

Getting started with the GOV.UK Prototype Kit

Course materials online

[https://prototype-kit-training.
cloudapps.digital/](https://prototype-kit-training.cloudapps.digital/)

What we'll cover today

- Basics of HTML and CSS
- Prototyping in the browser
- Making pages in the Prototype Kit
- Working with user data
- Uploading and publishing your prototype to the web

Housekeeping

Ground rules

Quiet while the presenter is talking

Do the lessons before doing other things

Use the exact names & text in the lessons

**It's ok to ask for
help**

Things will go
wrong today

Prototyping

Collaboration

Paper prototypes
Sketch
Axure
Prototyping in browser
HTML prototypes

Paper prototypes

Sketch

Axure

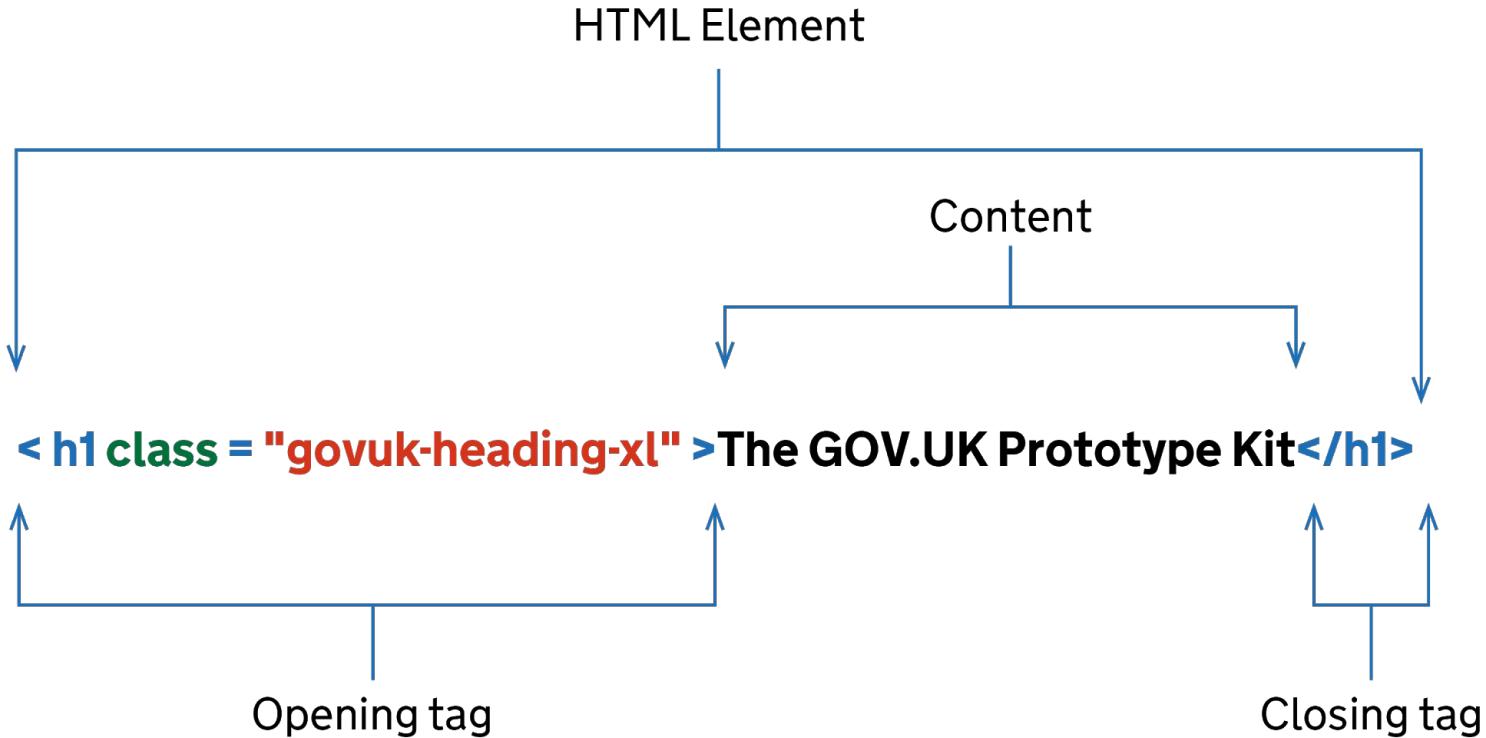
HTML prototypes

Prototyping in browser

HTML prototypes

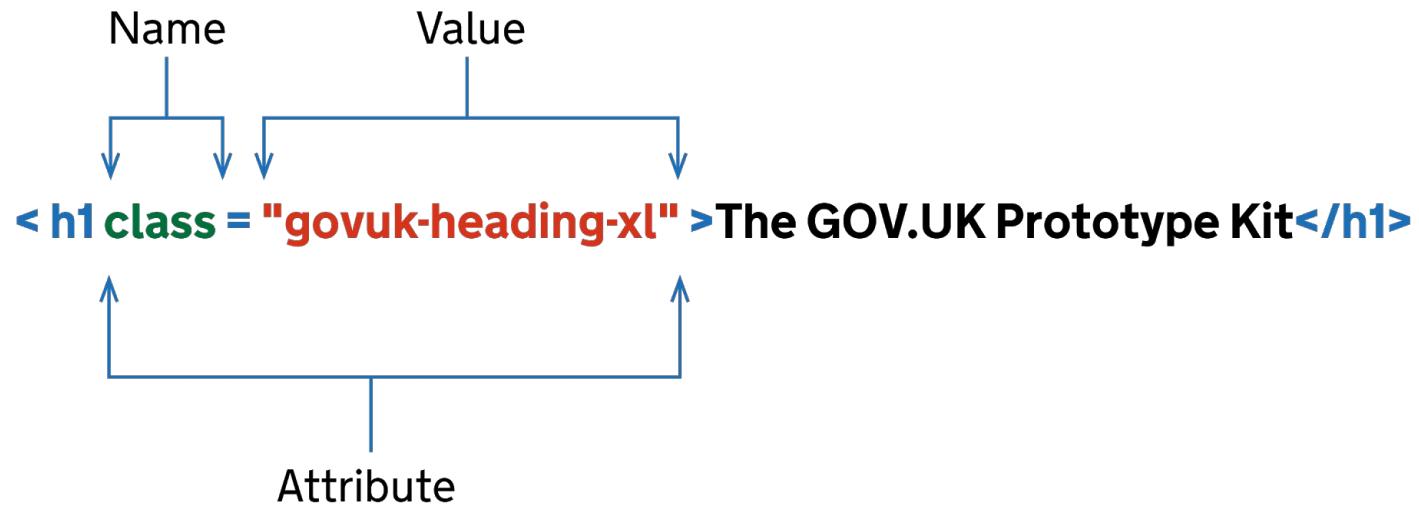
HTML stands for **Hypertext Markup Language**, we use it to add semantics (meaning) to our web content.

- It describes our content in a way the web browser can understand.
- It's made up of “**tags**” that surround pieces of our content to describe their context.
- It's hierarchical – tags can contain other tags (nesting).
- Part of mastering HTML is understanding what tags to use for which types of content.



```
1
2 <div class="govuk-grid-row">
3
4   <div class="govuk-grid-column-two-thirds">
5
6     <h1 class="govuk-heading-xl">
7       The GOV.UK Prototype Kit
8     </h1>
9
10    <p>
11      This kit lets you rapidly create HTML
12      prototypes of GOV.UK services.
13    </p>
14
15    <p>
16      Learn more:
17      <a href="/docs">Documentation</a>
18    </p>
19
20  </div>
21
22</div>
23
24
```

HTML attributes



<p>Use this service to:</p>

Related link

<button class= "govuk-button">Continue</button>

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Nesting

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Indentation

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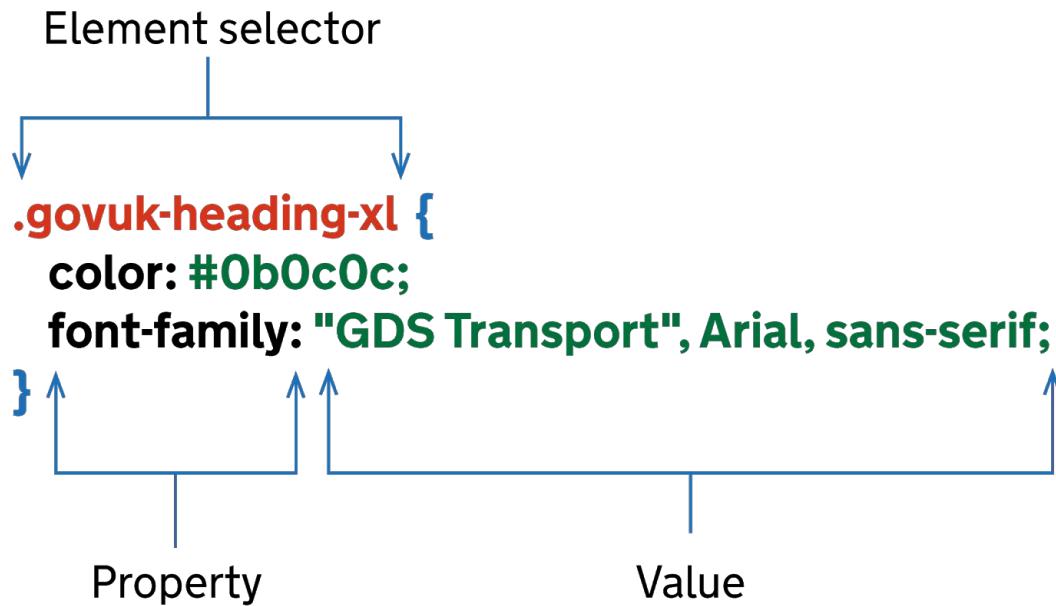
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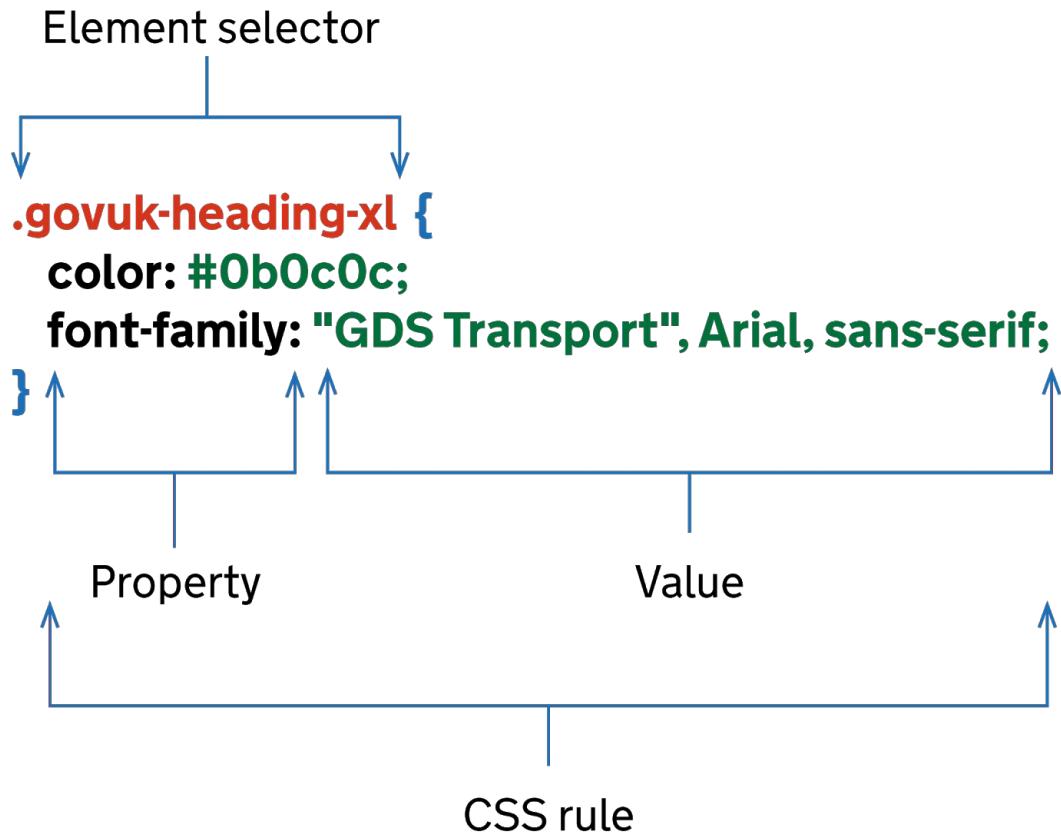
Intro to CSS

CSS stands for **Cascading Style Sheets**. It defines the visual representation of the content. For example colour, margins, borders, backgrounds, position in the page.

This is done by attaching styles to the HTML we write.

CSS Syntax





```
< h1 class = "govuk-heading-xl" >  
  The GOV.UK Prototype Kit  
</h1>
```

```
.govuk-heading-xl {  
  color: #0b0c0c;  
  font-family: "GDS Transport",  
              Arial, sans-serif;  
  margin-bottom: 50px;  
}
```

<https://design-system.service.gov.uk/styles/typography/captions/index.html>

Live demo

codepen.io/pen

Prototyping in the browser

Find your favourite GOV.UK page

www.gov.uk/report-smoky-vehicle



[Home](#) > [Driving and transport](#) > [Driving and enforcing the law](#)

Report a smoky lorry or bus



Report an excessively smoky lorry or bus exhaust to the Driver and Vehicle Standards Agency (DVSA).

You can't report other types of smoky vehicles to DVSA.

Start now >

on the report a smoky vehicle service

Related content

[Emissions testing](#)

Explore the topic

[Driving and transport](#)

Report a smoky lorry or bus -

User

Secure | https://www.gov.uk/report-smoky-vehicle

GOV.UK Search

Home > Driving and transport > Driving and enforcing the law

h1.pub-c-title_text | 373.64 x 89.09

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You can't report other types of smoky vehicles to DVSA.

Start now >

on the report a smoky vehicle

Elements Console Sources > :: X

<header class="page-header">
 <div class="pub-c-title"
 pub-c-title--bottom-margin">
 <h1 class="pub-c-title__text">
 Report a smoky lorry or bus
 </h1> = \$0
 </div>
 </header>
 <div class="article-container group">...</div>

... div #content header div h1.pub-c-title_text

Styles Computed Event Listeners DOM Breakpoints >

Filter :hov .cls +

element.style {
}

header.page-header div static-ce0f5cc6...4cdb982c.css:1
h1 {
 font-family: "nta", Arial, sans-serif;
 font-weight: 400;



Search

[Home](#) > [Driving and transport](#)

Report a smoky lorry or bus

div.pub-c-title.pub-c-title--bottom-margin | 373.64 x 89.09

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[Start now](#)

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Styles Computed Event Listeners DOM Breakpoints »

Filter

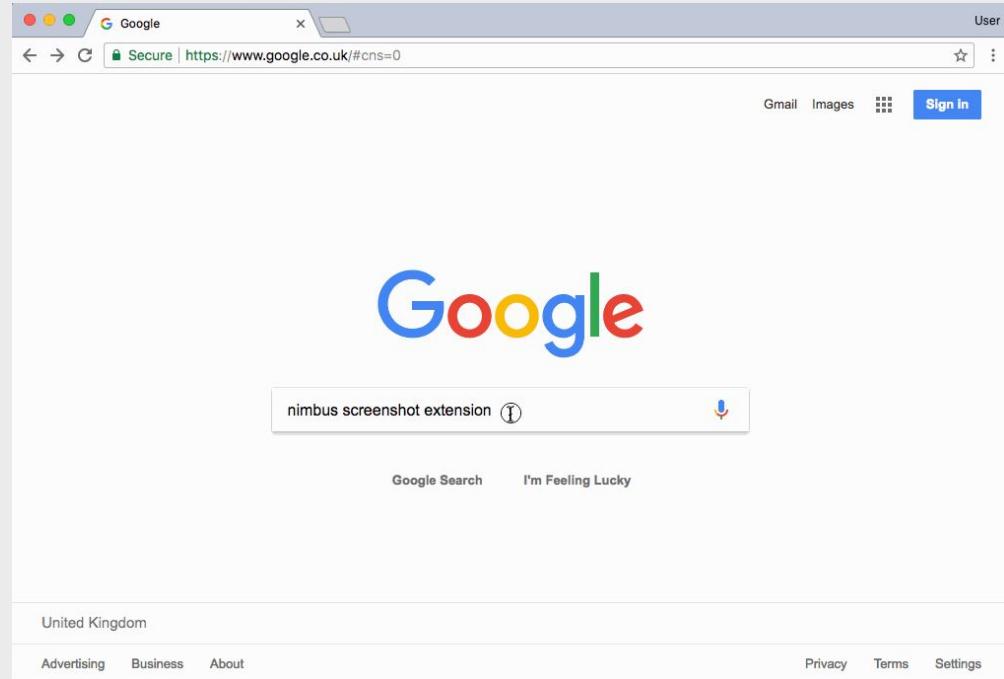
:hov .cls +

```
element.style {  
}
```

```
header.page-header div static-ce0f5cc6...4cdb982c.css:1  
h1 {  
  font-family: "nta", Arial, sans-serif;  
  font-size: 1em;
```

```
document.designMode = "on"
```

Nimbus screenshot extension



GDS

Screenshots entire pages

Welcome to GOV.UK
The best place to find government services and information
Simpler, clearer, faster

Search GOV.UK

Popular on GOV.UK
Universal Jobseeker job search
Universal credit finance
Log in to Student Finance
Book your theory test
Personalise account

Benefits
Includes eligibility, appeals, tax credits and universal credit

Births, deaths, marriages and care
Planning, civil partnerships, divorce and last wills and probate

Business and self-employed
Tools and guidance for businesses

Childcare and parenting
Includes giving birth, fostering, adopting, becoming a parent, pre-school and schools

Citizenship and living in the UK
Visas, permanent residence, rights in the UK, international projects

Crime, justice and law
Legal processes, courts and the police

Disability
Includes carers, veterans, benefits and the disabled

Driving and transport
Includes vehicle tax, MOT and driving licences, parking and road safety

Education and learning
Includes student loans, admissions and courses

Employing people
Includes pay, contracts and hiring

Environment and countryside
Includes recycling, re-cycling and wildlife

Housing and local services
Owning or renting and council services

Money and tax
Includes debt and Self Assessment

Passports, travel and living abroad
Includes renewing passports and travel documents, visas and immigration

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Includes holidays and finding a job

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Includes debt and Self Assessment

Passports, travel and living abroad
Includes renewing passports and travel documents, visas and immigration

Working, jobs and pensions
Includes holidays and finding a job

25
Ministerial departments

385
Other agencies and public bodies

The websites of all government departments and many other agencies and public bodies have been merged into GOV.UK.

Here you can see all policies, announcements, publications, statistics and consultations.

Find out how government services are performing and how satisfied users are.

Grenfell Tower support 
EU Citizens in the UK 
The UK and the EU 

More on GOV.UK
Universal Jobseeker job search
Log in to Student Finance
Passport fees
Jobseeker's Allowance
Universal credit
Running a limited company
Driving theory test
Car tax
HGV vehicle tax
VAT rates

Post office
Universal Jobseeker job search
Log in to Student Finance
Passport fees
Jobseeker's Allowance
Universal credit
Running a limited company
Driving theory test
Car tax
HGV vehicle tax
VAT rates

UK bank holidays
Check the dates for bank holidays in England, Wales, Scotland and Northern Ireland.

In this page search? In this section search?

Services and information	Departments and policy
<p>Benefits Births, deaths, marriages and care Business and self-employed Childcare and parenting Citizenship and living in the UK Crime, justice and law Disabled people Driving and transport</p>	<p>Education and training Entitlements and benefits Health and social care Housing and local services Immigration, asylum and citizenship Jobs and careers Money and tax Passports, travel and living abroad Working, jobs and pensions</p>
<p>Universal Jobseeker job search Log in to Student Finance Passport fees Jobseeker's Allowance Universal credit Running a limited company Driving theory test Car tax HGV vehicle tax VAT rates</p>	<p>Use government services Direct Debits Worries Pensions Publications Announcements</p>

Help
Cookies
Contact
Terms and conditions
Read our Privacy Notices
Built by the Government Digital Service

© Crown copyright

GDS

Screenshot your  **amazing**  pages

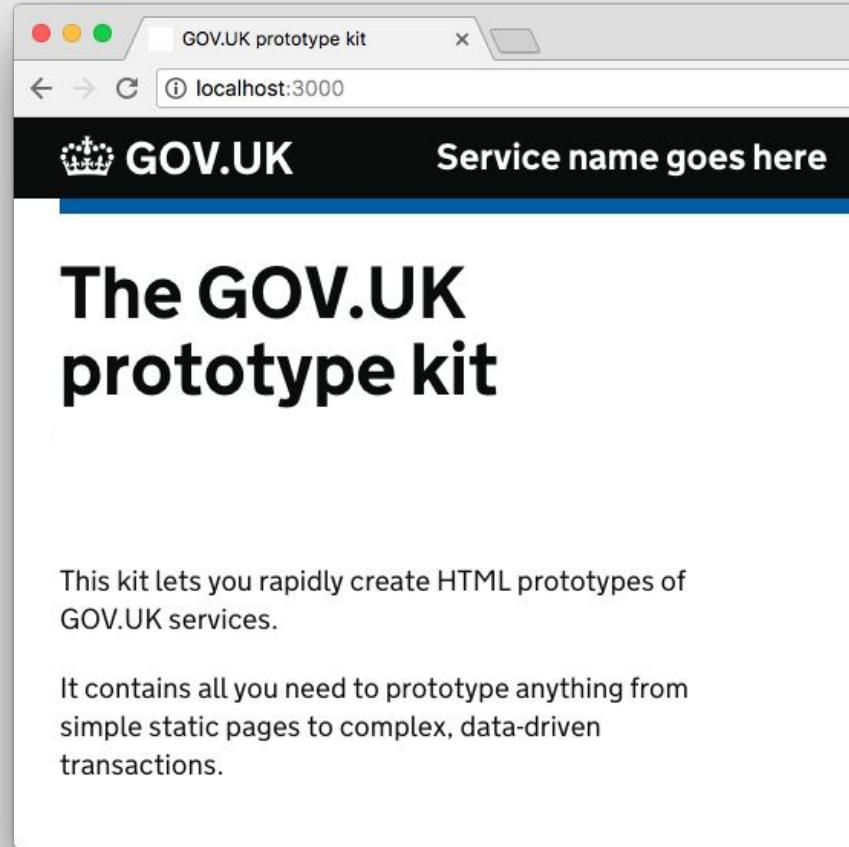
Exploring the Prototype Kit

Principles

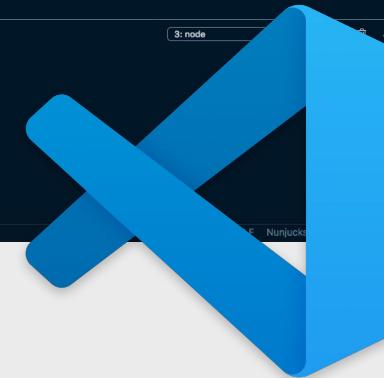
- is designed for prototyping, not for production code
- requires minimal skills to get started: HTML, CSS
- should be fully documented in a way that is accessible to the target audience
- makes use of GOV.UK Frontend
- allows for server-side code

Do you see this in your browser?

If not, Google
'GOV.UK Prototype Kit'



VS Code editor



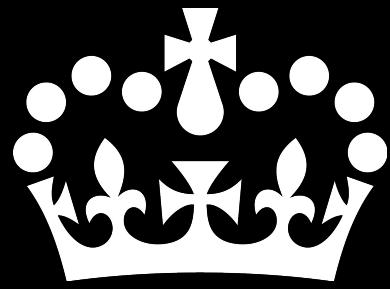
A screenshot of the Visual Studio Code (VS Code) code editor interface. The main view shows a file named `juggling-balls.html` with the following content:

```
<html>
  <head>
    <meta charset="UTF-8">
    <title>Juggling Balls</title>
  </head>
  <body>
    <div>&lt;!-- Main Content --&gt;</div>
    <div>&lt;!-- Header --&gt;</div>
    <div>&lt;!-- Sidebar --&gt;</div>
  </body>
</html>
```

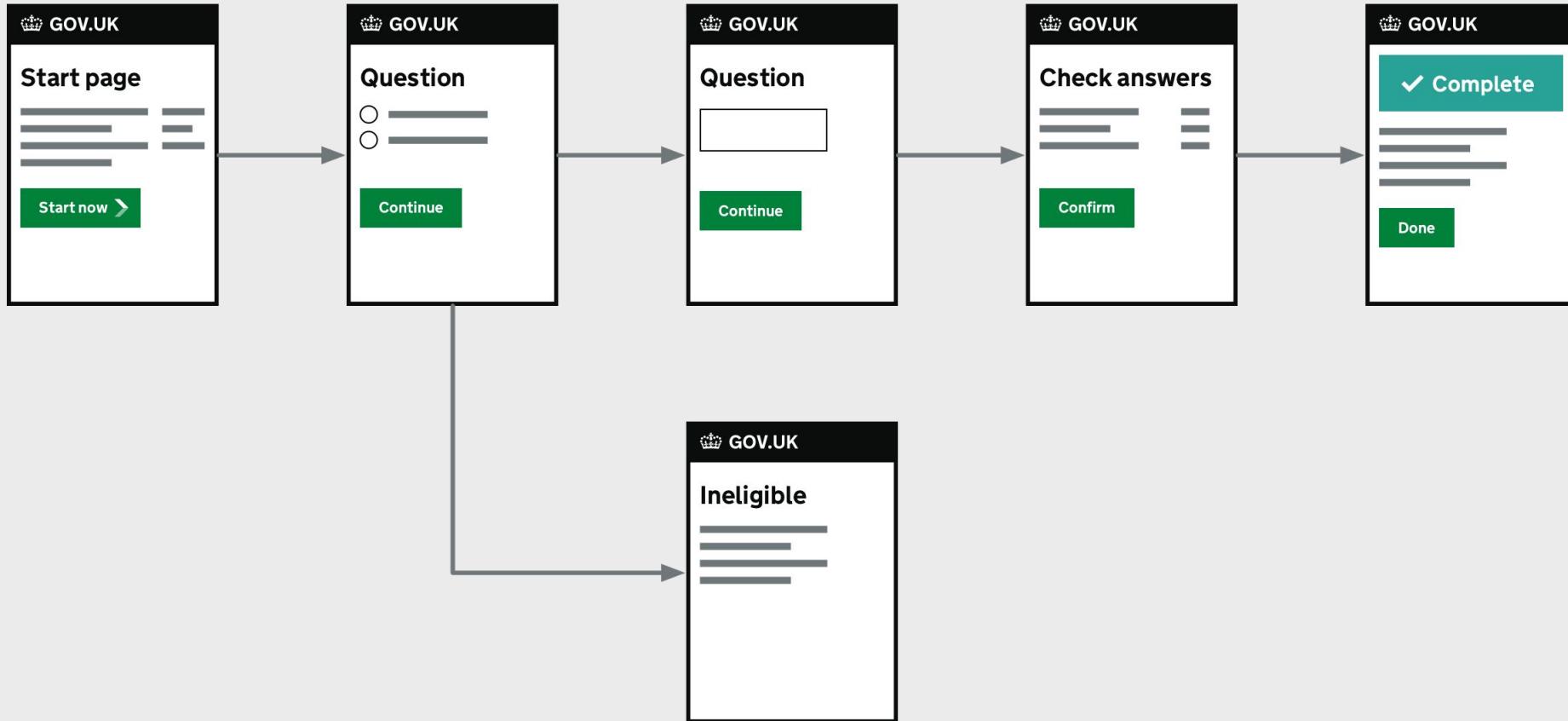
The Explorer sidebar on the left lists various files and folders, including `config.js`, `juggling-balls.html`, `views`, `includes`, and `routes.js`. The Terminal tab at the bottom shows command-line logs related to a build or watch process.

GDS

Live demo



Apply for a
juggling licence



Adding pages



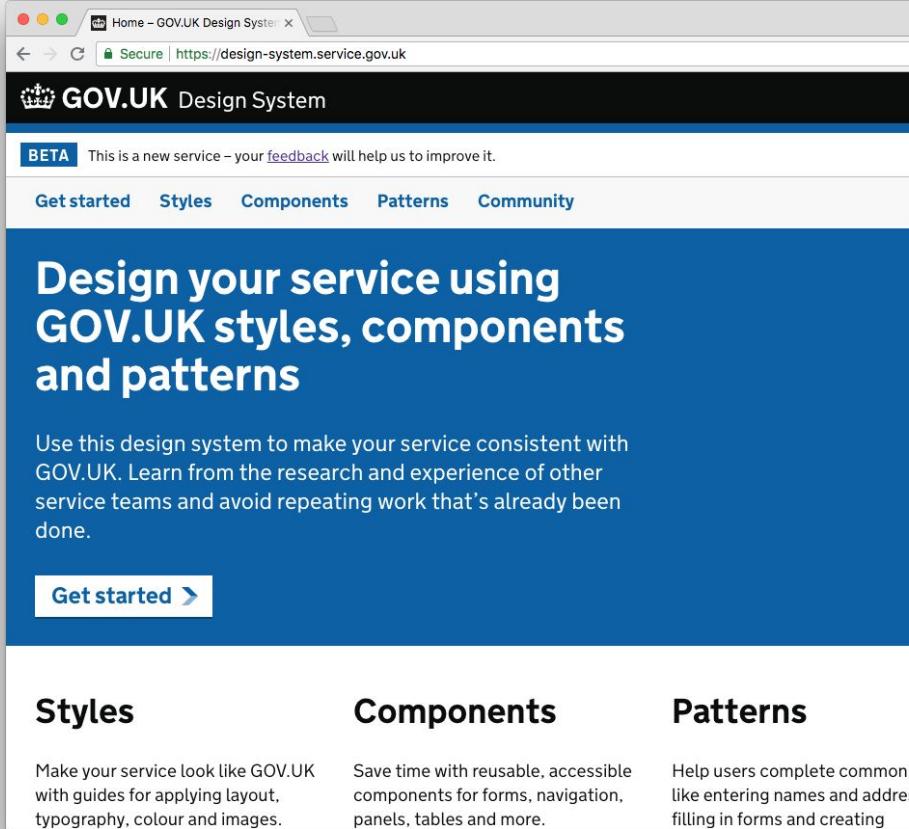
- Copy templates for each page
- Add headings
- Link the pages together

Tutorial task 1: Adding pages and linking them together (20mins)

Break

Adding questions

GOV.UK Design System



The screenshot shows the GOV.UK Design System homepage. At the top, there's a navigation bar with links for 'Get started', 'Styles', 'Components', 'Patterns', and 'Community'. A 'BETA' badge with the text 'This is a new service – your [feedback](#) will help us to improve it.' is also present. The main content area features a large blue header with the text 'Design your service using GOV.UK styles, components and patterns'. Below this, a paragraph explains the purpose of the design system. A prominent 'Get started >' button is located in the center. At the bottom, three sections are shown: 'Styles' (with a description of making services look like GOV.UK), 'Components' (with a description of saving time with reusable components), and 'Patterns' (with a description of helping users complete common tasks). The URL in the browser bar is https://design-system.service.gov.uk.

GDS

Tutorial task 2: Adding questions to your pages (20mins)

Intro to Nunjucks

Nunjucks is a templating language

The GOV.UK Prototype Kit

v9.2.0

This kit lets you rapidly create HTML prototypes of GOV.UK services.

It contains all you need to prototype anything from simple static pages to complex, data-driven transactions.

About this page

We recommend you add links to your prototype to this page, rather than delete it. You'll find this page in the kit at '/app/views/index.html'.

You can change the service name by editing the file '/app/config.js'.

Examples and documentation

- [Example pages and documentation](#)
- [GOV.UK Design System](#)



```
{% extends "layout.html" %}

{% block pageTitle %}
  GOV.UK Prototype Kit
{% endblock %}

{% block content %}

  <div class="govuk-grid-row">
    <div class="govuk-grid-column-two-thirds">
      <h1 class="govuk-heading-xl">
        The GOV.UK Prototype Kit
        <span class="govuk-caption-xl">{{releaseVersion}}</span>
      </h1>{{releaseVersion | log}}
      <p>
        This kit lets you rapidly create HTML prototypes of GOV.UK services.
      </p>

      <p>
        It contains all you need to prototype anything from simple static pages to complex, data-driven transactions.
      </p>

      <h2 class="govuk-heading-m">About this page</h2>

      <p>We recommend you add links to your prototype to this page, rather than delete it.
        You'll find this page in the kit at '/app/views/index.html'.</p>

      <p>You can change the service name by editing the file '/app/config.js'.</p>

      <h2 class="govuk-heading-m">Examples and documentation</h2>

      <ul class="govuk-list govuk-list--bullet">
        <li><a href="/docs/tutorials-and-examples">Example pages and documentation</a></li>
        <li>
          <a href="https://design-system.service.gov.uk">
            GOV.UK Design System
          </a>
        </li>
      </ul>
    </div>
  </div>

  {% endblock %}
```

```
{% extends "layout.html" %}
```

```
{% block pageTitle %}
```

```
    Page Title Here
```

```
{% endblock %}
```

{ { releaseVersion } }

```
{% from "govuk/components/radios/macro.njk" import govukRadios %}

{{ govukRadios({
  classes: "govuk-radios--inline",
  idPrefix: "changed-name",
  name: "changed-name",
  fieldset: {
    legend: {
      text: "Have you changed your name?",
      isPageHeading: true,
      classes: "govuk-fieldset__legend--xl"
    }
  },
  hint: {
    text: "This includes changing your last name or spelling your"
  },
  items: [
    {
      value: "yes",
      text: "Yes"
    },
    {
      value: "no",
      text: "No"
    }
  ]
}) }}}
```

mozilla.github.io/nunjucks

Event name

Prototype Kit Training



Application details

Event name Prototype Kit Training [Change](#)

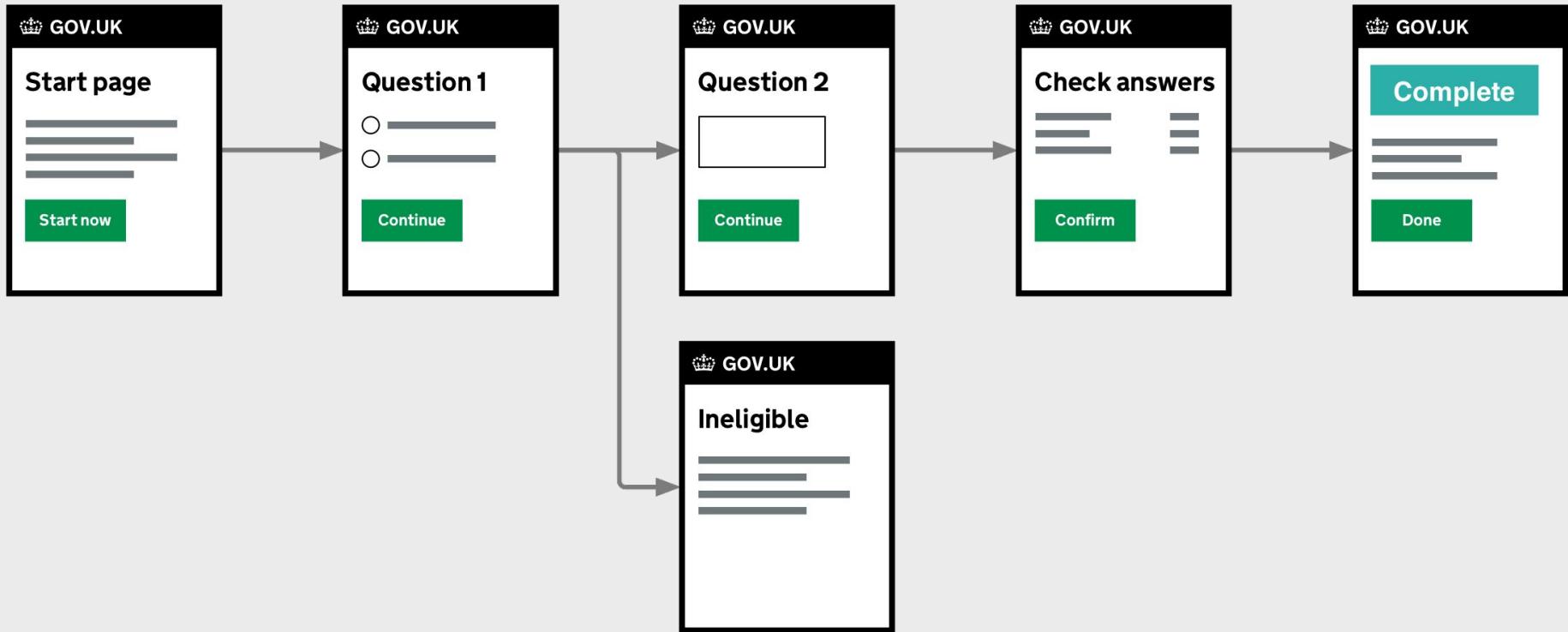
Address The White Chapel
Building
London
E1 8Qs

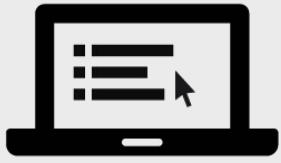
Licence period Valid for 6 months [Change](#)

Lunch

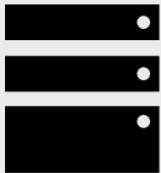
Tutorial task 3: Passing data around your prototype (30mins)

Intro to routing





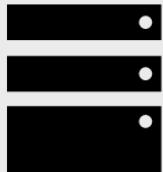
Browser



Server



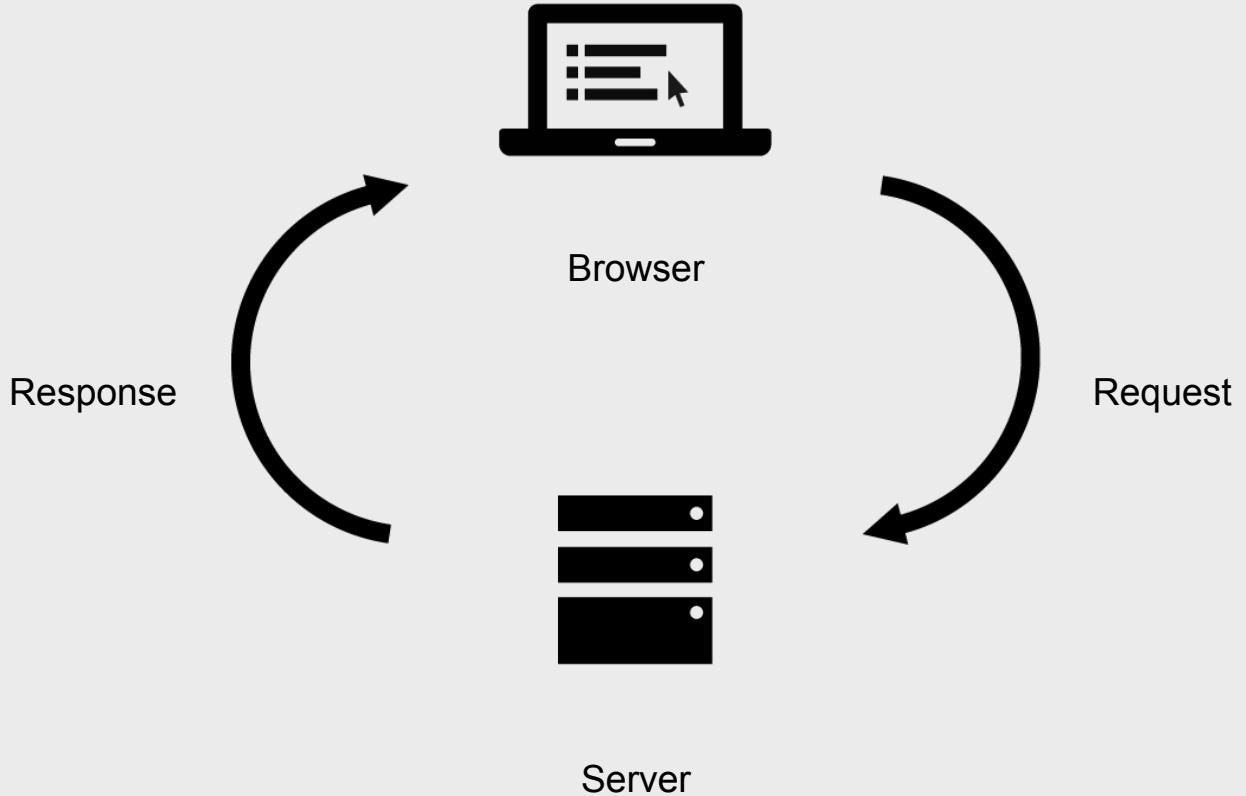
Browser

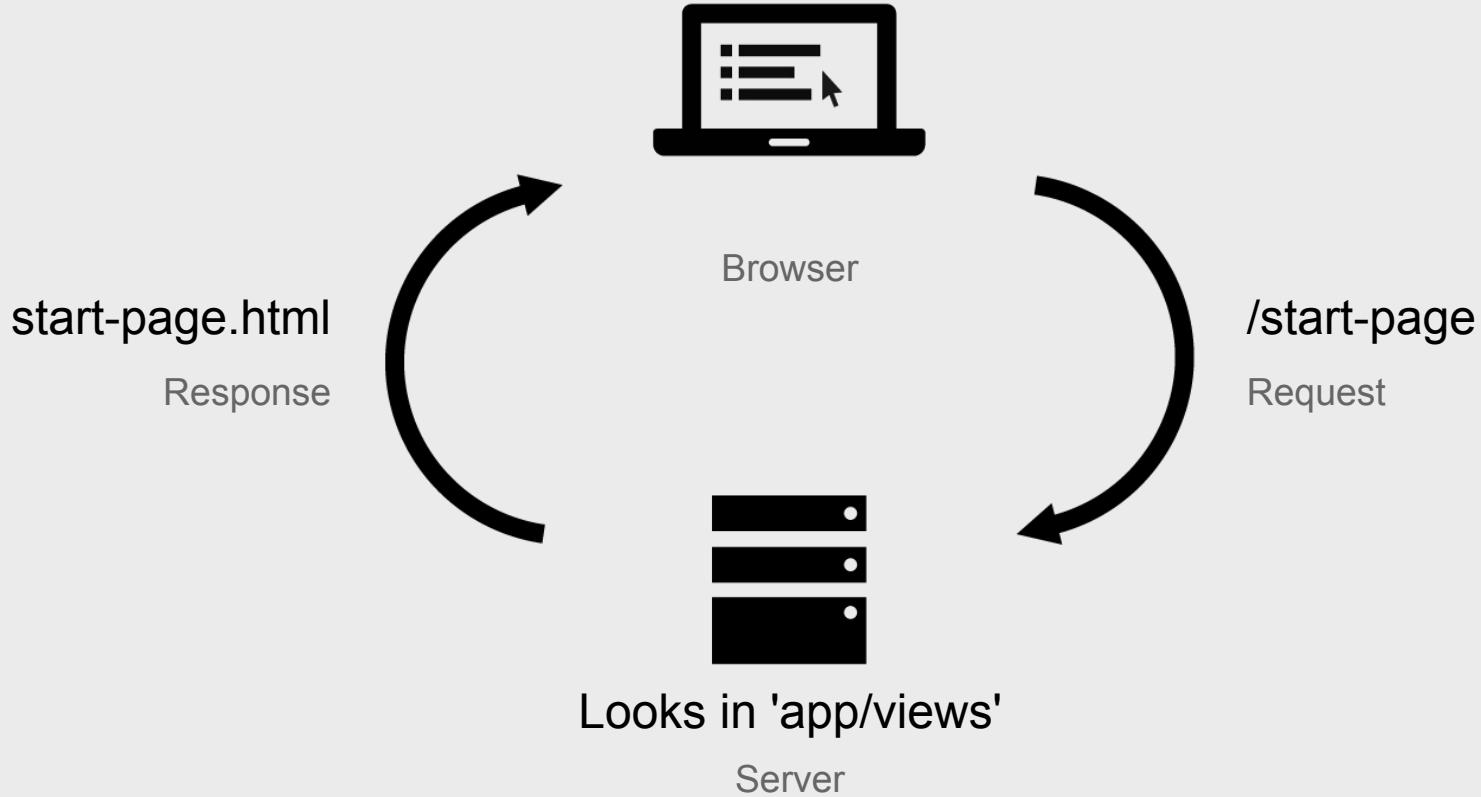


Server

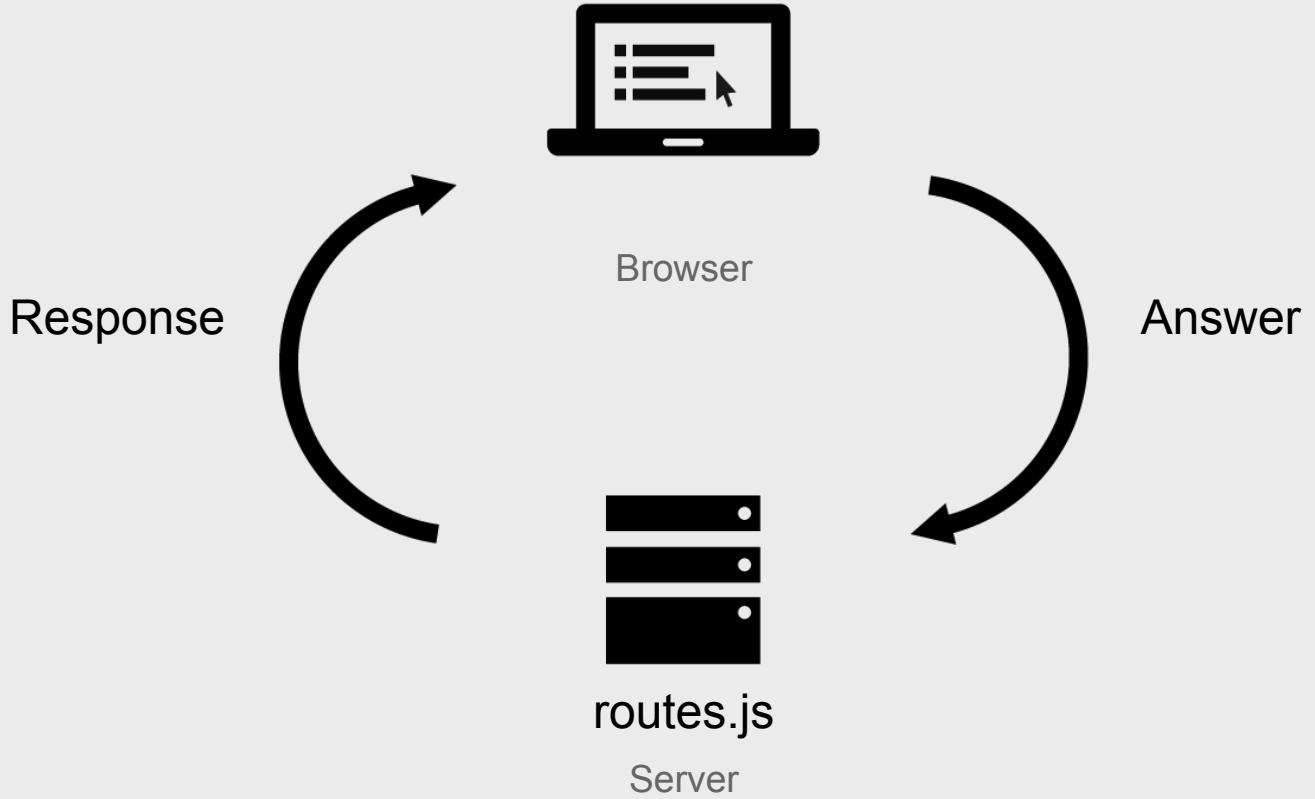


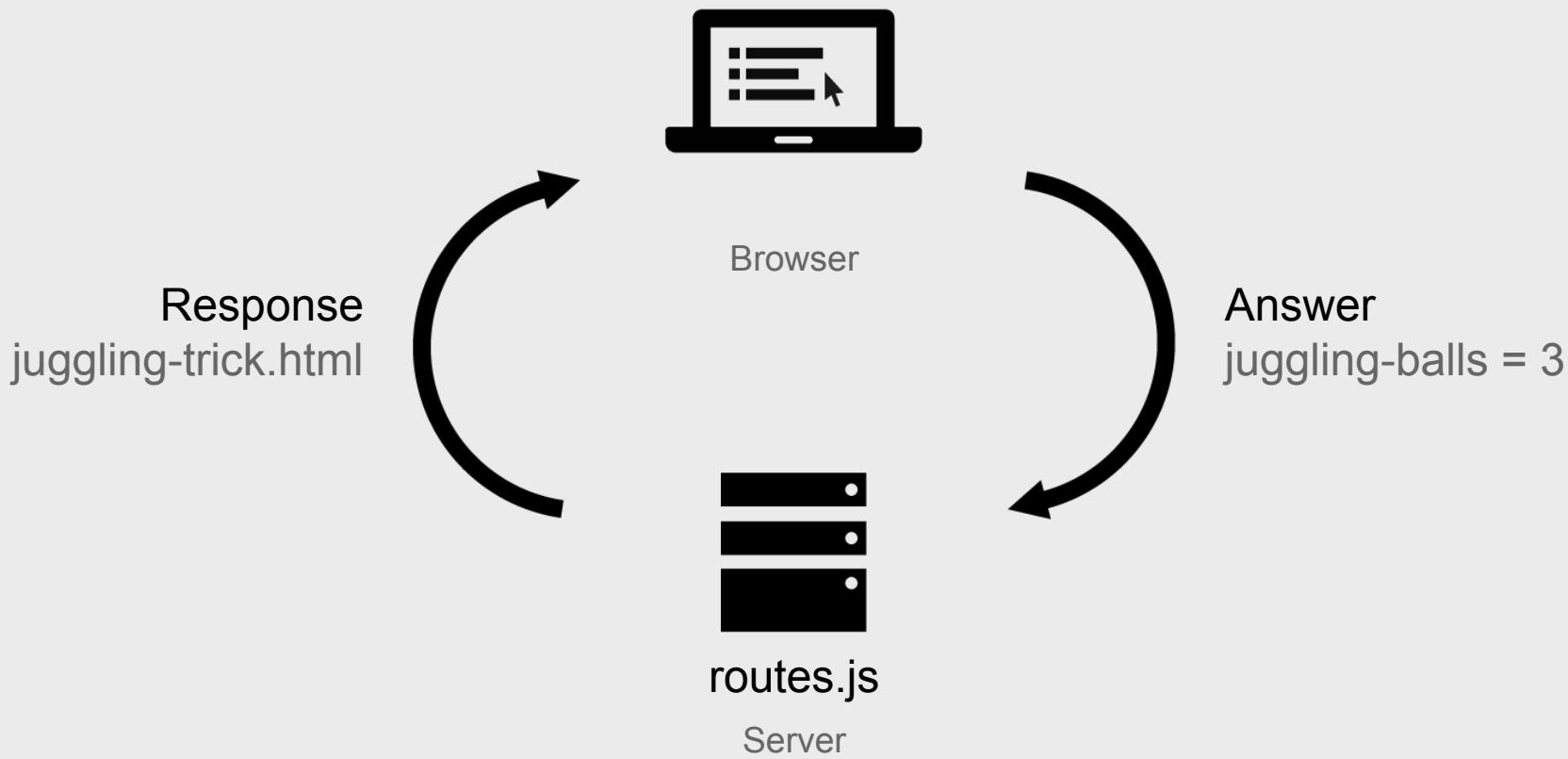
Request

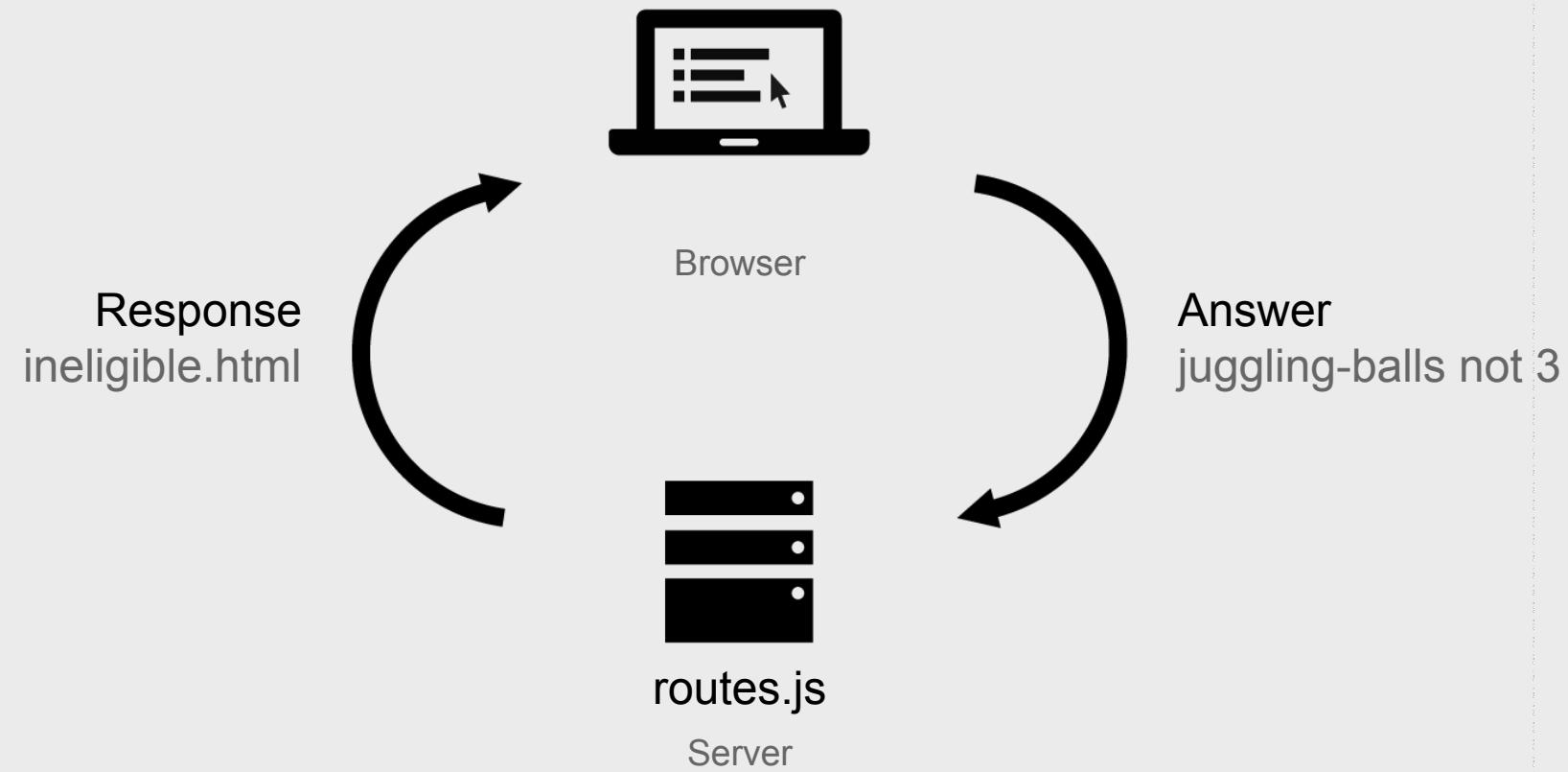




If user can juggle 3 balls or more,
then show next question;
else show the ineligible page







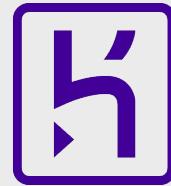
Tutorial task 4: Branching (20mins)

Break

Uploading to the web



Store and share code



HEROKU

Runs prototypes online

Git

We use **git** to track **changes** to code

We can see the history of every change and why it was made

Commits on Nov 10, 2017
Update process for those not using the command line (#458) ...
 markbarlow authored and joelanman committed on 10 Nov 2017 ✓
Commits on Nov 8, 2017
clean up typos, formatting, etc
 joelanman committed on 27 Oct 2017 ✓
Commits on Oct 27, 2017
clean up examples
 joelanman committed on 27 Oct 2017 ✓
de-duplicate code to stop search indexing
 joelanman committed on 24 Oct 2017 ✓
Commits on Oct 24, 2017
refactor checked function into utils, remove need for middleware
 joelanman committed on 24 Oct 2017 ✓
Commits on Oct 19, 2017
fix typo
 joelanman committed on 19 Oct 2017 ✘

We can undo changes

Helps us collaborate on code with others

We can try new ideas without risk of
breaking things

Similar to Google docs history - a log of
everything that's happened

Git tracks all the files in your project folder -
this is called a **repo**

When you're happy with your changes, you
can save them - this is a **commit**

When you have new commits to upload to
GitHub, you **push** your code

GitHub

GitHub is an online code store

The screenshot shows the GitHub organization page for 'Government Digital Service'. The header includes the organization logo, search bar, and navigation links for Pull requests, Issues, Marketplace, and Explore. Below the header, the organization's name 'Government Digital Service' is displayed along with its location ('The White Chapel Building, 10 Whitechapel...') and website ('https://gds.blog.gov.uk/'). A summary bar shows 1,054 repositories, 319 people, 60 teams, and 0 projects. A search bar and filters for Type and Language are available. The main content area lists three repositories: 'whitehall', 'smart-answers', and 'notifications-api', each with a brief description, contributors, and commit activity visualizations. To the right, sections show 'Top languages' (Ruby, Python, JavaScript, CSS, HTML) and 'Most used topics' (govuk, verify, govuk-pay, govuk-publishing-frontend, govuk-notify). A 'People' section displays a grid of user profiles and avatars.

GDS

We'll use the terminal in VS code to work
with **Git** and upload to **GitHub**

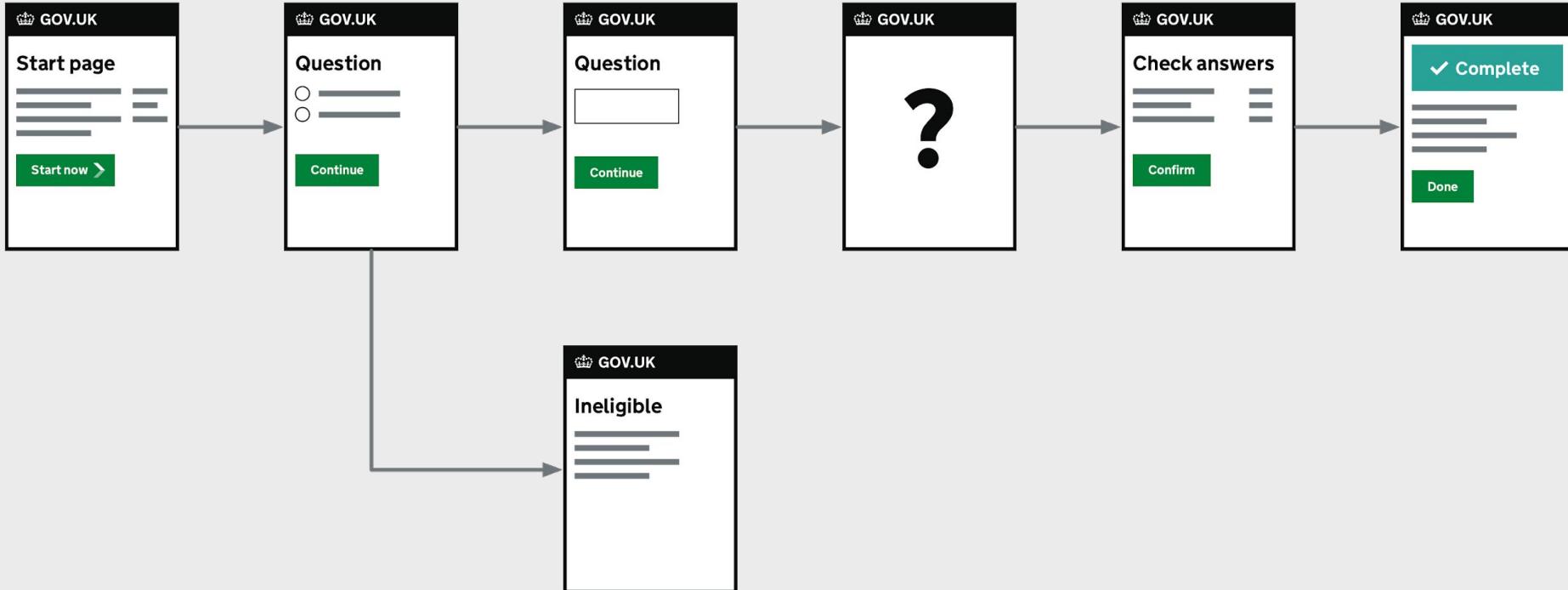
Heroku

Heroku is a platform for building and
deploying apps online.

Tutorial task 5: Uploading to the web(30mins)

**Challenge /
Prototype clinic**

Add your own
question



- Copy template
- Add question content
- Link in the flow
- Show data in Check your answers

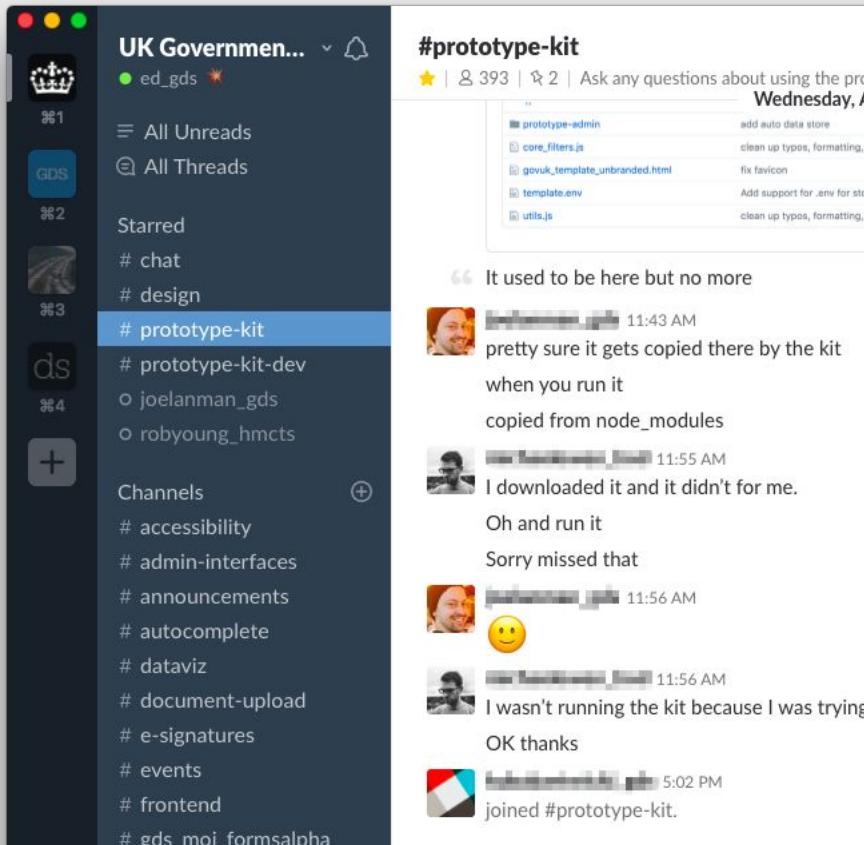
Update Heroku

1. Make changes to code
2. Commit changes
3. Push changes to Github
4. Tell Heroku to use latest code

Next steps

Join the **#prototype-kit** channel in Cross Government Slack

bit.ly/cross-gov-slack



GDS

Join the digital service designer's mailing list

bit.ly/design-mailing-list

Sign up to the UCD newsletter and mailing list

<https://www.smartsurvey.co.uk/s/UCDPAGE/>

The screenshot shows a web-based mailing list interface. At the top left is a blue button labeled 'GDS'. To its right is a search bar with the placeholder 'Search for messages'. Below the search bar is a red button labeled 'NEW TOPIC' and a grey button with a 'C' icon. Further to the right are buttons for 'Mark all as read' and 'Mark all as unread'. The main area is titled 'Groups' in red. On the left, there is a sidebar with links: 'My groups', 'Home', 'My discussions', 'Starred', 'Favourites' (with 'GovUK Makers' listed), 'Recently viewed' (with 'GaaP Submit', 'GDS Designers', 'Digital Service Designers', 'Content tools team', and 'Recent searches' listed), and 'Recent searches'. To the right, a list of topics is displayed in a grid format. Each topic entry includes a small profile picture, the topic name, the number of posts, and the number of views. The topics listed are: 'Prefixes and suffixes on te...' (8 posts, 15 views), 'Are we mandated to allow...' (4 posts, 3 views), 'Cross government design...' (1 post, 12 views), 'GDS Axure library (6)' (6 posts, 1 views), 'New member (2)' (2 posts, 5 views), 'Services formally known a...' (3 posts, 6 views), and 'Have you used icons in yo...' (8 posts, 1 views). At the bottom of the sidebar, there are links for 'Privacy - Terms of Service'.

GDS



Cabinet Office

Thanks!