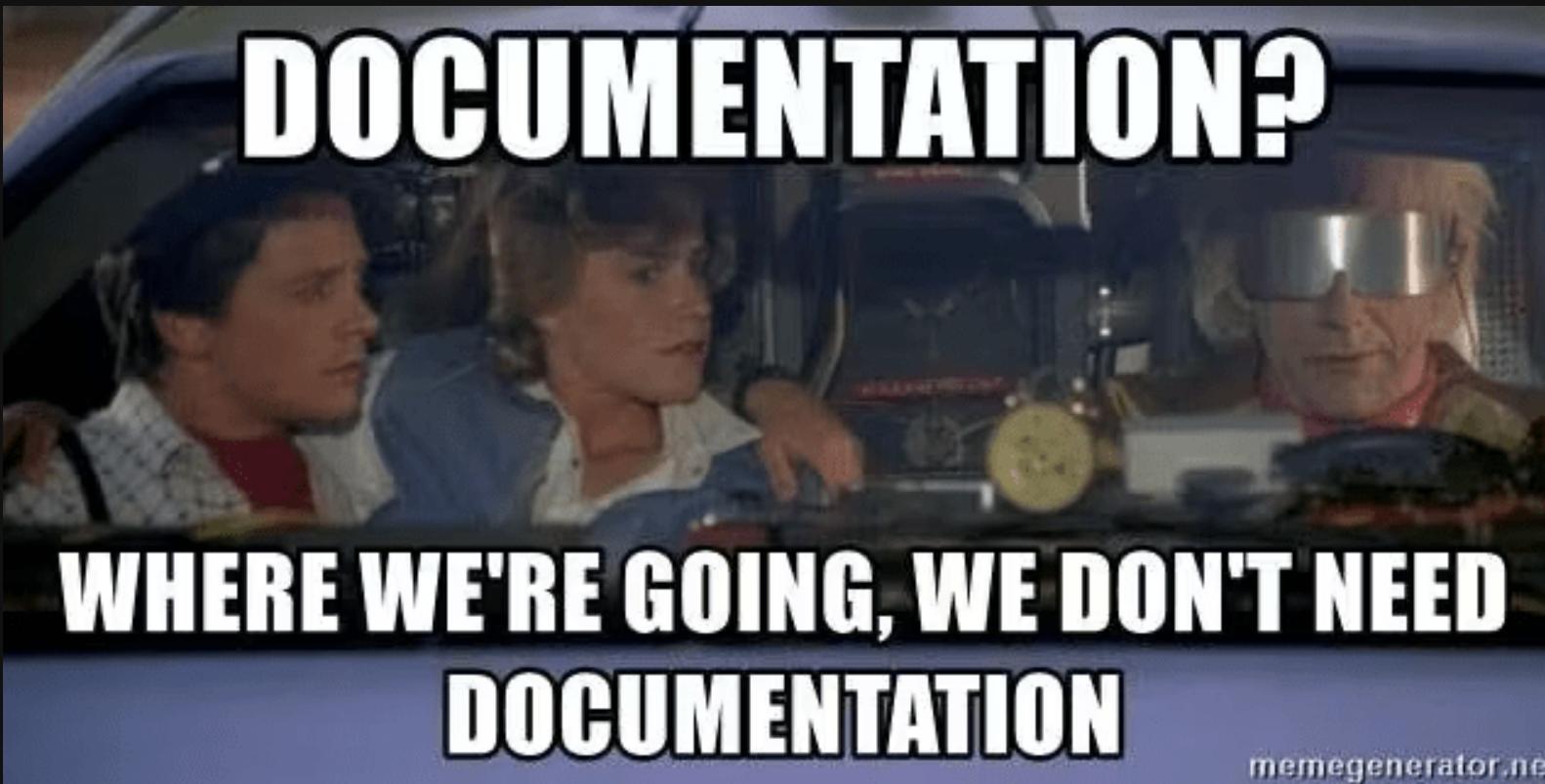
```
1 export function addCourseToSchedule {  
2   /*...*/  
3 }  
4  
5 export function beginCourse {  
6   /*...*/  
7 }  
8  
9  
10 export function abandonCourse {  
11   /*...*/  
12 }  
13  
14  
15 export function singUpForWaitingList  
16   /*...*/  
17 }
```



Behaviour Driven Development (BDD)



Documentation Driven Development (DDD)



What data do they need?

- List of Houses
- Available Filters
- Agent info

What actions can they take?

- change filters
- see house details
- contact agent

Tournament Planning

Team Editor

Bacon United

Dora Paulsen

Keeper

Ashtyn Sneed

striker

Randi Erickson

center back

Areli Schwartz

left-back

Kidneypool

Tori Riggins

Keeper

Hillary Tabor

defensive midfielder

Odalys Hickey

center back

Margaret Carver

striker

Northampton

Eryn Bateman

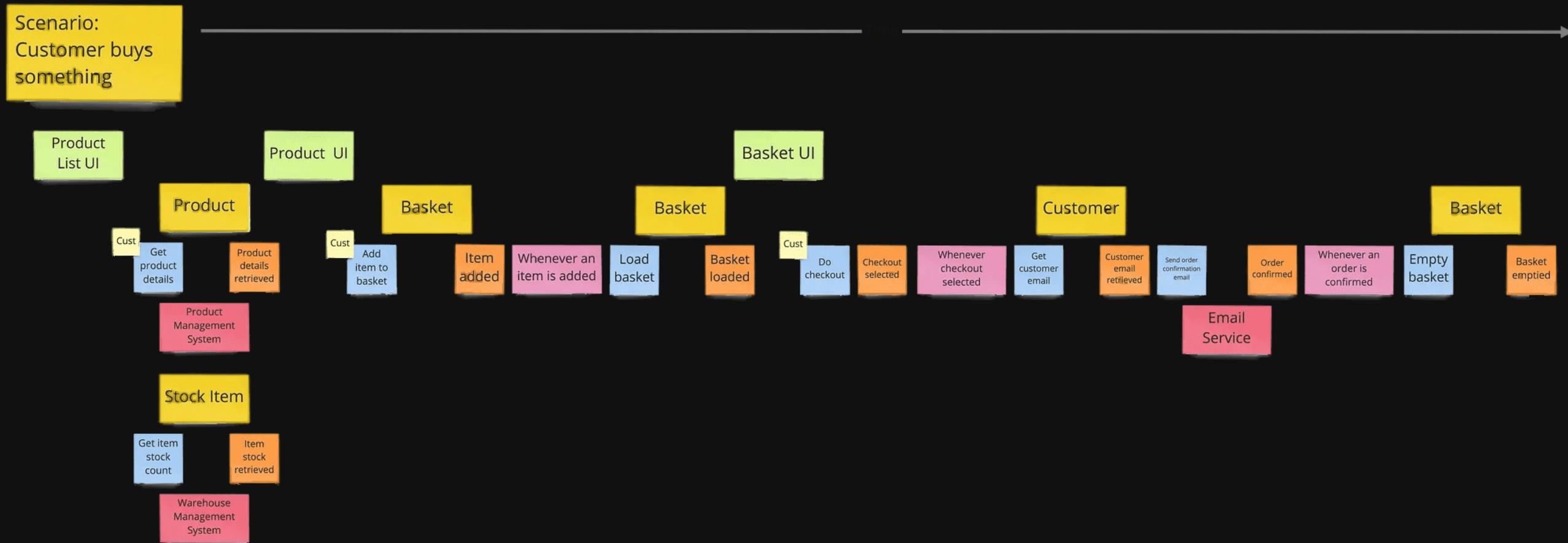
Keeper

Gretchen Fortner

center back

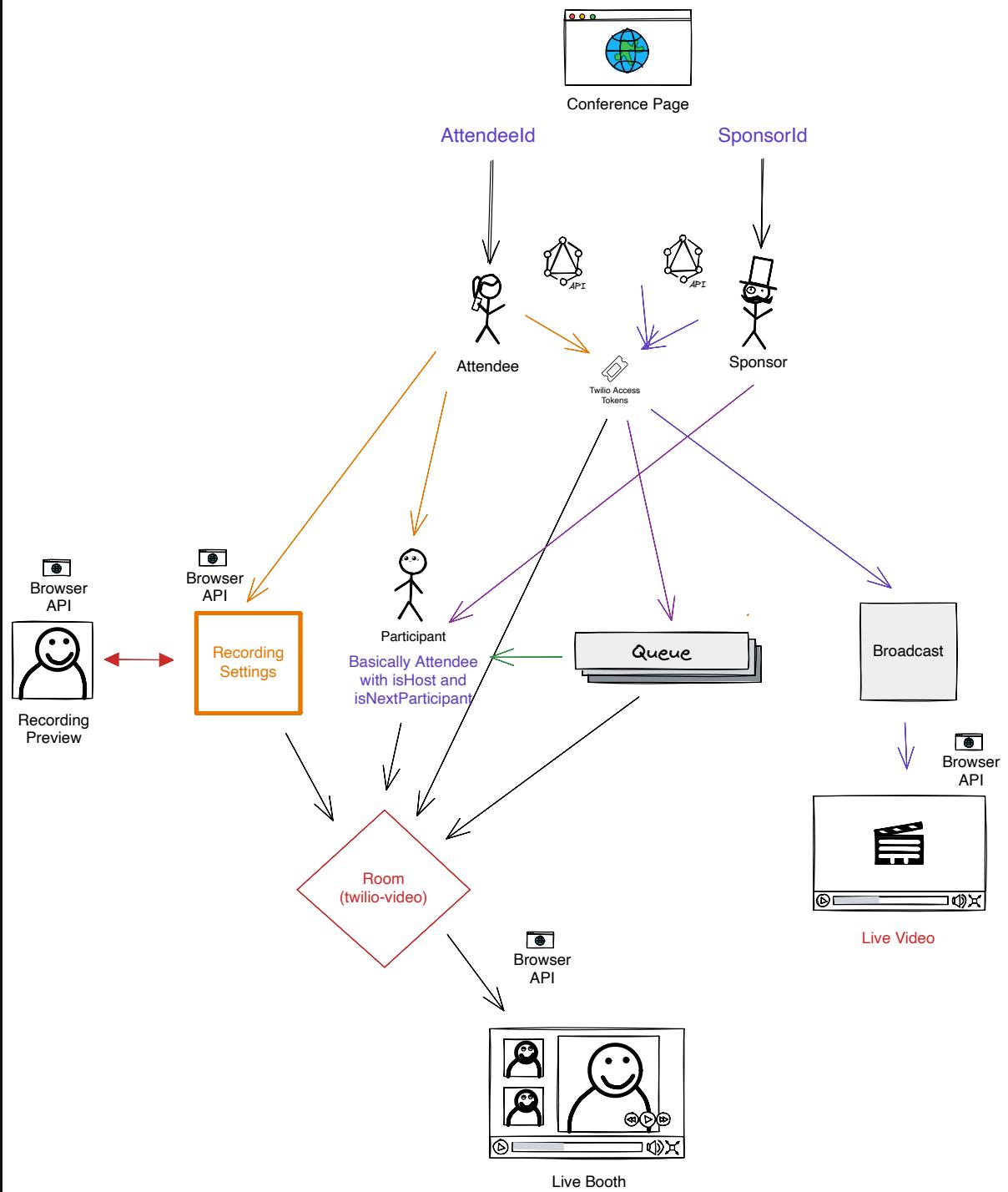
Isla Barrett

midfielders





Think before
coding...



Front-To-Back

- Consumer First Thinking
- What data do you need?
- What actions can you take?

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