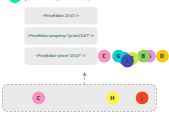

1
You have a PriceEditor component that has one property called price. How would you use that component?
<PriceEditor 23.67 />
<PriceEditor property="price"23.67" />
<PriceEditor price="23.67" />
C
H
I


2
You have a PriceEditor component that has one property called price. How would you make use of that property in the components definition? Choose two
prop.price
this.prop.price
price
C
H
I


3
How does React keep track of changes to data in a running application? Choose two
An internal database.
Its own simple algorithm
The browser's local and session storage
Vanilla variables
C
H
I


4
How does React's virtual DOM recognise when something has changed?
Vanilla Vanilla values filled by React's runtime which monitors vanilla values
Scanning your code's state variables
Keep all the JSP pages
C
I

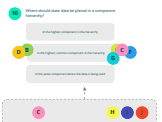

5
Yes or No!
You can modify a state variable by modifying it directly.
YES
NO
C


6
State variables are declared using which syntax?
const variable = 'some initial value'
const variable = useState()
const [variable, setVariable=String] = useState()
H
I


7
Why is it important to use the setter method that useState() provides to update your state variables? Choose two
It causes React to perform a diff to the DOM
It's more performant updating the variable
It causes React to perform a diff to the Virtual DOM
C
I


8
What does React call the flow of data changes from child components to parents?
Reverse flow
Inverse flow
Unidirectional flow
C
I

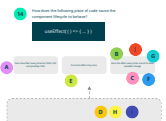

9
Properties flow from ...?
Children to their parents
Parent to its direct children
C
H
I

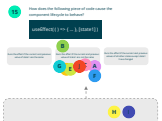

10
Where should state data be placed in a component hierarchy?
In the highest component in the hierarchy
In the highest common component in the hierarchy
In the same component where the data is being used
C
H
I


11
How do you modify the state variables that are higher up in the component hierarchy?
By passing a callback to the child component
By passing down a callback from the parent component
D
E
H
I


12
Yes or No!
Users a static version of your app involve working with data from a server?
YES
NO
E
I


13
Yes or No!
Do all React components have to be visible?
YES
NO
C
D
I


14
How does the following piece of code cause the component lifecycle to behave?
useEffect(() => { ... })
D
H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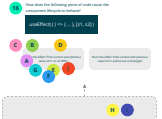
useEffect(() => { ... }, [state1])
H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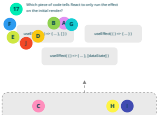
How does the following piece of code cause the component lifecycle to behave?
useEffect(() => { ... }, [ct, s2])
H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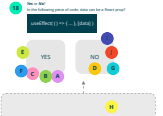
Which piece of useEffect React to only run the effect on the initial render?
useEffect(() => { ... })
useEffect(() => { ... }, [])
useEffect(() => { ... }, [stateValue])
C
H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In the following piece of code, data can be a React prop?
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YES
NO
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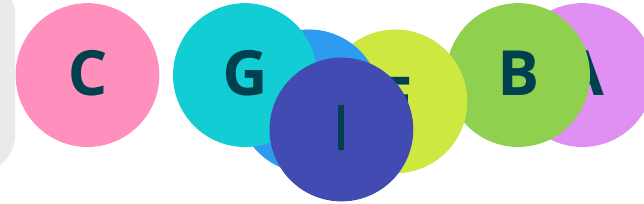

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J H G

props.price
ming props is a param
component

E

props.price
Assuming props has been declared as
param as
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C

price
ssuming props has been declared as a
param as
({price})

F H H E B

const {price} = useProps()

C

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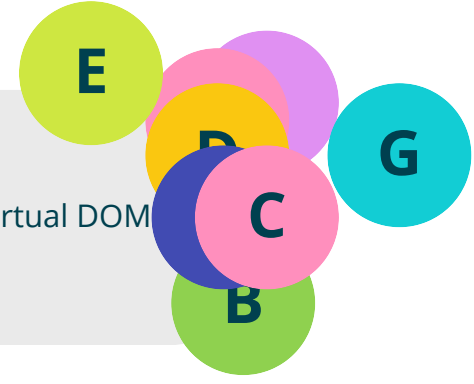
How does React keep track of changes to data in a running application? Choose *two*

An internal database

Its own virtual DOM



The browser's Local and Session storage

State variables

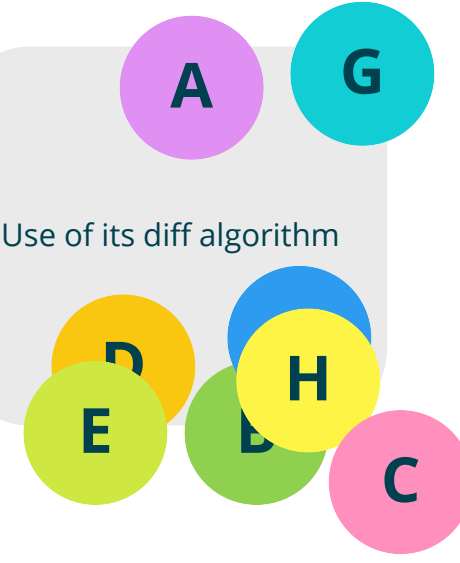
4

How does React's virtual DOM recognize when something has changed?

State hooks cause React to check current and previous state values

Scanning your code's state variables

Use of its diff algorithm



5

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You can modify a state variable by modifying it directly.

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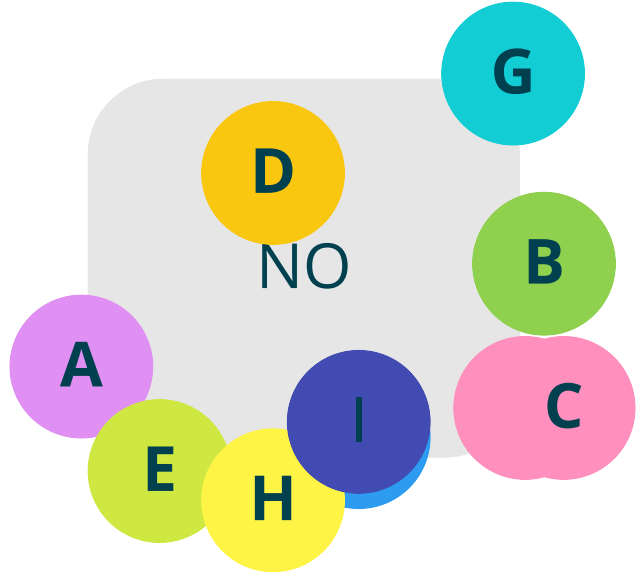

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const variable = <some initial value>

const variable = useState()

const [variable, setterForVariable] = useState()

C

B

G

F

C

A

D

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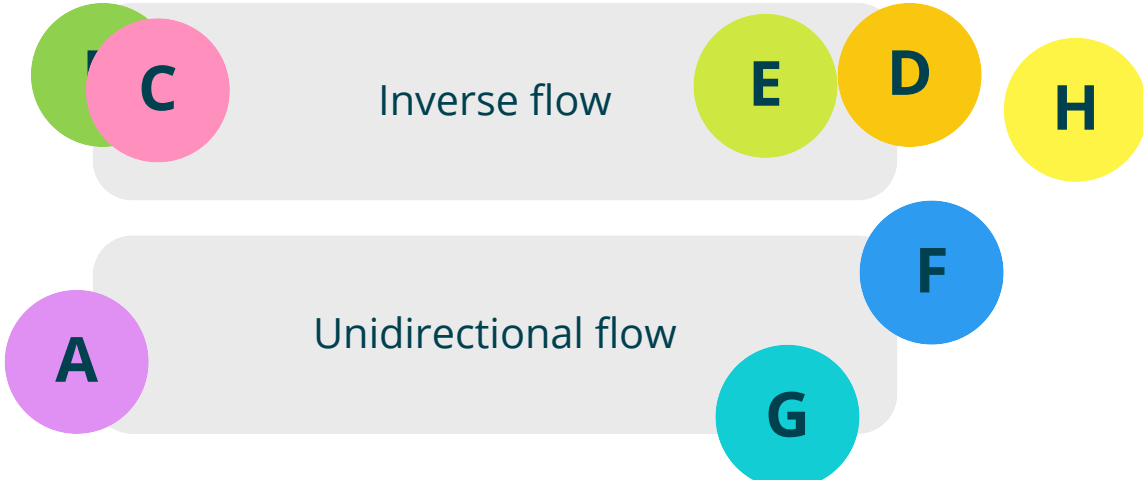
Unidirectional flow

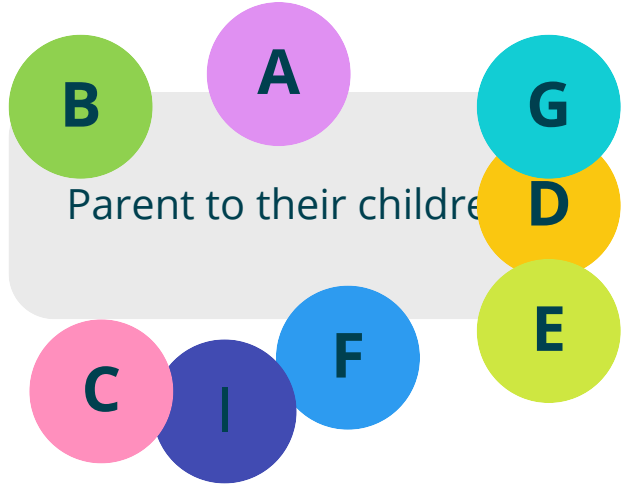


9

Properties flow from...?

Children to their parent

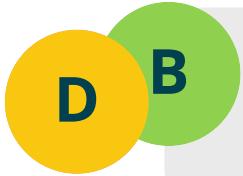
Parent to their childre



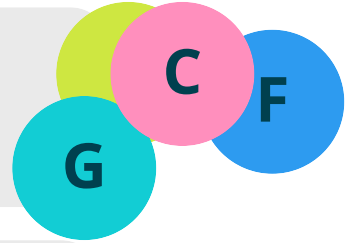
10

Where should state data be placed in a component hierarchy?

In the highest component in the hierarchy



In the highest common component in the hierarchy



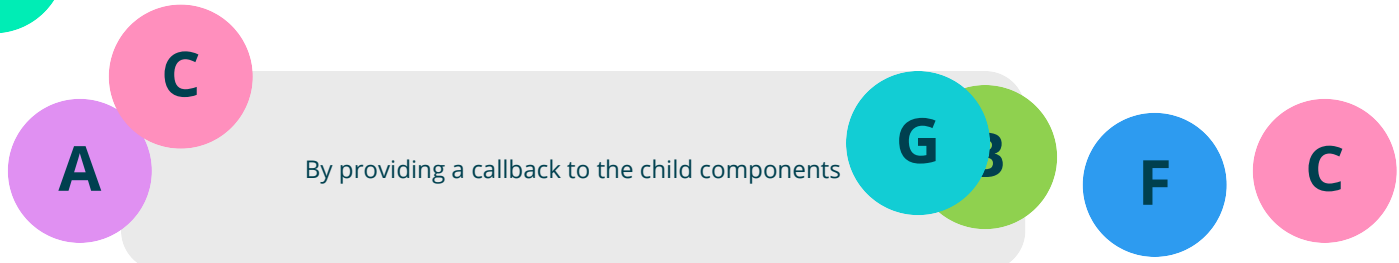
In the same component where the data is being used

11

How do you modify the state variables that are higher up in the component hierarchy?

By providing a callback to the child components

By passing the state variable down the hierarchy as a property

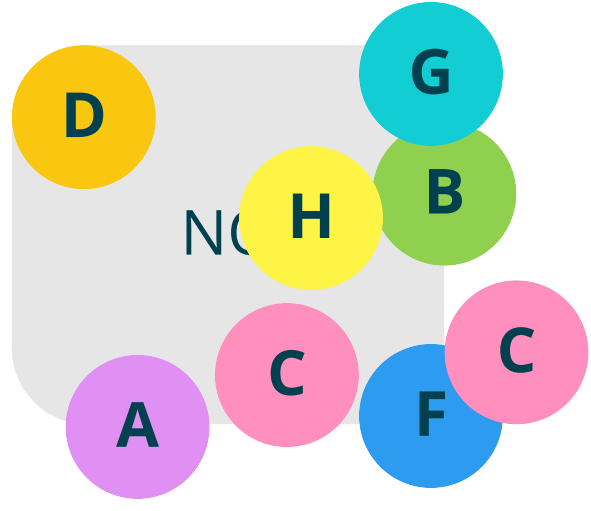


12

Yes or ***No***?

Does a static version of your app involve working with data from a server?

YES

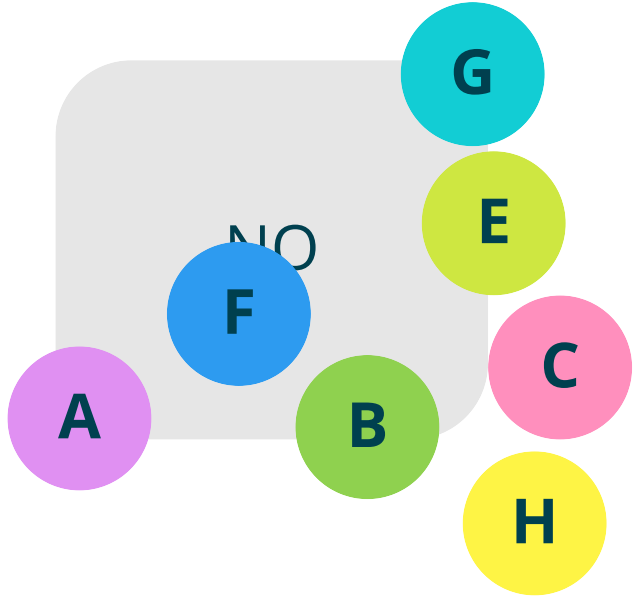


13

Yes or ***No***?

Do all React components have to be visible?

YES



14

How does the following piece of code cause the component lifecycle to behave?

```
useEffect( ( ) => { ... } )
```

A

Runs the effect every time for CDM, CDU and possibly CWU

E

Runs the effect only once

B

J

G

Runs the effect every time one of its state variables change

C

F

15

How does the following piece of code cause the component lifecycle to behave?

```
useEffect( ( ) => { ... }, [state1] )
```

B

Runs the effect if the current and previous value of state1 are the same

Runs the effect if the current and previous value of state1 are not the same

Runs the effect if the current and previous values of all other states except state1 have changed

16

How does the following piece of code cause the component lifecycle to behave?

```
useEffect( ( ) => { ... }, [s1, s2] )
```

C

B

D

A

G

E

J

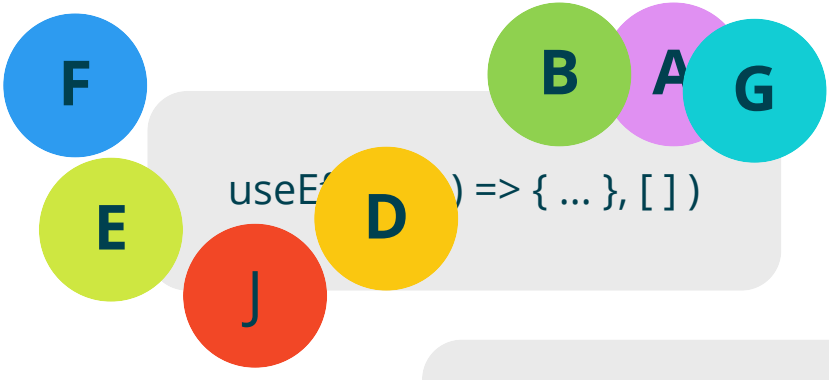
F

the effect if the current and previous value of s1 or s2 differ

Runs the effect if the current and previous value of s1 and s2 are unchanged

17

Which piece of code tells React to only run the effect on the initial render?



useE) => { ... }, [ ])

useEffect(( ) => { ... })

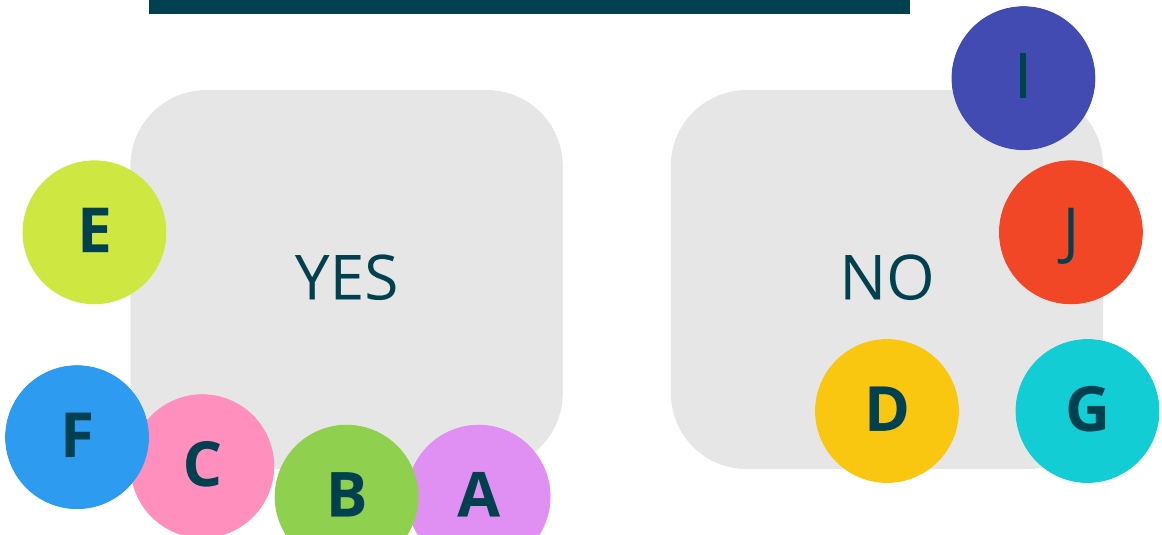
useEffect(( ) => { ... }, [dataState])

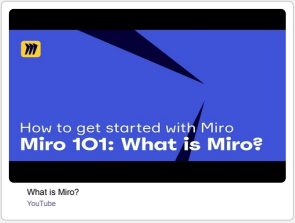
18

Yes or ***No***?

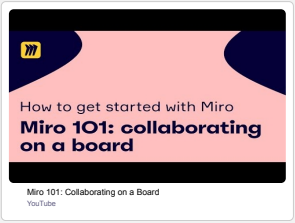
In the following piece of code, data can be a React prop?

```
useEffect( ( ) => { ... }, [data] )
```



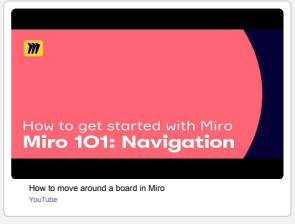


What is Miro?
YouTube

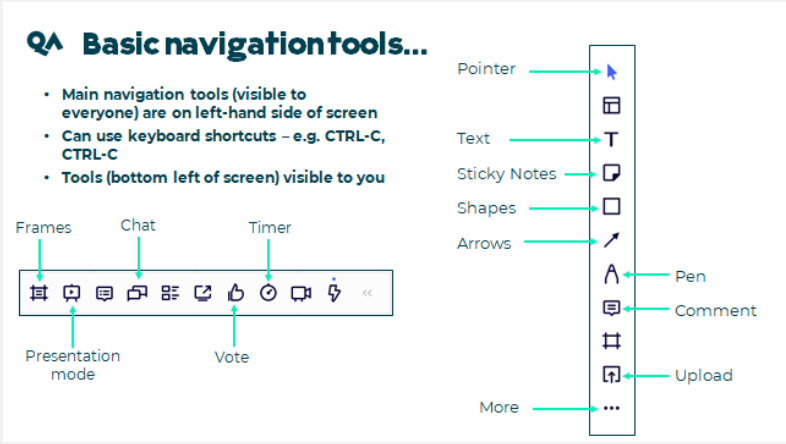


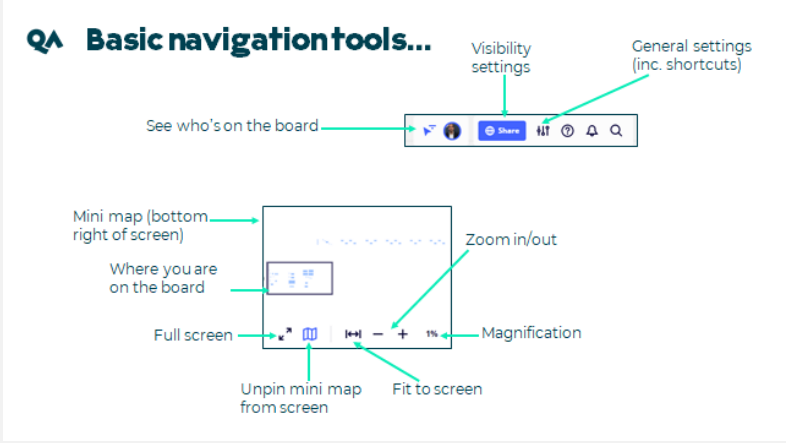
Miro 101: Collaborating on a Board
YouTube

How to collaborate in Miro
YouTube



How to move around a board in Miro
YouTube





Add some post its!

Press N to create your own sticky notes

Hey!

:)

Hey

Hi there

Draw something

Press P to create your art

Write something

Press T to express your thoughts

Good morning!

Pete

hello World

Objectives for this event

To gain a better understanding of ReactJS

To learn about best practice and how to improve my current skillset.

Learn React to help build apps for Thredd

Contribute to Thredds front end development using React

Learn a frontend framework

Have some fun building a web app

Type something

Be comfortable with React

* learn to build FE apps to help other teams

Regarding webcams

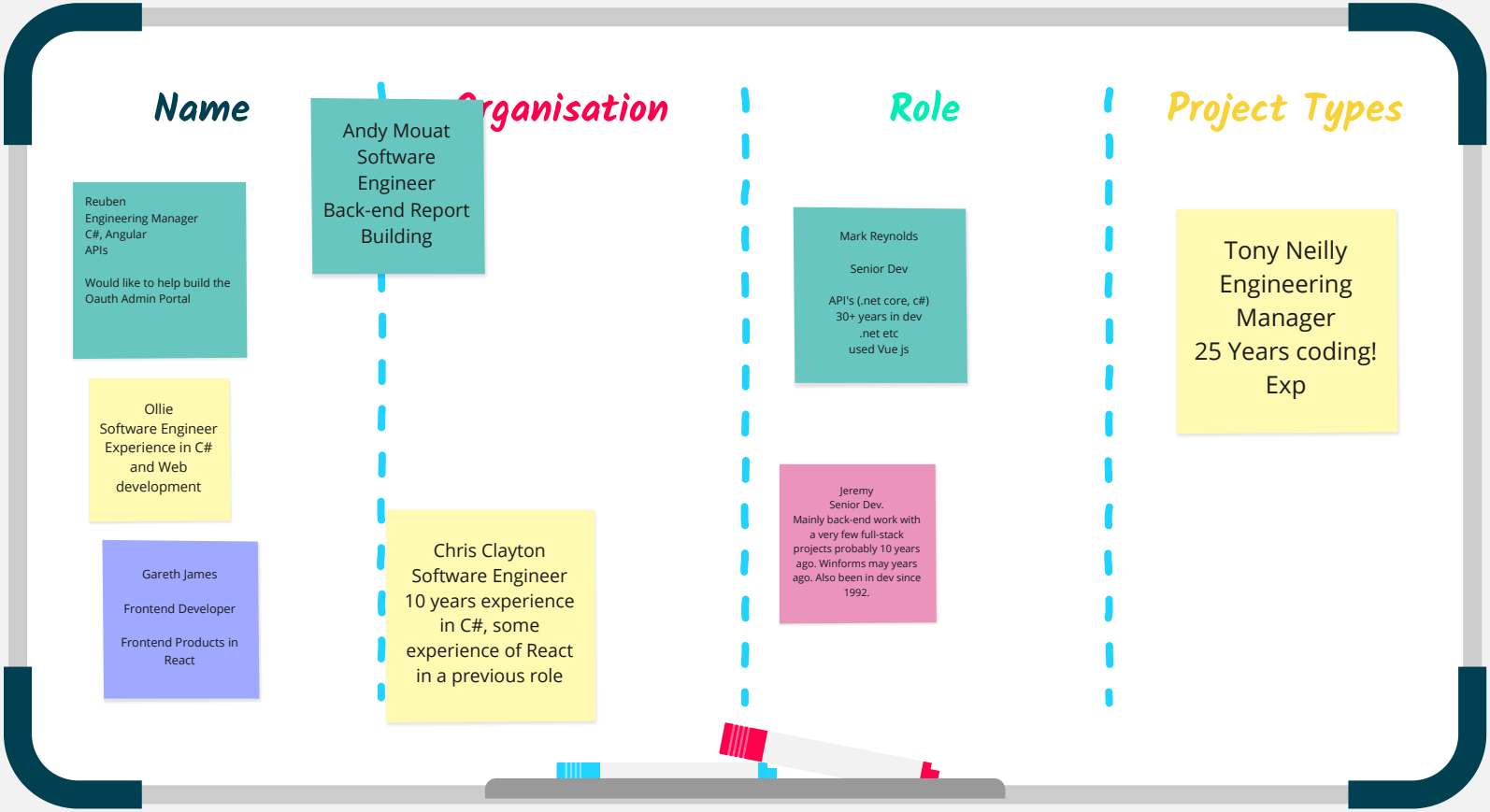
Regarding mute

Frequency of breaks

Regarding group participation

Regarding questions

Anything else


Name
Organisation
Role
Project Types
Reuben
Engineering Manager
C#, Angular
APIs
Would like to help build the Oauth Admin Portal
Andy Mouat
Software Engineer
Back-end Report Building
Mark Reynolds
Senior Dev
API's (.net core, c#)
30+ years in dev
.net etc
used Vue js
Tony Neilly
Engineering Manager
25 Years coding!
Exp
Ollie
Software Engineer
Experience in C# and Web development
Gareth James
Frontend Developer
Frontend Products in React
Chris Clayton
Software Engineer
10 years experience in C#, some experience of React in a previous role
Jeremy
Senior Dev.
Mainly back-end work with a very few full-stack projects probably 10 years ago. Winforms may years ago. Also been in dev since 1992.

1 You have a **PriceEditor** component that has one property called **price**. How would you use that component?

- `<PriceEditor .5}/>`
- `<PriceEditor property="price"}/>`
- `<PriceEditor price="}/>` ✓

2 You have a **PriceEditor** component that has one property called **price**. How would you make use of that property in the components definition? Choose two

- ✓ **property.price** — Accessing the property value of the component
- **price.property** — Accessing a property called price on a property called property
- ✓ **price** — Accessing a local var/prop/function called price
- **const {price} = useProps()**

3 How does React keep track of changes to data in a running application? Choose two

- An internal database — Its own circuit MRI
- ✓
- The browser source and forward storage — Voice variables
- ✓

4 How does React's virtual DOM recognise when something has changed?

- Make frantic saves that the check numbers and produces under control
- Scanning your code's code comments
- Use of its diff algorithm
- ✓

5 **Yes or No?**
You can modify a state variable by modifying it directly.

- YES
- NO
- ✓

6 **State variables** are declared using which syntax?

- const variable = 'some initial value'
- const variable = useState()
- const [variable, setVariable] = useState() ✓

7 **Why is it important to use the setter method that useState() provides to update your state variable?**

- It knows that it must be a diff in the database
- ✓
- It's easier and keeps all updating the variable
- It's more fun more clever to perform the internal event
- ✓

8 **What does React call the flow of data changes from child components to parents?**

- Reverse flow
- Inverse flow
- ✓
- Unidirectional flow

9 **Properties flow from ...?**

- Children to their parent
- Parent to their children
- ✓

10 **Where should state data be placed in a component hierarchy?**

- In the highest component in the hierarchy
- In the highest common component in the hierarchy
- ✓
- In the same component where the data is being used

11 **How do you modify the state variables that are higher up in the component hierarchy?**

- By passing a callback to the state component
- ✓
- By passing the state variables down the hierarchy to a property

12 **Yes or No?**
Do all React components have to be visible?

- YES
- NO
- ✓

13 **How does the following piece of code cause the component lifecycle to behave?**

```
useEffect(() => { ... }, [])
```

- ✓ Runs the effect every time the component renders
- Runs the effect only once
- Runs the effect every time one of the state variables change

14 **How does the following piece of code cause the component lifecycle to behave?**

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useEffect(() => { ... }, [state1])
```

- Runs the effect every time a state variable changes
- Runs the effect every time one of the state variables in the array changes
- ✓
- Runs the effect every time a state variable in the array changes and when the component renders

15 **How does the following piece of code cause the component lifecycle to behave?**

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useEffect(() => { ... }, [state1, state2])
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- Runs the effect if the current and previous value of state1 and state2 differ

16 **Which piece of code tells React to only run the effect on the initial render?**

- ✓ `useEffect(() => { ... }, [])`
- `useEffect(() => { ... })`
- `useEffect(() => { ... }, [stateValue])`

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- ✓ YES
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You have a **PriceEditor** component that has one property called **price**. How would you make use of that property in the component definition? Choose *two*

props.price
Assuming props is a param of the component

props.price
Assuming props has been declared as a param as
({props})

price
Assuming props has been declared as a param as
({props})

const {price} = useProps()

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How does React keep track of changes to data in a running application? Choose *two*

An internal database

Its own virtual DOM

The browser's Local and Session storage

State variables

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State hooks cause React to check current and previous state values

Scanning your code's state variables

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YES

NO

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Which piece of code tells React to only run the effect on the initial render?

useEffect(( ) => { ... }, [ ])

useEffect(( ) => { ... })

useEffect(( ) => { ... }, [dataState])

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In the following piece of code, data can be a React prop?

```
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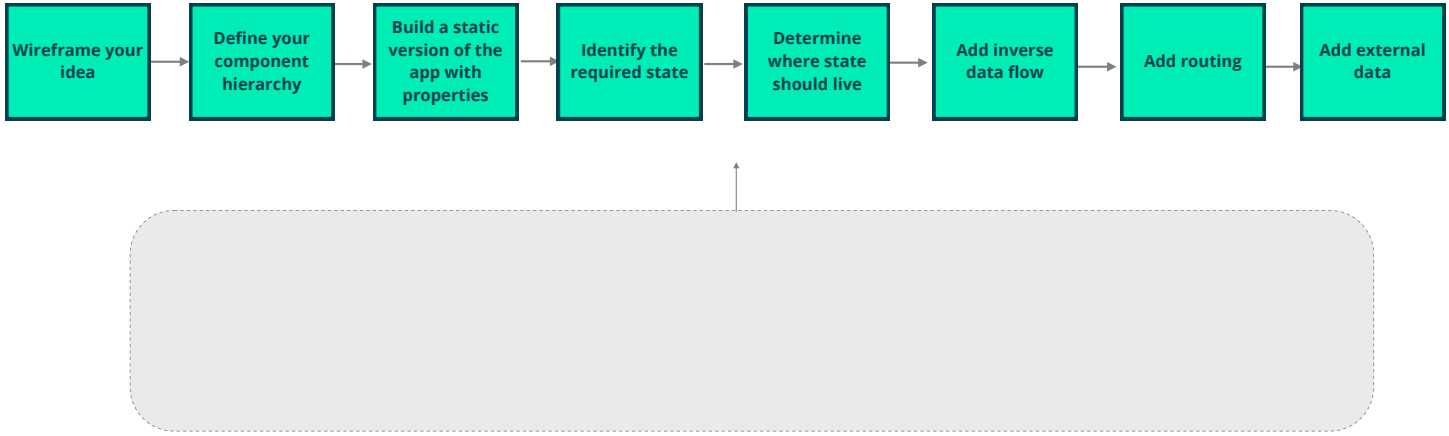
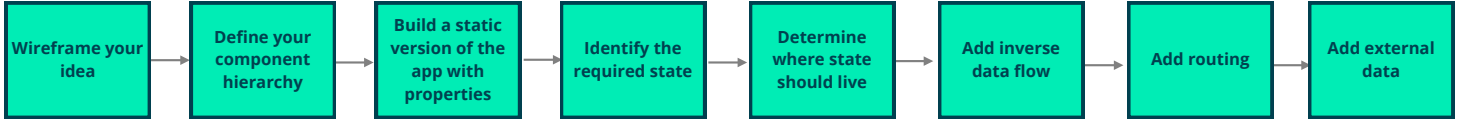
YES

NO


Wireframe your idea
Define your component hierarchy
Build a static version of the app with properties
Identify the required state
Determine where state should live
Add inverse data flow
Add routing
Add external data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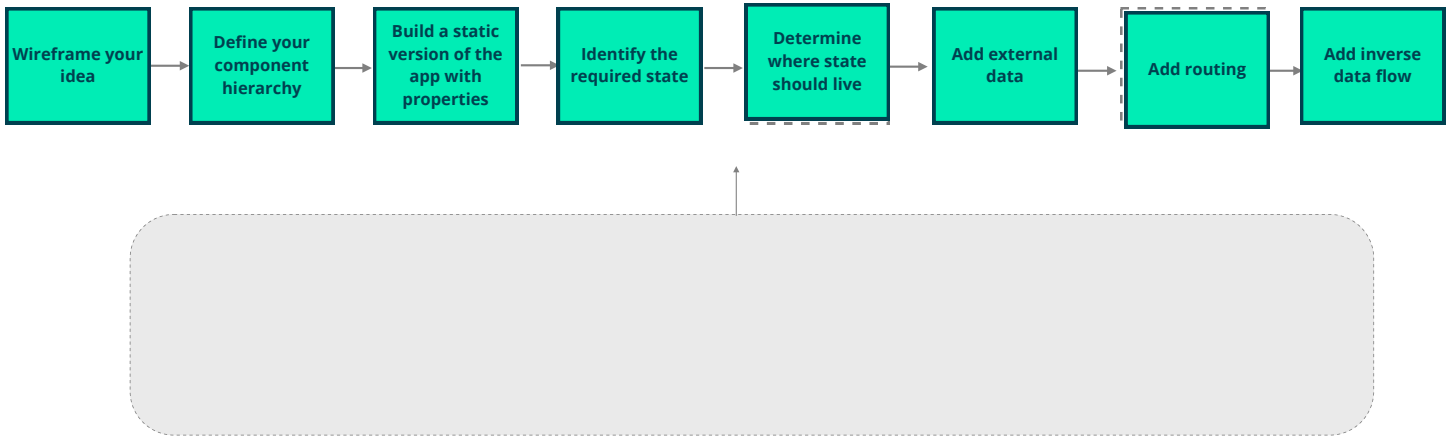
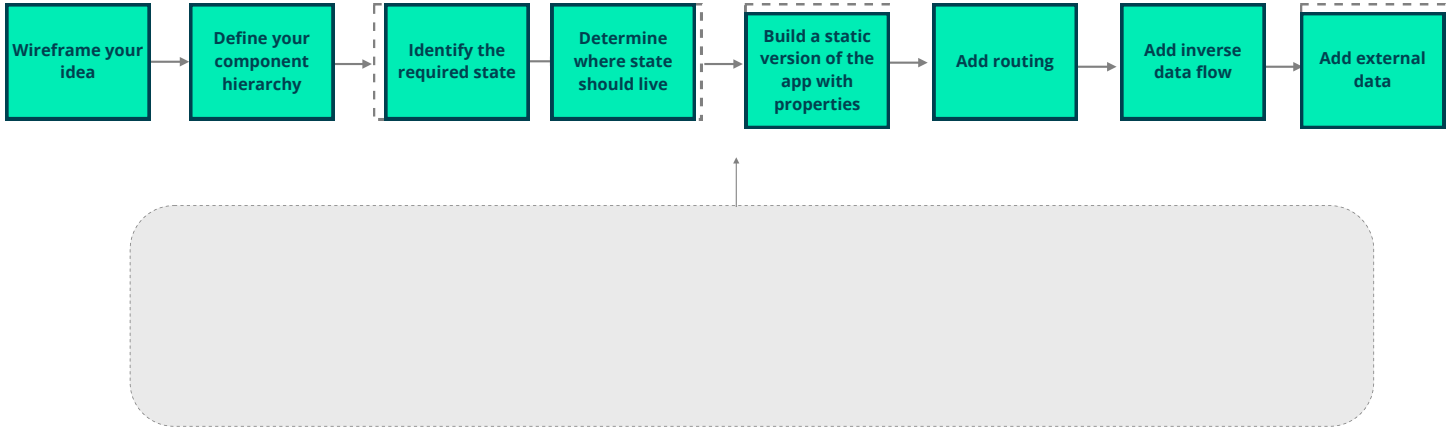
Add routing
Add external data

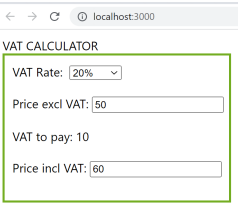

Wireframe your idea
Define your component hierarchy
Build a static version of the app with properties
Identify the required state
Determine where state should live
Add external data
Add routing
Add inverse data flow


Wireframe your idea
Define your component hierarchy
Identify the required state
Determine where state should live
Build a static version of the app with properties
Add routing
Add inverse data flow
Add external data

Mini Lab - VAT Calculator

During your Digital Phase you completed labs for a **ToDo** application

As a refresher and to consolidate what you have learnt, you will now develop a simple **VAT Calculator**



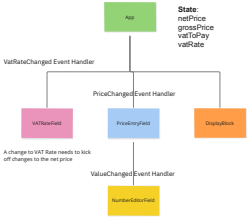
User Stories

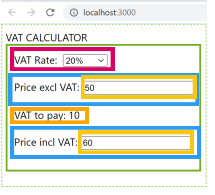
1. As a user, I want to be able to calculate the VAT to pay and the net price (price excluding VAT) given the gross price of an item (price including VAT).

2. As a user, I want to be able to adjust the VAT rate so that I can meet different government VAT requirements. The VAT rates should be 20%, 15%, 12.5% and 0% (Exempt).

3. As a user, I want to be able to calculate the total VAT to pay on an item and the total cost of the item including VAT (gross price) given its price excluding VAT (net price).

Suggested Components





Code in Pairs

Option 1
Code the solution for the VAT calculator in pairs.

Option 2
Code the solution for the VAT calculator along with your instructor.

Mini Lab - Key Takeaways

Add stickies describing your key takeaways from this activity.

Dockerizing a React Application

Step 1:
Create a **Dockerfile** in the root of your React Application directory

```
# Use official node image as the base image
FROM node:14-alpine

# Set the working directory in the container
WORKDIR /app

# Copy package.json and package-lock.json to the working directory
COPY package*.json ./

# Install dependencies
RUN npm install

# Copy the rest of the application code to the working directory
COPY . .

# Build the React app
RUN npm run build

# Install serve to serve the build directory
RUN npm install -g serve

# Expose port 3000
EXPOSE 3000

# Command to run the application
CMD ["serve", "-s", "build"]
```

Right-click picture and select "Send to back" to reveal copyable code

Step 2:
Create a **.dockerignore** file in the root of your React Application directory

```
node_modules
```

Step 3:
Create an **nginx** folder in the root of your React Application folder.

Add a file **nginx.conf**


```
server {
    listen 80;

    location / {
        root   /usr/share/nginx/html;
        index  index.html index.htm;
        try_files $uri $uri/ /index.html;
    }

    error_page 500 502 503 504 /50x.html;

    location = /50x.html {
        root   /usr/share/nginx/html;
    }
}
```

Right click picture and select "Send to back" to reveal copyable code

Step 4:
Build your docker image and tag it as **vat-calculator:1.0**

```
C:\Total_Learning_React\Demo\vat-calculator>docker build --tag vat-calculator:1.0 .
[+] Building 873.9s (14/16)  FINISHED
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 1028
 => [internal] load .dockerignore
```

docker build –tag vat-calculator:1.0 .

Step 5:
Verify your image exists using the **docker images** command

```
C:\Total_Learning_React\Demo\vat-calculator>docker images
REPOSITORY        TAG       IMAGE ID       CREATED          SIZE
vat-calculator    1.0       0b1a2b3c4d5e   2 minutes ago    64.2MB
node              14-alpine 9f8e7d6c5b4a   3 weeks ago      169MB
```

Create and run a container based on the image

Name the container **vat-container** and expose it on an unused port, for example **4250**

```
C:\Total_Learning_React\Demo\vat-calculator>docker run -p 4250:80 -d --name vat-container vat-calculator:1.0
f1a2b3c4d5e6f7a8b9c0d1e2f3a4b5c6d7e8f9a0b1c2d3e4f5a6b7c8d9e0f1a2
```

docker run -p 4250:80 -d --name vat-container vat-calculator:1.0

Step 6:
Browse to the port you exposed and confirm your application is running.

Step 1:

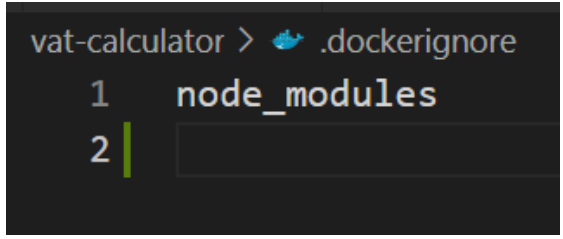
Create a **Dockerfile** in the root of your React Application directory

vat-calculator > Dockerfile > ...

```
# Set the base image to node:17-alpine
FROM node:17-alpine as build

# Specify where our app will live in the container
WORKDIR /app

# Copy the React App to the app directory in the container
COPY . /app/

# Install the app dependencies
RUN npm install
# Build a production version
RUN npm run build

# Prepare nginx
FROM nginx:1.21.6-alpine
# Copy the built react app from alpine container to nginx container
COPY --from=build /app/build /usr/share/nginx/html
# Copy our new config file for nginx
COPY nginx/nginx.conf /etc/nginx/conf.d/default.conf

# Start nginx
EXPOSE 80
CMD ["nginx", "-g", "daemon off;"]

```

Right click picture and select "Send to back" to reveal copyable code

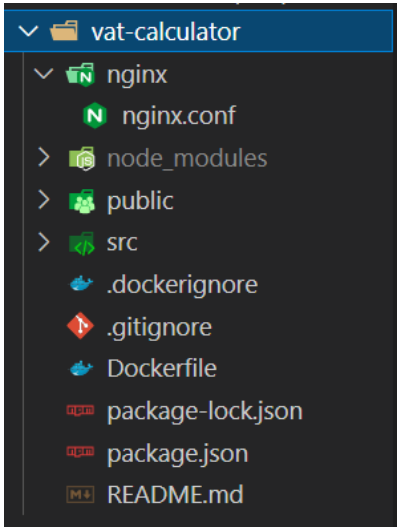
Step 2:
Create a **.dockerignore** file in the root of your React Application directory



Step 3:

Create an **nginx** folder in the root of your React Application folder.

Add a file: **nginx.conf**



vat-calculator > nginx > nginx.conf

```
server {

  listen 80;

  location / {
    root   /usr/share/nginx/html;
    index  index.html index.htm;
    try_files $uri $uri/ /index.html;
  }

  error_page 500 502 503 504 /50x.html;

  location = /50x.html {
      root /usr/share/nginx/html;
  }

}
```

Right click picture and select "Send to back" to reveal copyable code

Step 4:
Build your docker image and tag it as **vat-calculator:1.0**

```
C:\Total_Learning_React\Demos\vat-calculator>docker build --tag vat-calculator:1.0 .
[+] Building 671.4s (18/18) FINISHED
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 631B
 => [internal] load .dockerignore
```

docker build --tag vat-calculator:1.0 .

Step 5:

Verify your image exists using the **docker images** command

```
C:\Total_Learning_React\Demos\vat-calculator>docker images
REPOSITORY                                          TAG                 IMAGE ID            CREATED             SIZE
vat-calculator                                      1.0                 36c290509464        4 minutes ago       20.9MB
mongo                                               4.2                 0df68ce04956        5 days ago          388MB
```

Create and run a container based on the image

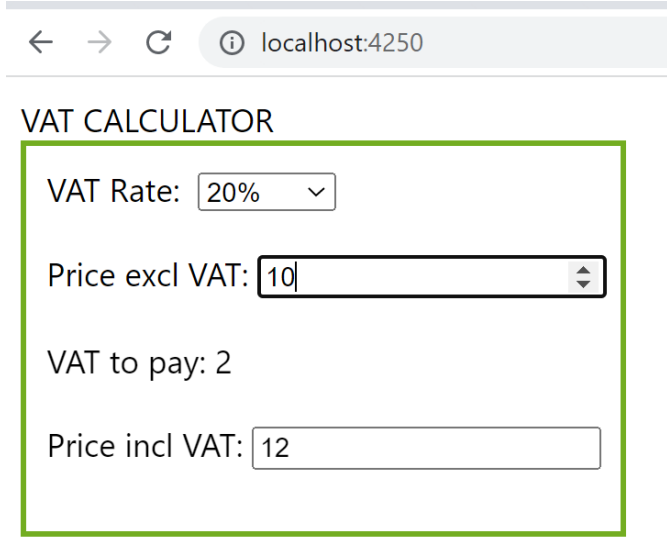
Name the container **vat-container** and expose it on an un-used port, for example: **4250**

```
C:\Total_Learning_React\Demos\vat-calculator>docker run -p 4250:80 -d --name vat-container vat-calculator:1.0
783b0b28dbdf014302b4e04ffcbedddfdd5fdc40152a125e1dfc7368247d177d
```

docker run -p 4250:80 -d --name vat-container vat-calculator:1.0

Step 6:

Browse to the port you exposed and confirm your application is running.



CI/CD: Deploying a React Application

I want to GitHub project and push any given large codes for repository.

Add a GitHub secret in the repository settings named **DO_TOKEN** with your digital ocean token.

.gitlab-ci.yml

vat-calculator > .gitlab-ci.yml > ...

gitlab-ci (ci.json)

```yaml
# A BUILD stage to confirm the React App Builds
# A TEST stage to run any React tests
# A DOCKER-BUILD stage to containerize the app using a Dockerfile and push the image to the Container Registry
# A DEPLOY stage to pull the image onto an AWS EC2 instance and spin up a container
stages:
  - build
  - test
  - docker-build
  - deploy

build:
  stage: build
  image: node
  script:
    - echo "Start building App"
    - npm install
    - npm run build
    - echo "Built successfully!"
  artifacts:
    expire_in: 1 hour
    paths:
      - build
      - node_modules/

```

Right click picture and select "Send to back"to reveal copyable code

```
24
25  test:
26    stage: test
27    image: node
28    script:
29      - echo "Testing App"
30      - CI=true npm test
31      - echo "Tested successfully!"
32
```

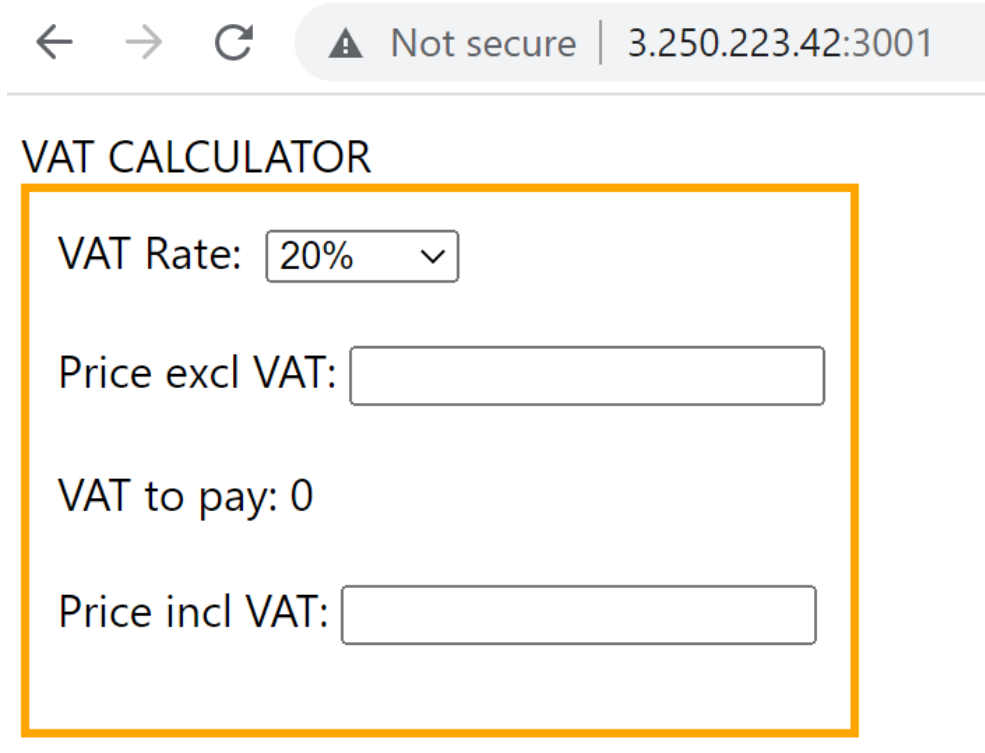
Right click picture and select "Send to back"to reveal copyable code

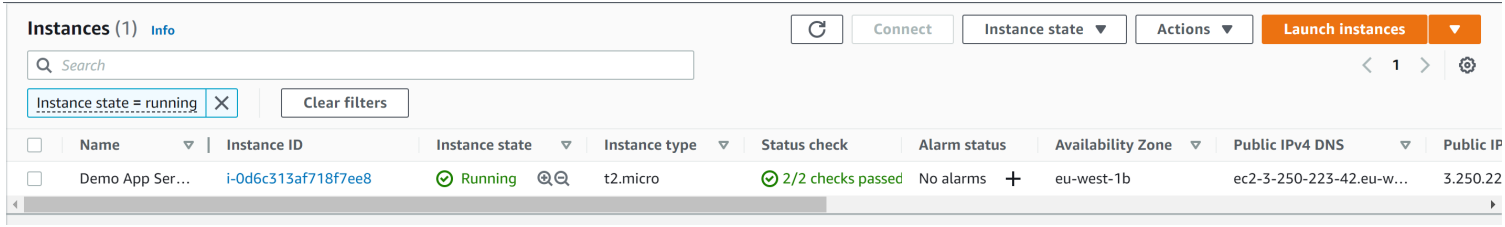
```
32
33  docker-build:
34    stage: docker-build
35    # this version of docker is used to prevent 'access denied' errors when connecting from EC2
36    image: docker:19.03.12
37    services:
38      - name: docker:19.03.12-dind
39    before_script:
40      # login to GitLab's docker registry using the built-in stored credentials
41      - docker login -u "$CI_REGISTRY_USER" -p "$CI_REGISTRY_PASSWORD" $CI_REGISTRY
42    script:
43      # Build the image from the Dockerfile. Ensure the base images are up-to-date by pulling the
44      # latest images referenced
45      # Tag the image with the address of the project's Container Registry
46      - docker build --pull -t "$CI_REGISTRY_IMAGE" .
47      # Puch the new image to the Container Registry
48      - docker push "$CI_REGISTRY_IMAGE"
49
```

Right click picture and select "Send to back"to reveal copyable code

```
deploy:
  stage: deploy
   # need an image that will enable us to ssh int our cloud server
  image: kroniak/ssh-client
  before_script:
    - echo "Deploying app"
    # need variable in gitlab: SSH_PRIVATE_KEY and PROD_SERVER_IP
  script:
    - chmod 400 $SSH_PRIVATE_KEY
    - ssh -o StrictHostKeyChecking=no -i $SSH_PRIVATE_KEY ec2-user@$PROD_SERVER_IP "echo 'hello from your AWS EC2 instance'"
    - echo "Did I connect to EC2?"
    - ssh -o StrictHostKeyChecking=no -i $SSH_PRIVATE_KEY ec2-user@$PROD_SERVER_IP "echo 'try to peform a docker login'"
    - ssh -o StrictHostKeyChecking=no -i $SSH_PRIVATE_KEY ec2-user@$PROD_SERVER_IP "sudo docker login -u "$CI_REGISTRY_USER" -p
    "$CI_REGISTRY_PASSWORD" $CI_REGISTRY"

    - ssh -o StrictHostKeyChecking=no -i $SSH_PRIVATE_KEY ec2-user@$PROD_SERVER_IP "sudo docker pull registry.gitlab.com/qa167/vat-calculator"
    - echo "Pulled"
    - ssh -o StrictHostKeyChecking=no -i $SSH_PRIVATE_KEY ec2-user@$PROD_SERVER_IP "docker stop vatcontainer || true && docker rm
    vatcontainer || true"
    - ssh -o StrictHostKeyChecking=no -i $SSH_PRIVATE_KEY ec2-user@$PROD_SERVER_IP "docker run -p 3001:80 -d --name vatcontainer registry.gitlab.
    com/qa167/vat-calculator"
```

Right click picture and select "Send to back"to reveal copyable code


Not secure
3.250.223.42:3001
VAT CALCULATOR
VAT Rate:
20%
Price excl VAT:
VAT to pay: 0
Price incl VAT:



Inbound rules (5)

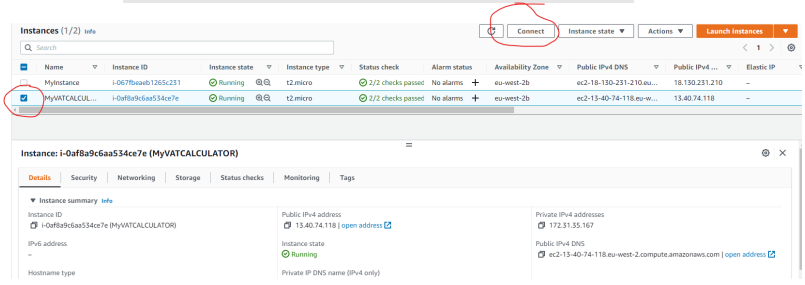
Manage tags | Edit inbound rules

Filter security group rules

1

Name	Security group rule…	IP version	Type	Protocol	Port range
–	sgr-050c5d0dda6e888…	IPv4	Custom TCP	TCP	3005
–	sgr-0ac385047b786ab…	IPv4	HTTPS	TCP	443
–	sgr-00c7bd301e077db…	IPv4	Custom TCP	TCP	3001
–	sgr-0d2e0bd8d5c597ffc	IPv4	HTTP	TCP	80
–	sgr-017253aa9df0856b1	IPv4	SSH	TCP	22

Open EC2 instance command line interface:



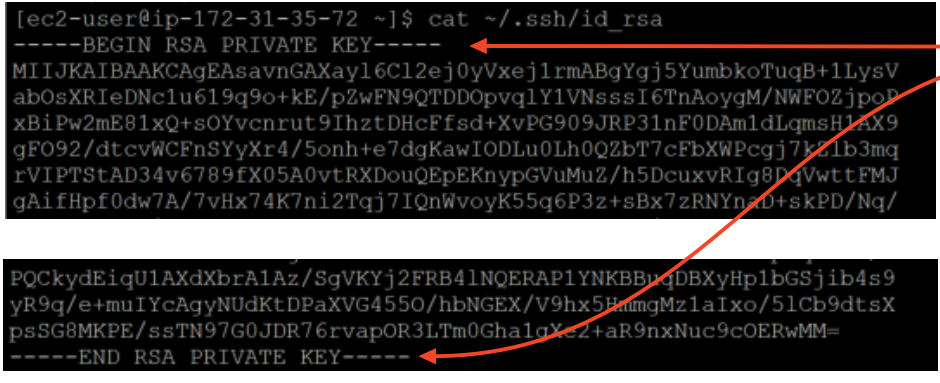
Install Docker on your Amazon Linux 2 instance:

```
sudo yum update -y
sudo amazon-linux-extras install docker
sudo service docker start
sudo systemctl enable docker
sudo usermod -a -G docker ec2-user
```

Log out of your instance, then log back in to confirm your permissions

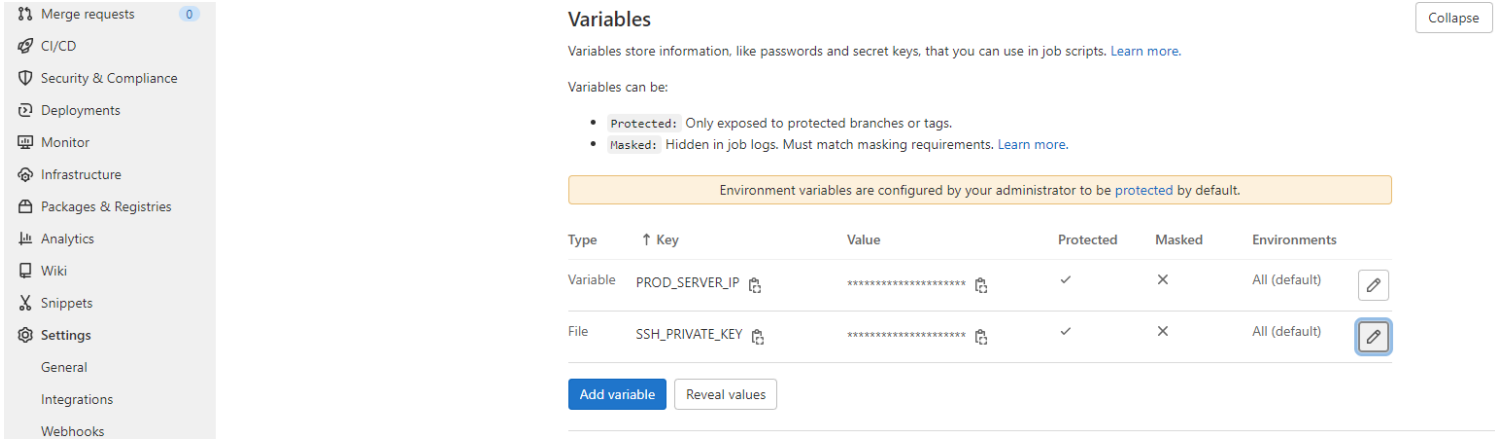
```
docker info
```

```
$ ssh-keygen -m PEM -t rsa -b 4096 -C "yourAWSemail@email.com"

$ cat ~/.ssh/id_rsa

$ cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
```



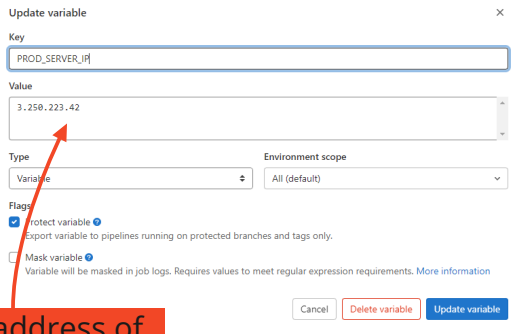
Be sure to include these lines when copying

Consider using a tool like PUTTY to run the above scripts simply because it's easier to select, copy and paste the private key ready for the next step



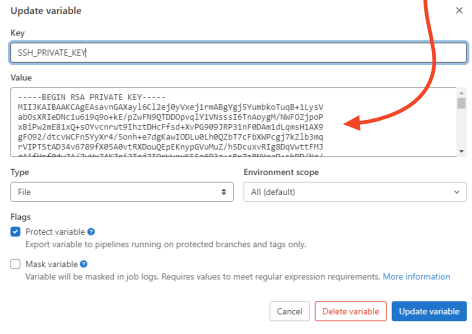
Copy the whole private key into a GitLab project *file* called: **SSH_PRIVATE_KEY**

Copy the AWS EC2 instance's Public IP address into a GitLab project *variable* called: **PROD_SERVER_IP**

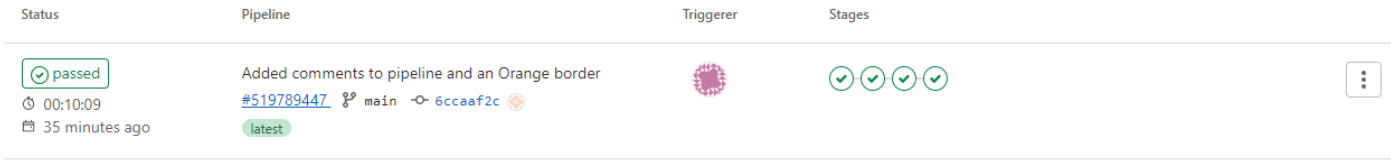


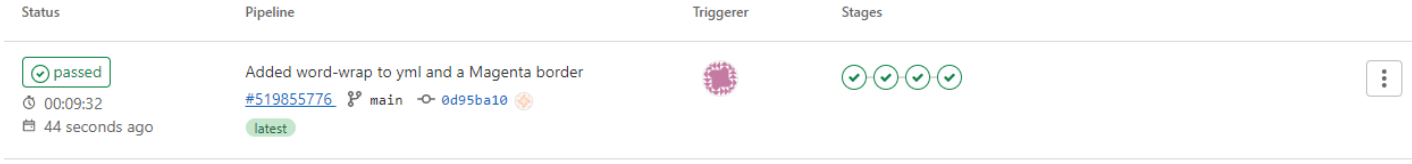
public IP address of AWS EC2 instance

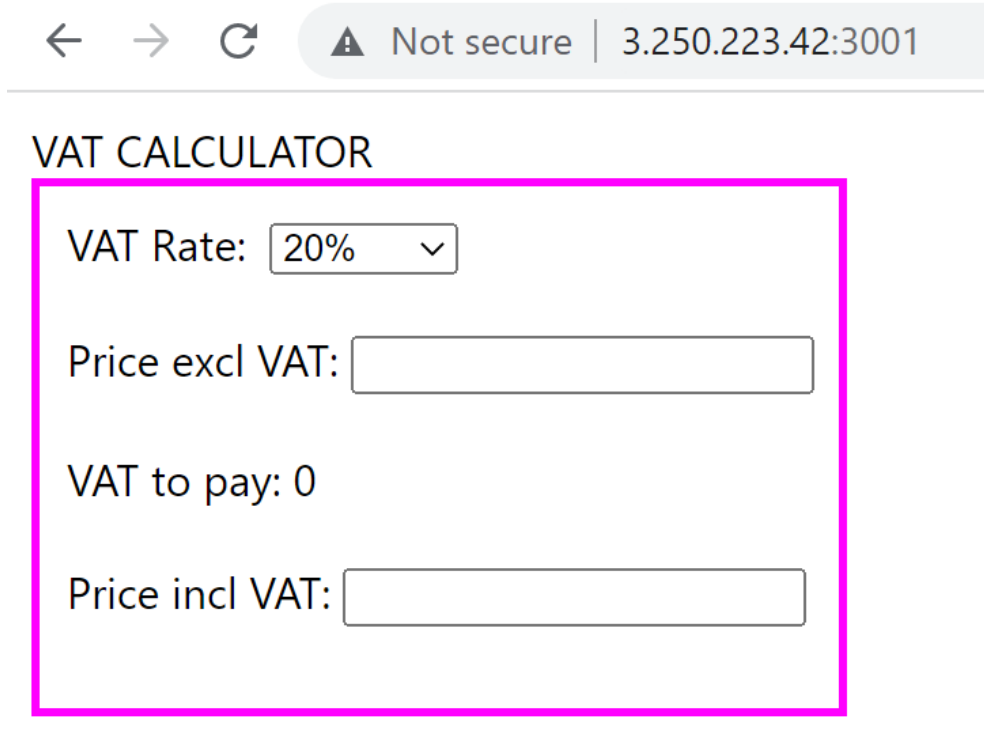
From previous step



Push some code changes to your GitLab repository and watch the pipeline stages run.

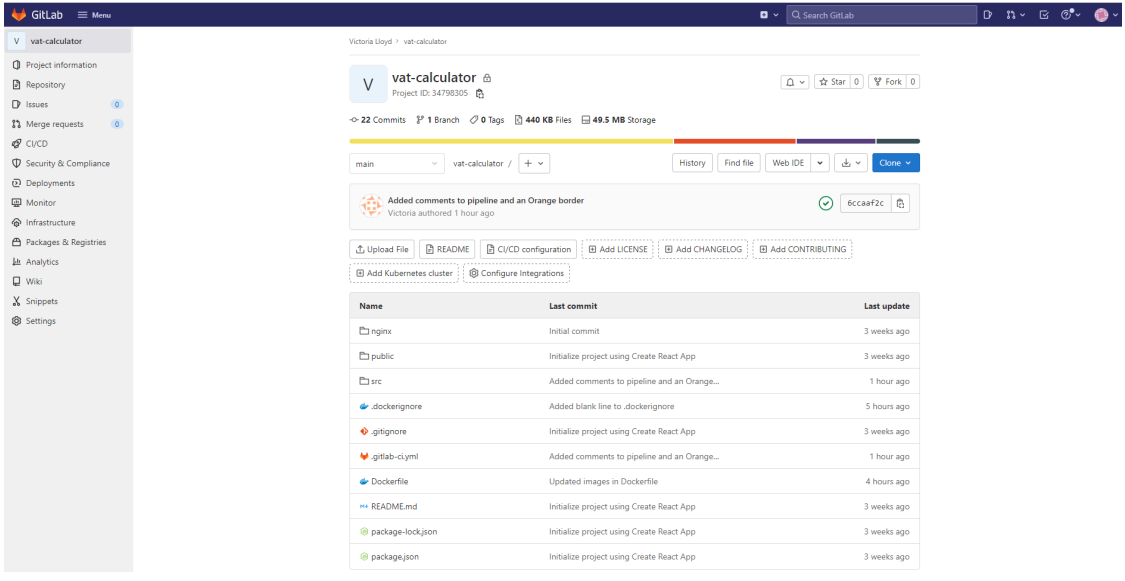





Not secure
3.250.223.42:3001
VAT CALCULATOR
VAT Rate:
20%
Price excl VAT:
VAT to pay: 0
Price incl VAT:

Create a GitLab project and push your React App code to its repository.

Add a GitLab pipeline to the project by adding a special file called: **.gitlab-ci.yml**



User Stories - Sprint Backlog

0 As a developer… I want to be able to get my computer setup so that I can start developing the Classic Cinema Company app.

1 As a user…
I want to be presented with a home page, so that I can see some general information and images of the Classic Cinema Company.

2 As a user… I want to efficiently navigate a well designed website, so that I can find what I need to access quickly.

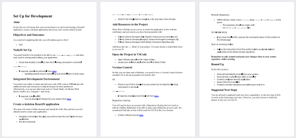
3 As a user… I want to be able to see the movies currently showing, so that I know what is on and at what time.

4 As a user…
I want to be able to click on a film in the schedule list, so that I can view more information about the film.

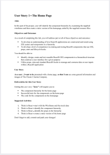
5 As a user… I want to be able to see the opening hours of the cinema, so that I know when the cinema is open.

User Story 0

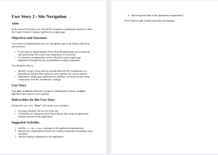
Repository for assets:
https://github.com/QA-Instructor/classic-cinema-company-assets.git



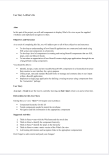
User Story 1



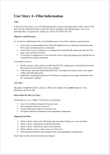
User Story 2



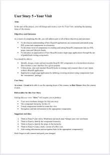
User Story 3

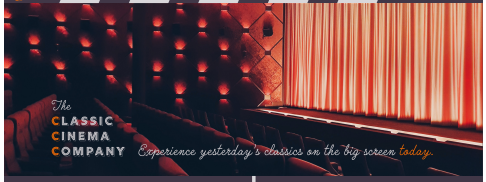


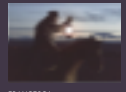
User Story 4

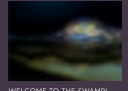


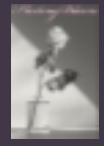
User Story 5

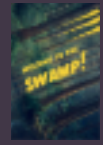


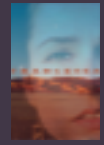


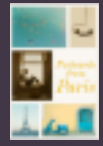












What's On
Coming Soon
Sign Up
Your Visit
Book Tickets

The
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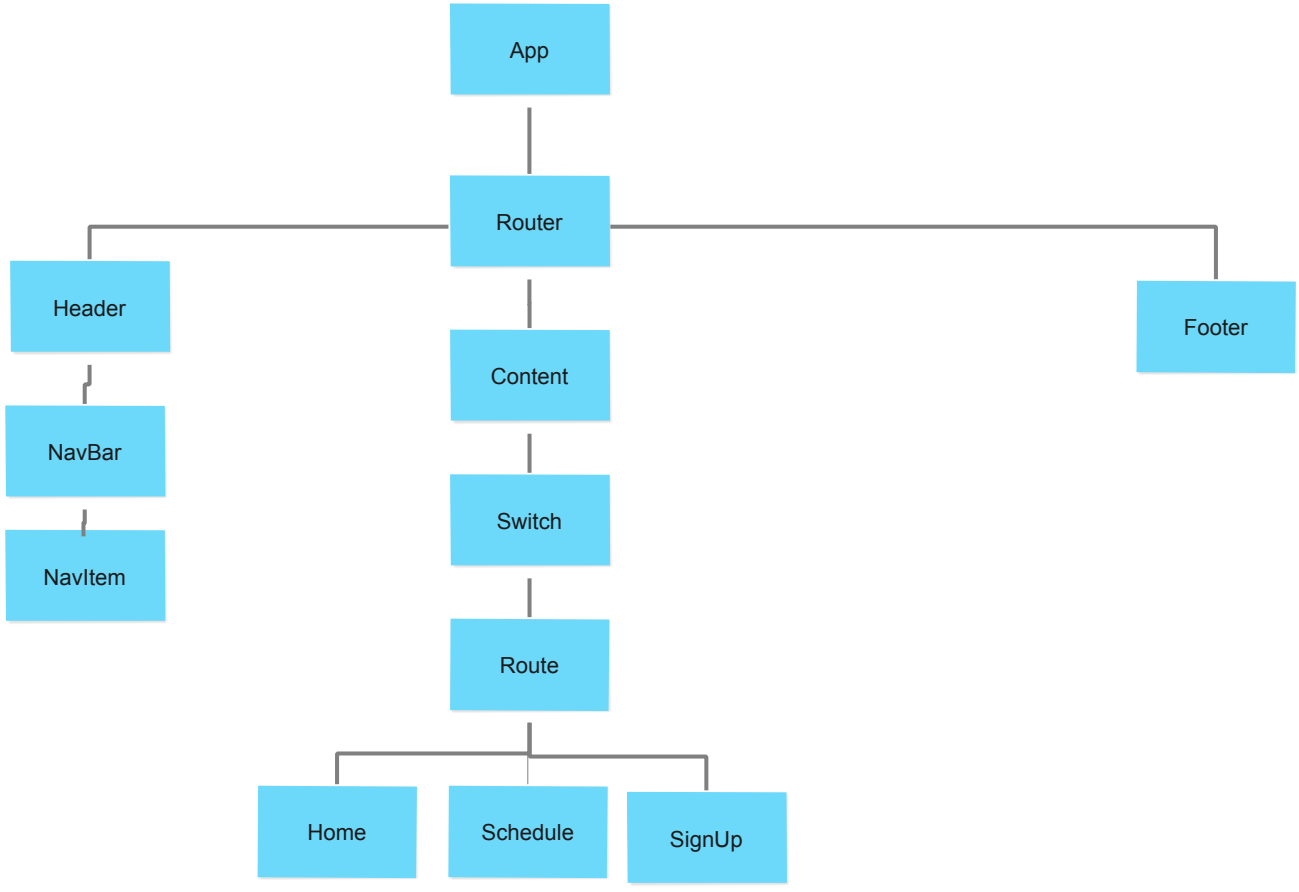
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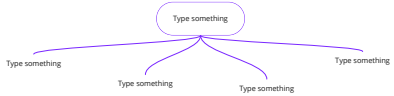
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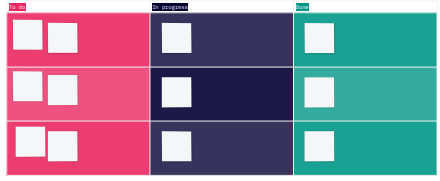
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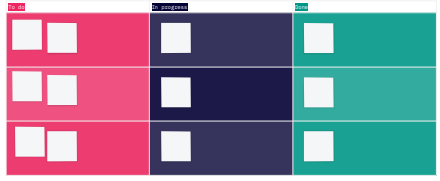
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What was good?
What was bad?
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What was good?
What was bad?
Ideas
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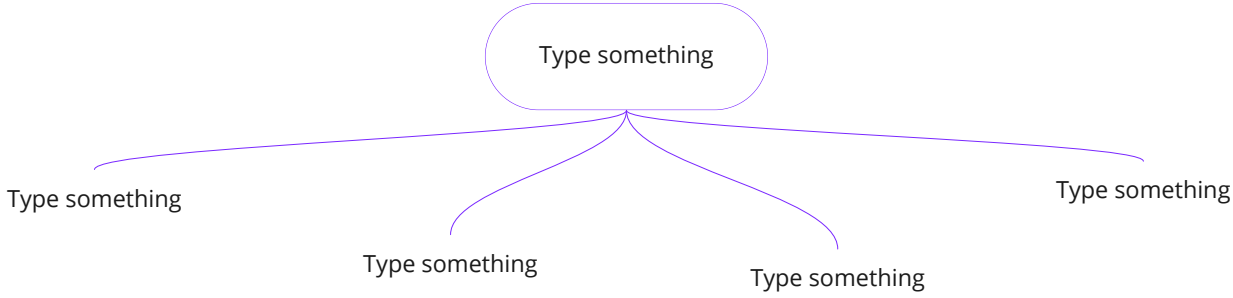
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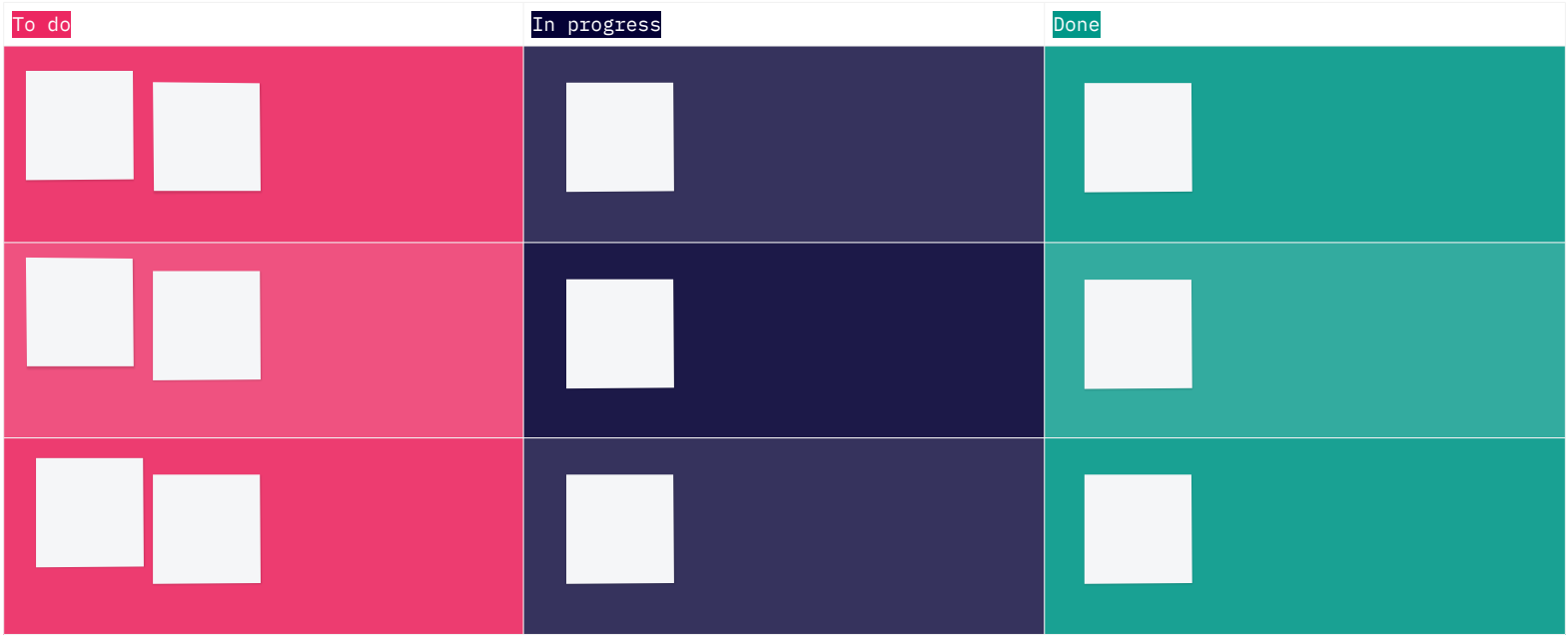
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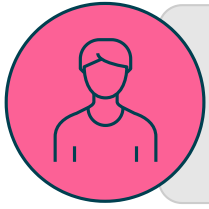

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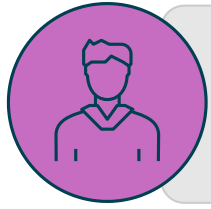

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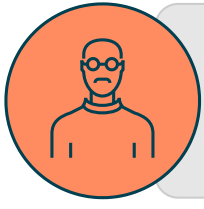

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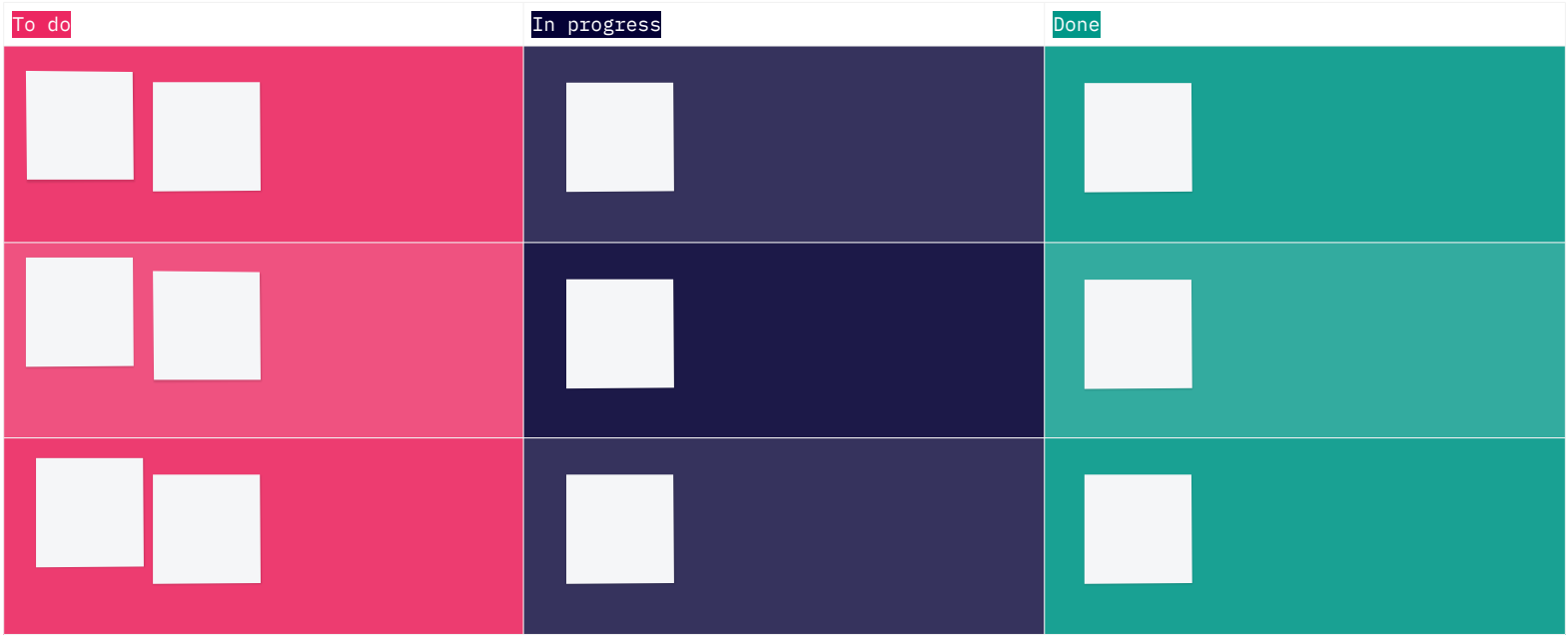
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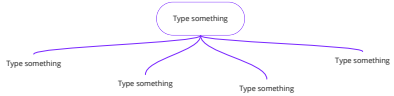
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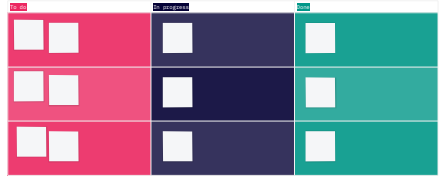
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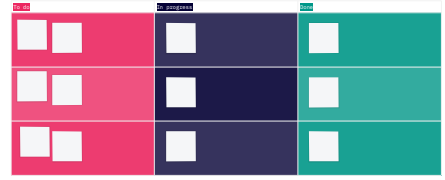
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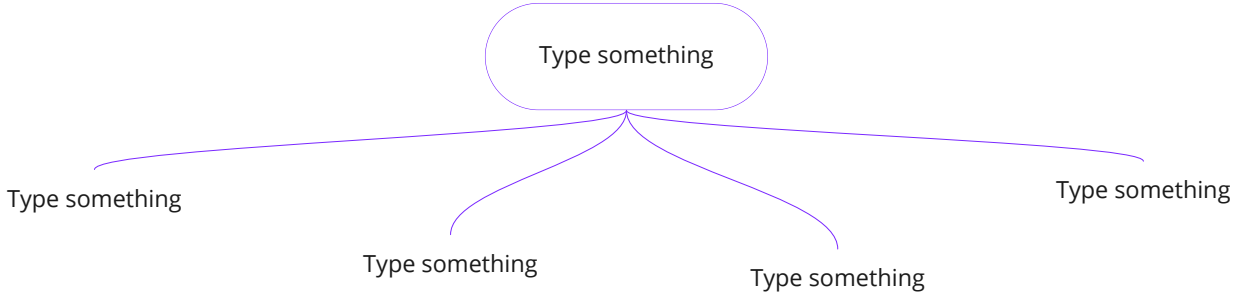
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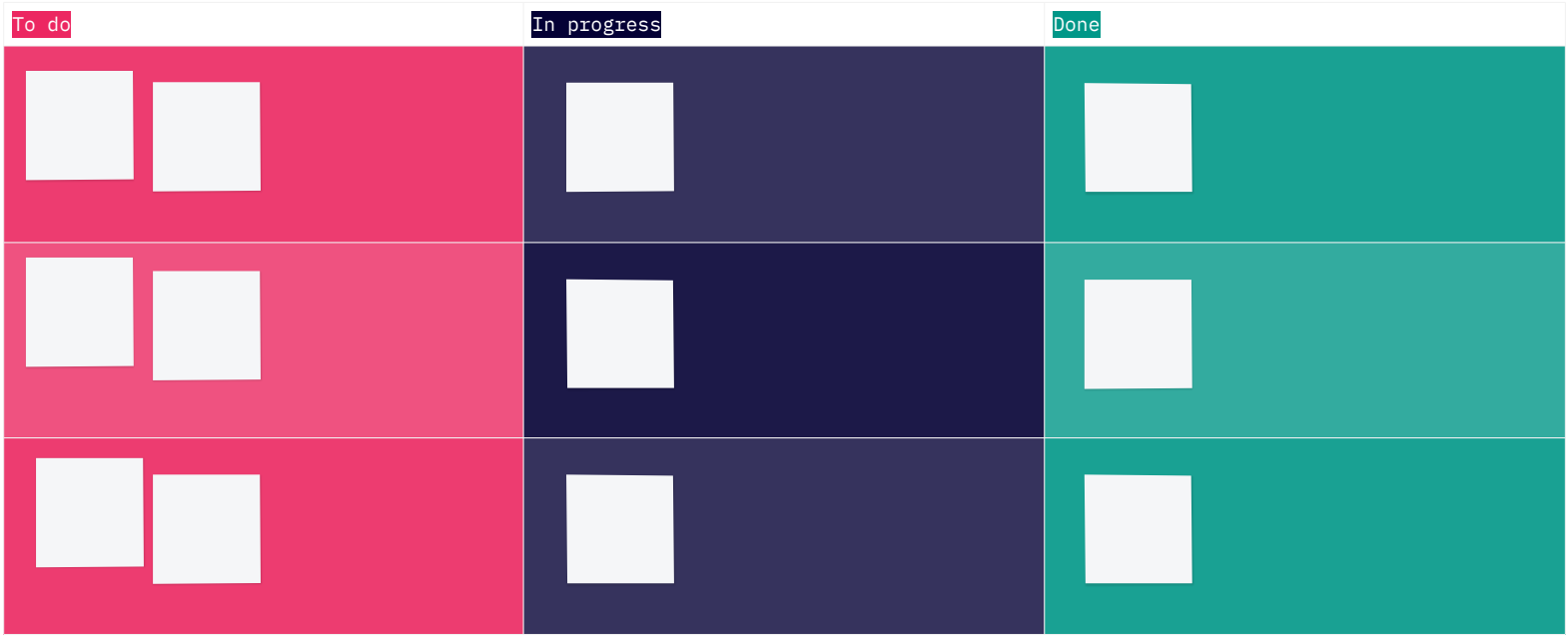
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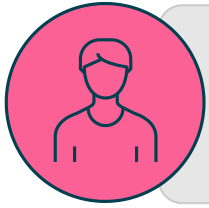

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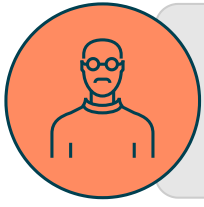

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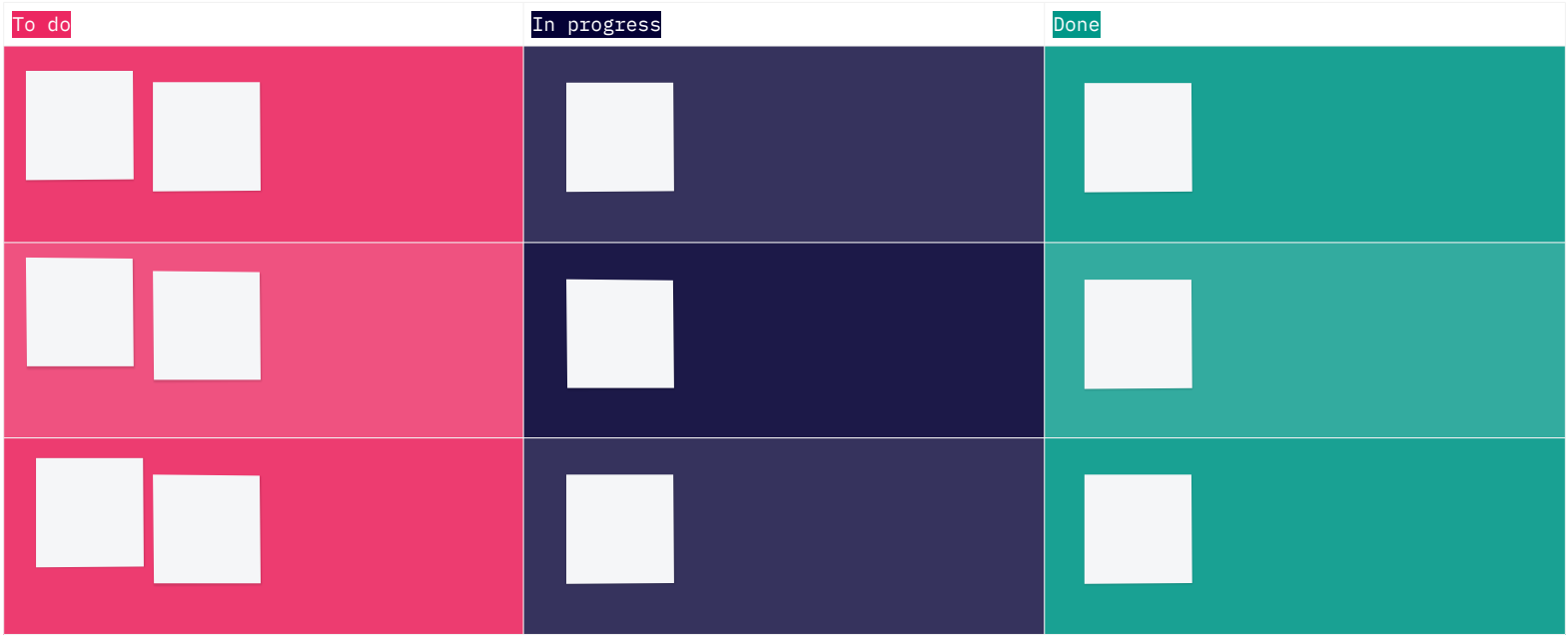
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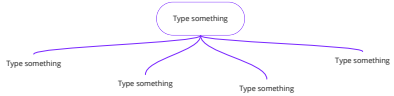
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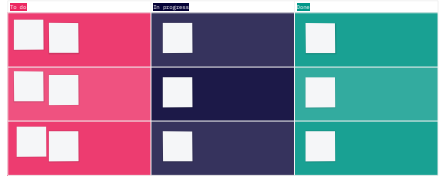
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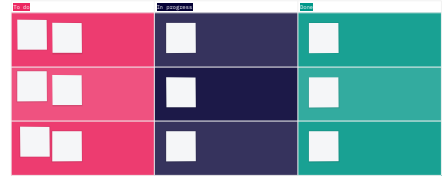
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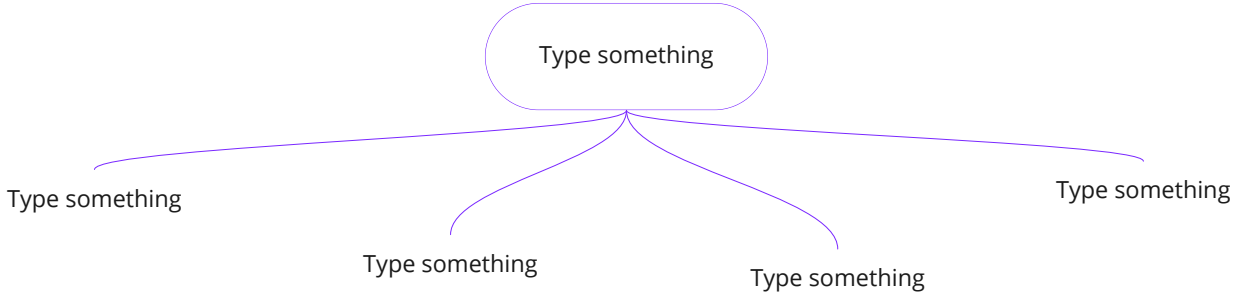
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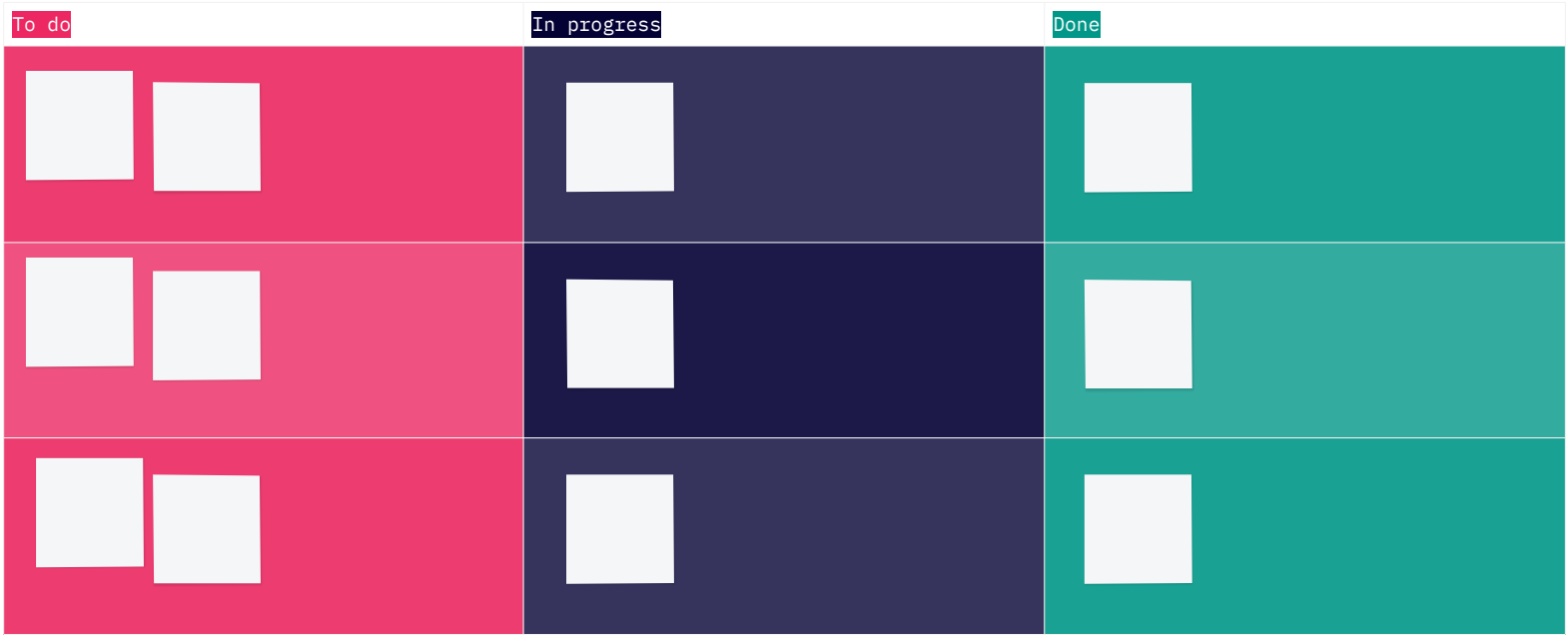
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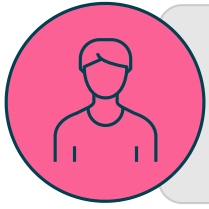

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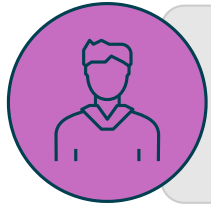

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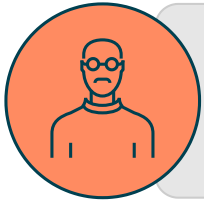

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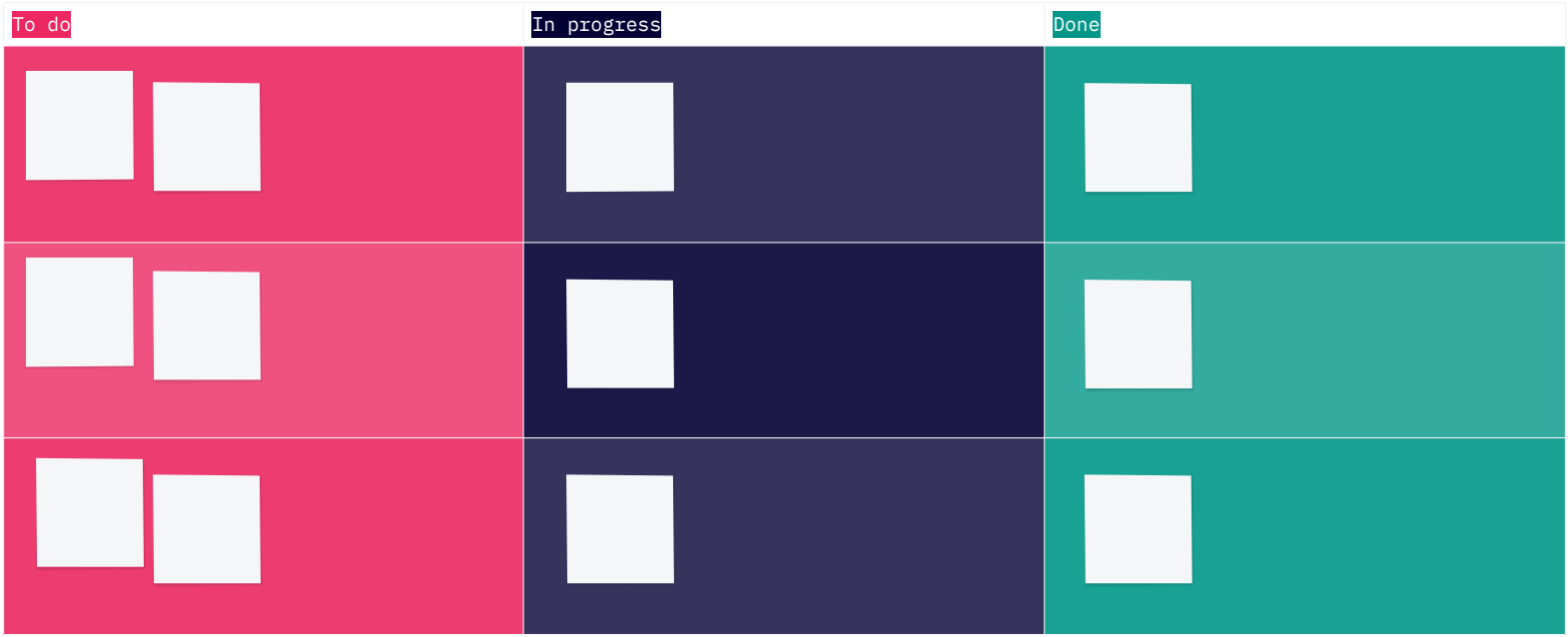
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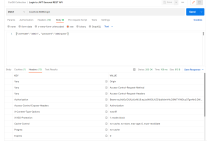
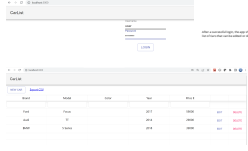
Securing a React Application with JWT





```
const Login = () => {
  const [user, setUser] = useState({username: '', password: ''})
  const [isAuthenticated, setAuth] = useState(false);

  const handleChange = (event) => {
    setUser({...user, [event.target.name] : event.target.value})
  }
```

```
const login = () => {
  fetch(SERVER_URL + 'login', {
    method: 'POST',
    body: JSON.stringify(user)
  })
  .then(res => {
    const jwtToken = res.headers.get('Authorization');
    if (jwtToken !== null) {
      sessionStorage.setItem("jwt", jwtToken);
      setAuth(true);
    }
    else {
      toast.warn("Check your username and password", {
        position: toast.POSITION.BOTTOM_LEFT
      })
    }
  })
  .catch(err => console.error(err))
}
```

The React Login component submits (POSTs) the user state object to the REST API's login endpoint and then checks for an **Authorization** Header in the returned Response object

It stores the value of the Authorization Header (the sent JSON Web Token (**JWT**)) in Session storage

It then sets the isAuthenticated state variable to *true*

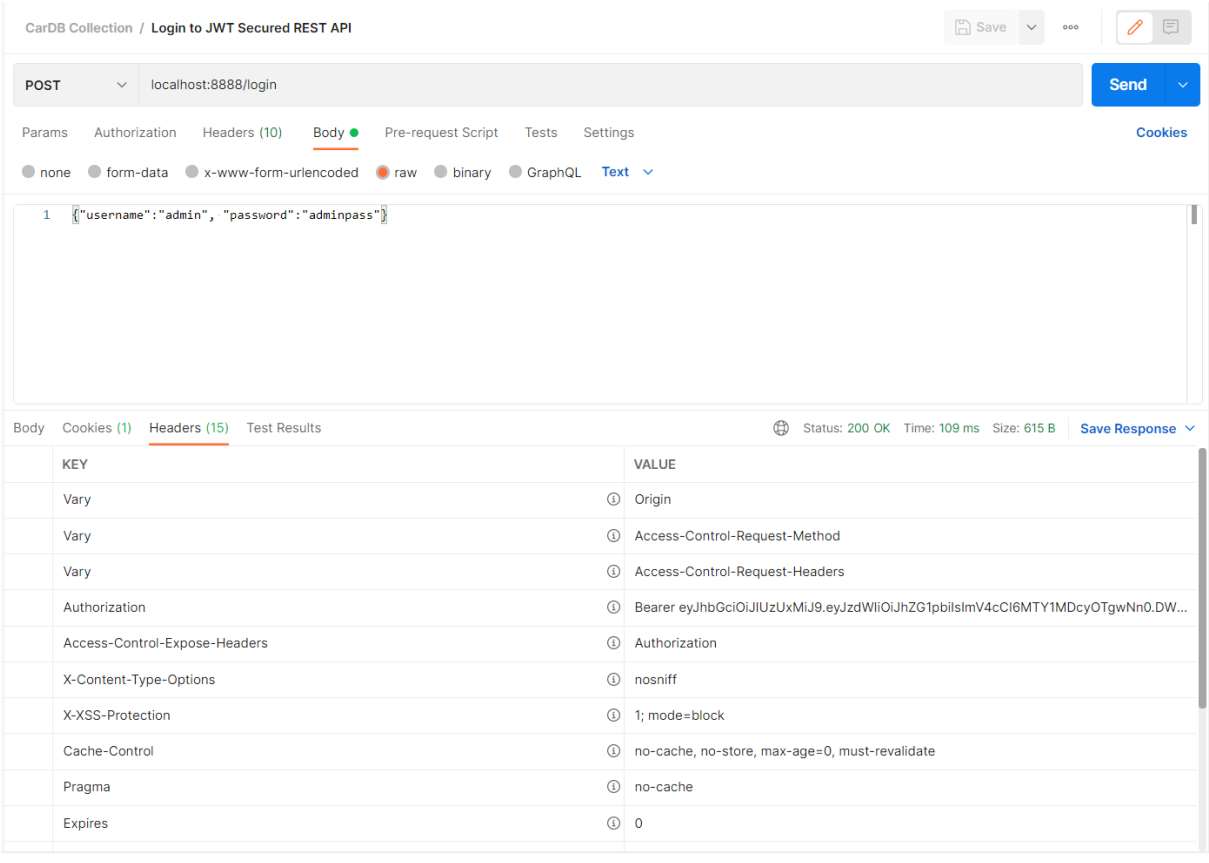
```
  if (isAuthenticated === true) {
    return (<Carlist />)
  }
  else {
    return (
      <div>
        <TextField name="username"
          label="Username" onChange={handleChange} /><br/>
        <TextField type="password" name="password"
          label="Password" onChange={handleChange} /><br/><br/>
        <Button variant="outlined" color="primary"
          onClick={login}>
          Login
        </Button>
        <ToastContainer autoClose={1500} />
      </div>
    );
  }
}

export default Login;
```

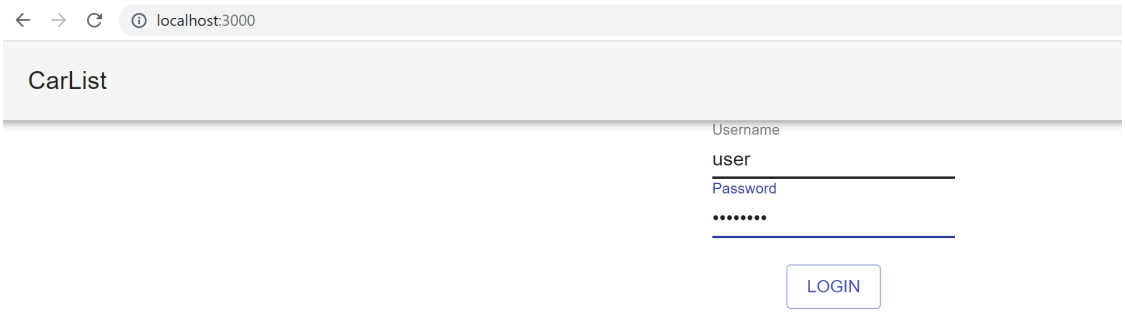
```
fetchCars = () => {
  // Read the token from the session storage
  // and include it in the Authorization header
  const token = sessionStorage.getItem("jwt");
  fetch(SERVER_URL + 'api/cars',
    {
      headers: { 'Authorization': token }
    })
    .then((response) => response.json())
    .then((responseData) => {
      this.setState({
        cars: responseData._embedded.cars,
      });
    })
    .catch(err => console.error(err));
}
```

All other component functions attach the JWT to the Request header from Session storage.

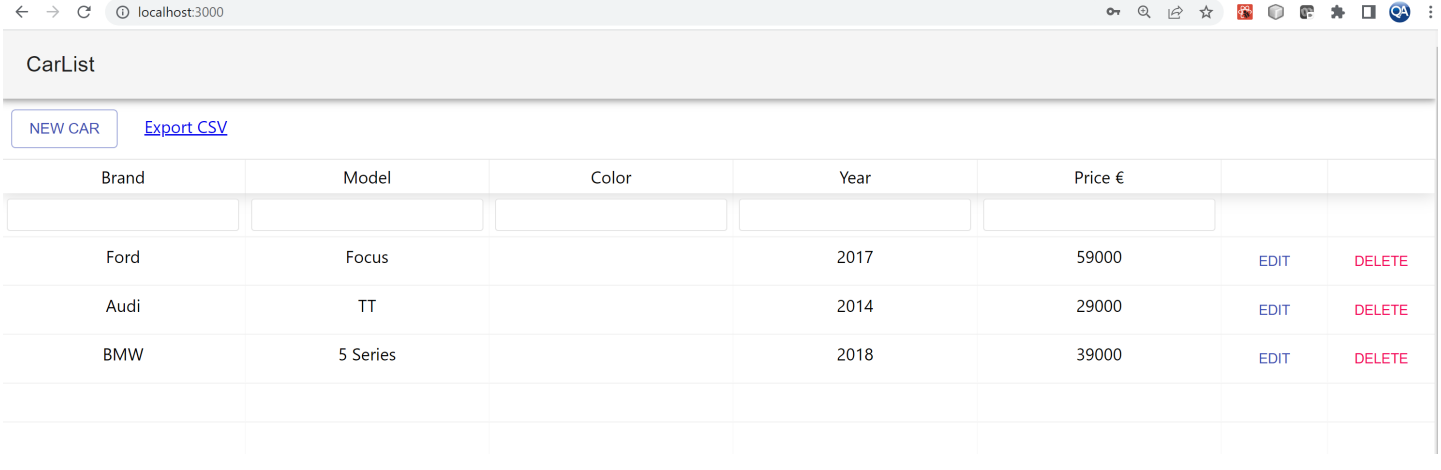
```
// Add new car
addCar(car) {
  const token = sessionStorage.getItem("jwt");
  fetch(SERVER_URL + 'api/cars',
    {
      method: 'POST',
      headers: {
        'Content-Type': 'application/json',
        'Authorization': token
      },
      body: JSON.stringify(car)
    })
    .then(res => this.fetchCars())
    .catch(err => console.error(err))
}
```



Postman shows the Authorization header that is returned from the REST API



After a successful login, the app shows a list of Cars that can be edited or deleted



Repository for Security Frontend

https://github.com/QA-Instructor/car_react.git

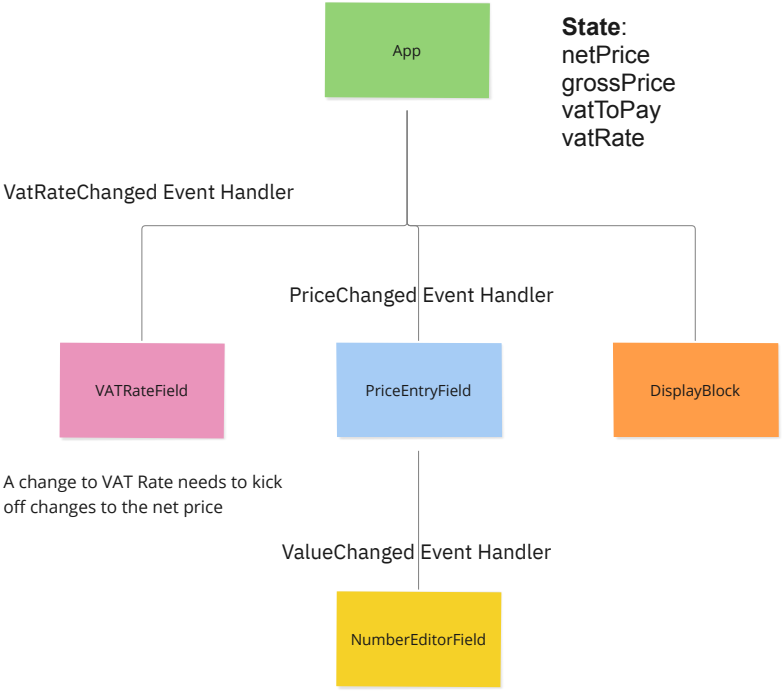
Repository for Security Backend

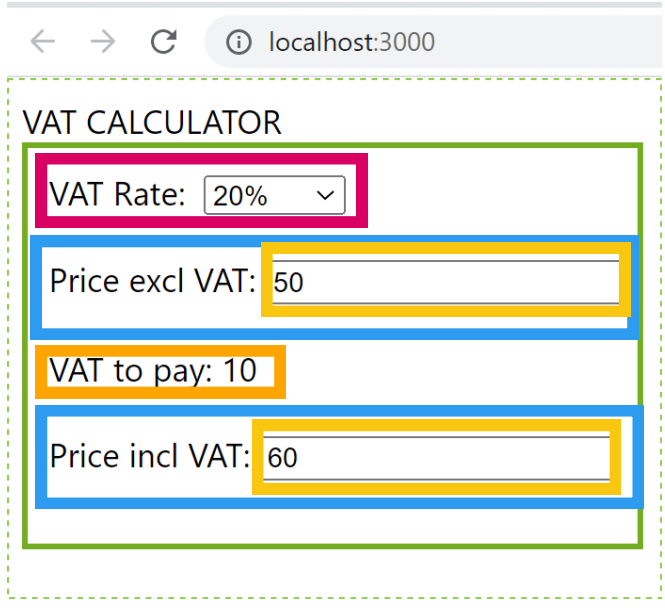
https://github.com/QA-Instructor/car_database_jwt.git

Note: The demo uses OIDC/OAuth2 which is no longer a recommended approach to protect public applications. The new recommended approach is to use QAuth2 authorisation code grant with Proof key for code exchange (PKCS). See:
https://www.taithienbo.com/why-the-implicit-flow-is-no-longer-recommended-for-protecting-a-public-client
OAuth 2.0 — OAuth
Microsoft are removing this the old flow in Azure and assume the other big players will follow:
OAuth 2.0 implicit grant flow - The Microsoft identity platform - Microsoft Entra | Microsoft Learn
Possible framework to help out?
react-oauth2-code-pkce - npm (npmjs.com)

One solution to the VAT calculator :

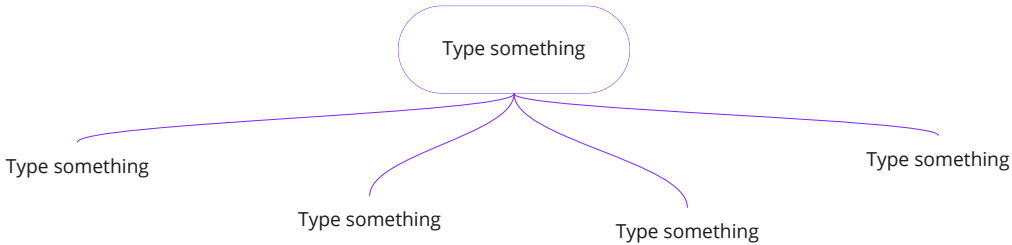
https://github.com/QA-Instructor/vat-calculator

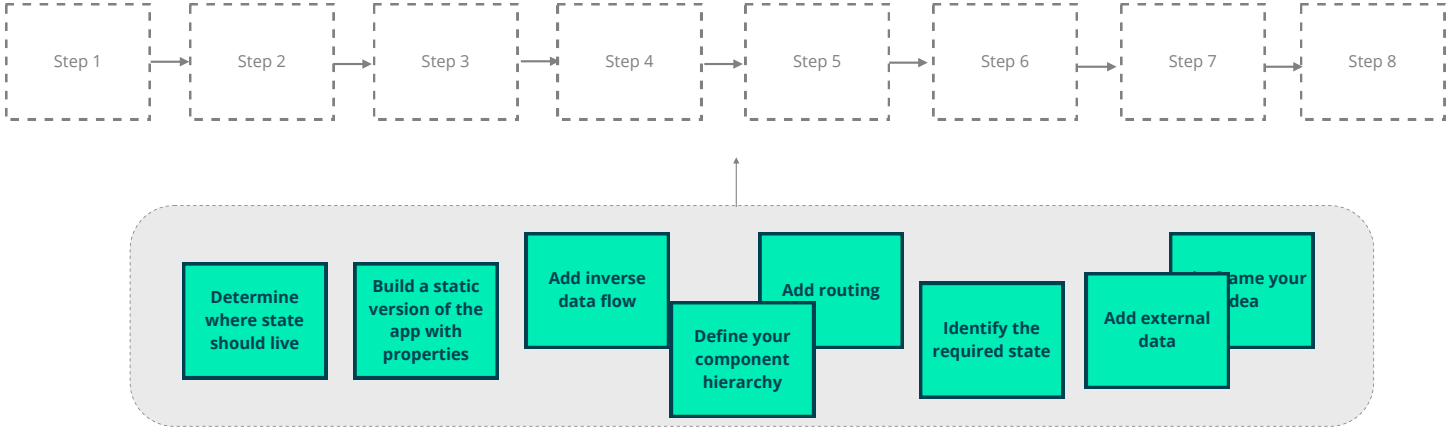

App
State:
netPrice
grossPrice
vatToPay
vatRate
VatRateChanged Event Handler
PriceChanged Event Handler
VATRateField
PriceEntryField
DisplayBlock
A change to VAT Rate needs to kick off changes to the net price
ValueChanged Event Handler
NumberEditorField


localhost:3000
VAT CALCULATOR
VAT Rate: 20%
Price excl VAT: 50
VAT to pay: 10
Price incl VAT: 60

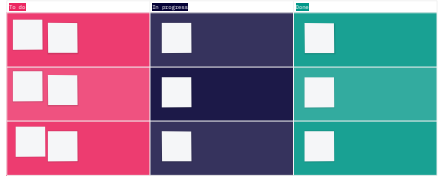
G3 - Mini Lab - Component Hierarchy

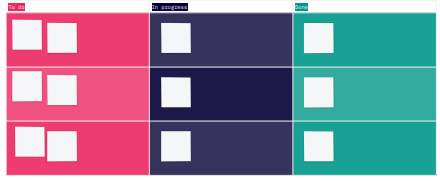
Based on the user stories, design a component hierarchy for the VAT calculator.
Consider how you might re-use components.




Step 1
Step 2
Step 3
Step 4
Step 5
Step 6
Step 7
Step 8
Determine where state should live
Build a static version of the app with properties
Add inverse data flow
Define your component hierarchy
Add routing
Identify the required state
Add external data
ame your dea


Home
Type something
Type something
Type something
Type something

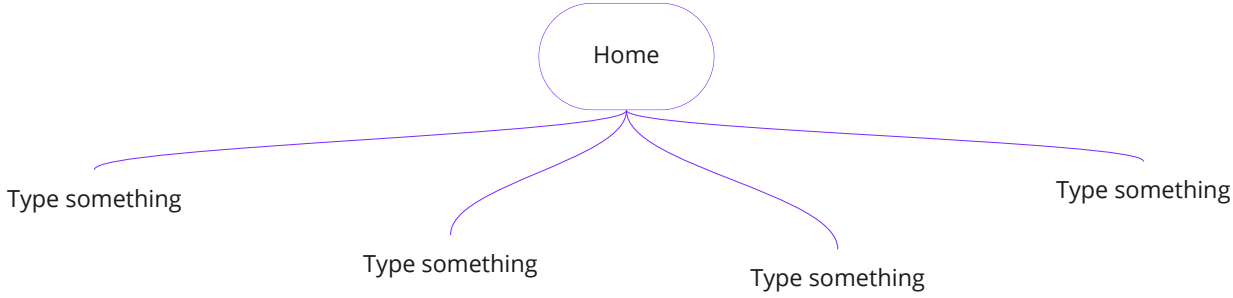

To do
In progress
Done

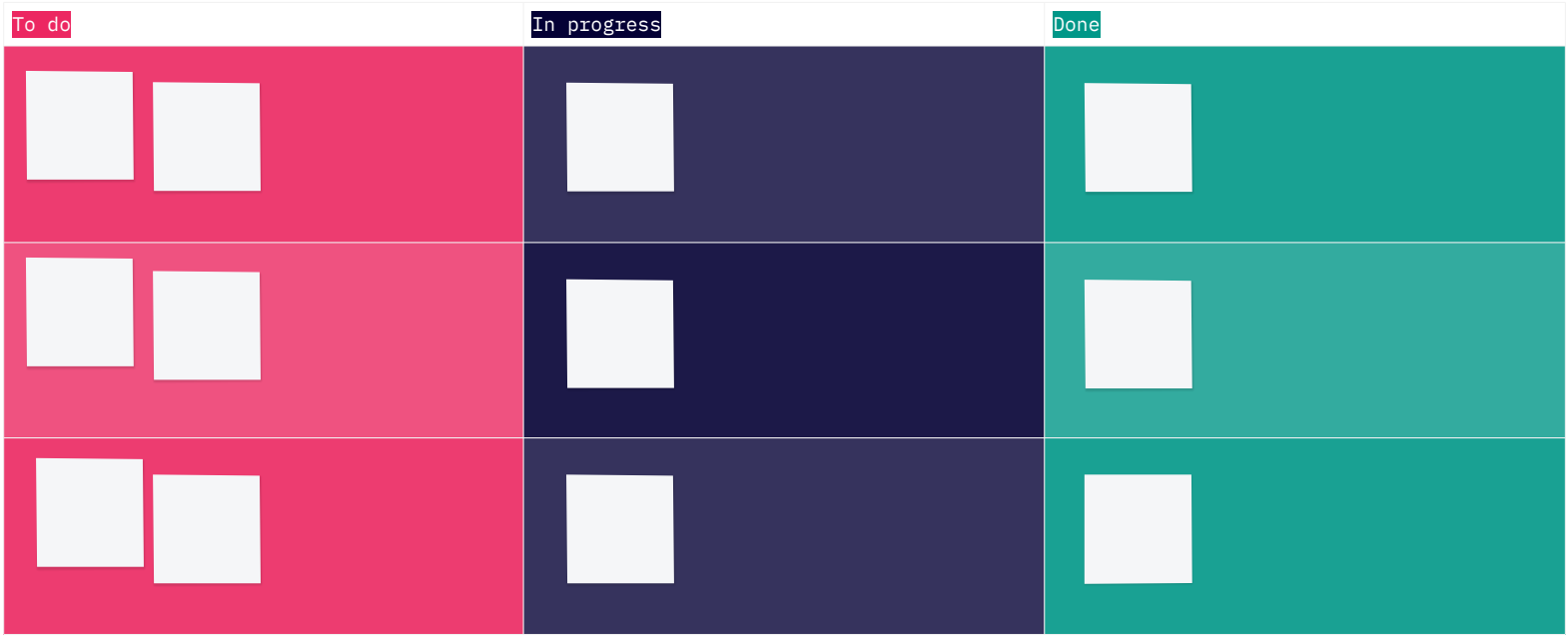

To do
In progress
Done

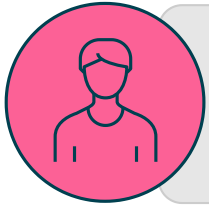

What was good?
What was bad?
Ideas
Actions


What was good?
What was bad?
Ideas
Actions


As a User, I want to be able to leave a review for a movie, so that other Users can decide whether the Movie is worth going to see.
As a User, I want to be able to access the website on any device, so that I can access the information I need on the device of my choice.
As a User, I want to be able to subscribe to the website using a form, so that I can receive the latest promotions and information.
As a User, I want to be able to login to the service, so that I have access to user specific features like reviews.
As a User, I want to be able to register to the site, so that I can login to the site and use special features.


Home
Type something
Type something
Type something
Type something


To do
In progress
Done



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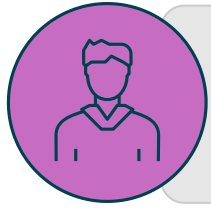

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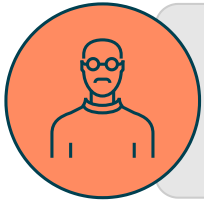

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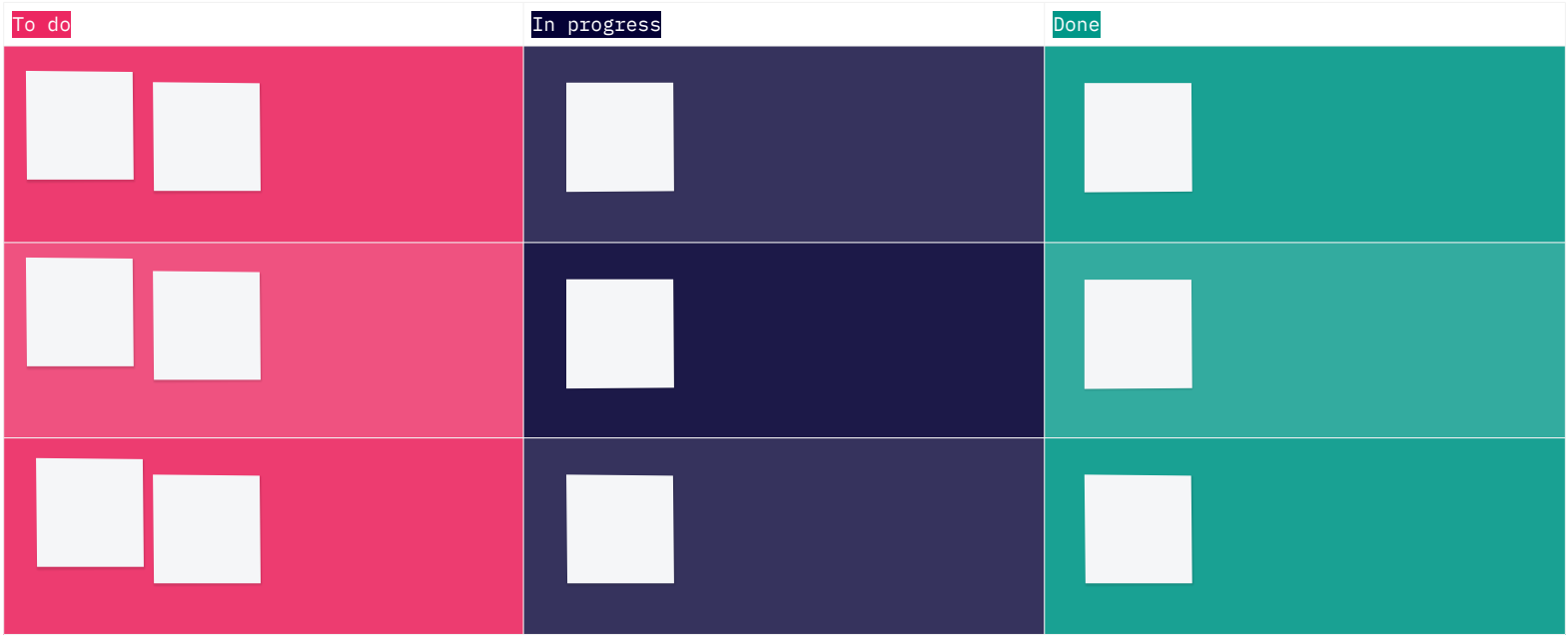

To do
In progress
Done

What was good?

What was bad?

Ideas

Actions

What was good?

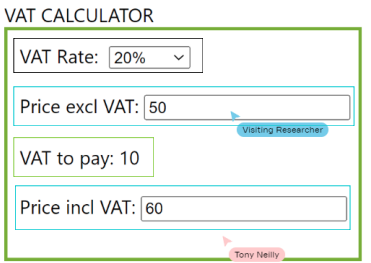
What was bad?

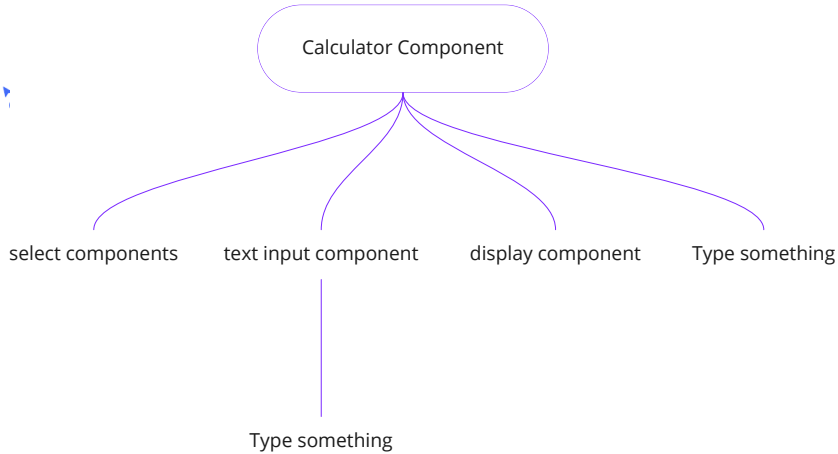
Ideas

Actions

G3 - Mini Lab - Component Hierarchy

Based on the user stories, design a component hierarchy for the VAT calculator.
Consider how you might re-use components.





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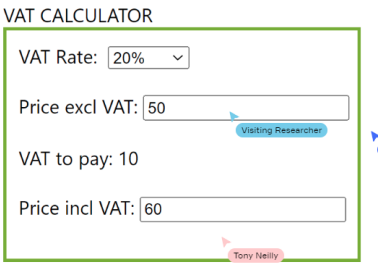

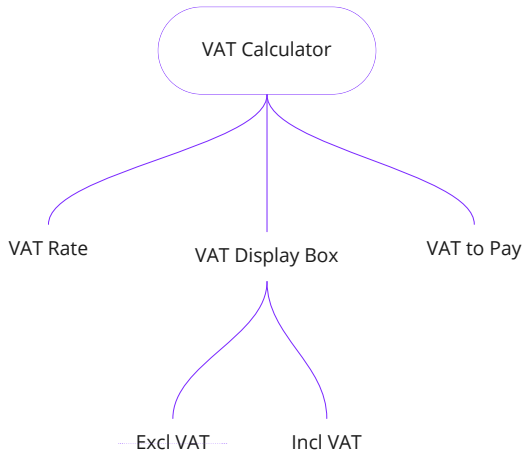

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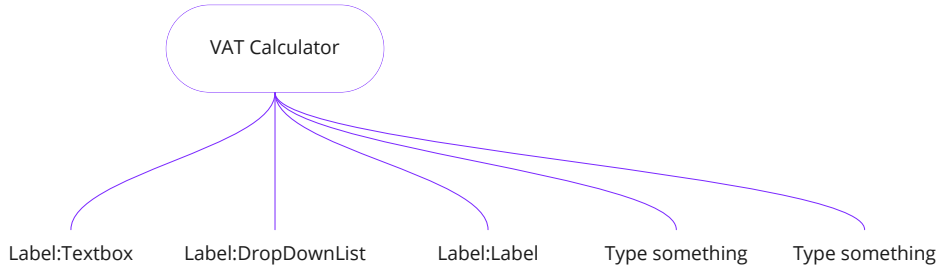

Routing V6.0 app:

QACS-TL/ReactTL-RouterV6Films (github.com)

Routing V5.0 app:

QACS-TL/ReactTL-RouterV5Films (github.com)

A possible solution to the Cinema Lab uses a C# .NET app as server:
QACS-TL/QACinemaProjectSolution (github.com)

Images, CSS and DATA

QACS-TL/QACinemaResources (github.com)

URL: https://evaluation.qa.com/

Course Code: QAREACJS-TL

PIN: 4794566-25