

Computing II: Design, Build and Explain a Website

GAC011 public-outcome practice; follow the current centre brief.

A report website helps readers find evidence and limits

- Design for an intended reader and academic purpose.
- Connect planning, content, code and practical checks.
- Use the current centre brief for assessed work.

Plan the audience, structure and route through the site

- Name the audience and the information it needs.
- Draw a wireframe before adding decoration.
- Make page and section relationships clear.

HTML describes meaning and the browser's document structure

- Use headings for the actual heading hierarchy.
- Use semantic regions for navigation and main content.
- Give attributes values suited to their purpose.

CSS controls layout, spacing and readable appearance

- Selectors choose elements and declarations set properties.
- Content, padding, border and margin affect layout.
- Test flexible widths before adding breakpoints.

Browser events let code change a useful existing page

- Read the page through the DOM.
- Attach listeners to the intended controls.
- Keep basic information useful without optional scripts.

A launch needs delivered files and checks at the actual URL

- Hosting serves the files; a domain gives an address.
- Check links, devices, access and media permission.
- Verify the delivered version after an authorised launch.

Promotion should connect an audience to a clear objective

- Choose an objective before choosing a platform.
- Plan accurate content, timing and responsibility.
- Interpret measures against the actual objective.

The practice page has a bounded academic job

- Provide a short transport overview for classmates.
- Show invented counts with their method and limits.
- Plan a connection to the full report and oral talk.

Clear labels make navigation understandable before a click

- Use labels that describe the destination or action.
- Keep findings and methods easy to locate.
- Check the reader's route against the wireframe.

The document head establishes encoding and a mobile viewport

- Save the complete example as transport.html.
- Use UTF-8, a descriptive title and the viewport setting.
- Open the file locally before considering publication.

```
<!doctype html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport"
      content="width=device-width, initial-scale=1">
<title>School transport: practice report</title>
```

A fragment link and its target ID must match

- The Method link targets the method section.
- Use unique IDs throughout the page.
- A correct-looking label does not fix a wrong target.

```
<a href="#method">Method and limits</a>
<section id="method">
  <h2>Method and limits</h2>
  <p>The counts are invented for practice.</p>
</section>
```

A table needs a caption and meaningful headers

- Label the table as invented practice counts.
- Identify column and row headings.
- The response counts sum to 36.

```
<caption>Practice counts, not research findings</caption>
<thead><tr>
  <th scope="col">Main mode</th>
  <th scope="col">Responses</th>
</tr></thead>
<tr data-mode="bus">
  <th scope="row">Bus</th><td>18</td>
</tr>
```

The script enhances content that HTML already provides

- Keep the complete table and method in the HTML.
- Hide optional controls until their listeners are ready.
- Do not require a script to read the main result.

Shared colour values keep both themes coherent

- Custom properties name page, text, border and link colours.
- The dark class changes the same set of values.
- Dark reading areas use the page background.

```
:root {  
  --page: #ffffff; --text: #172033;  
  --line: #637083; --link: #164db2;  
}  
body.dark {  
  --page: #080d17; --text: #e9eef7;  
  --line: #8392a8; --link: #a8d2ff;  
}
```

Flexible sizes and wrapping solve concrete layout needs

- Limit the reading width without forcing a wide phone layout.
- Let navigation wrap when it needs space.
- Include padding and borders in box sizing.

```
* { box-sizing: border-box; }
header, main, footer {
  max-width: 48rem; margin: auto; padding: 1rem;
}
nav { display: flex; flex-wrap: wrap; gap: 1rem; }
table { width: 100%; border-collapse: collapse; }
```

Readable content includes keyboard focus and appropriate alternatives

- Keep visible focus on interactive controls.
- Use underlined links and meaningful table headers.
- Describe informative images; decorative ones may have empty alt text.

```
:focus-visible {  
  outline: 3px solid var(--link);  
  outline-offset: 3px;  
}  
[hidden] { display: none !important; }
```

Find controls and rows before attaching their events

- Query selectors identify the intended DOM elements.
- The row collection contains the three category rows.
- The chosen select value will control the visible view.

```
const mode = document.querySelector("#mode");  
const rows = [...document.querySelectorAll("tbody tr")];  
const status = document.querySelector("#status");
```

The selection-change event recalculates visibility

- Reset the visible-category counter for each change.
- Hide a row only when a specific different mode is selected.
- Count each row that remains visible.

```
mode.addEventListener("change", () => {  
  let shown = 0;  
  rows.forEach(row => {  
    row.hidden = mode.value !== "all" &&  
      row.dataset.mode !== mode.value;  
    if (!row.hidden) shown += 1;  
  });  
  // The complete example then updates the status text.  
});
```

Trace Bus and All without confusing categories with responses

- Bus: hide Walking and Cycling; keep Bus with 18 responses.
- The status counts one category.
- All: make all three rows visible again.

A status message reports the change as text

- Update the paragraph with `textContent`.
- Use singular `category` for one and plural `categories` otherwise.
- Check the status announcement with available assistive tools.

```
const noun = shown === 1 ? "category" : "categories";
status.textContent =
  `${shown} transport ${noun} shown.`;
```

The theme button toggles one class and describes its next action

- A click adds or removes the dark class.
- CSS then applies the corresponding shared values.
- The button label changes between light and dark actions.

```
theme.addEventListener("click", () => {  
  const dark = document.body.classList.toggle("dark");  
  theme.textContent = dark  
    ? "Use light theme" : "Use dark theme";  
});  
controls.hidden = false;
```

Basic information should survive the loss of optional enhancement

- Without the script, the complete report content remains.
- Optional controls stay hidden.
- A filtered view must not imply changed research results.

Practical checks need results, not just a checklist title

- Open links and test keyboard use.
- Try narrow layouts, enlarged text and both themes.
- Check an additional device or browser and the basic fallback.

A relative report link works only when the real file is delivered

- A same-folder link can refer to report.pdf.
- Use a meaningful label that identifies the PDF.
- Check the actual filename and host path.

```
<a href="report.pdf">Read the full report (PDF)</a>
```

Static files can still include browser interactivity

- A host can serve stored HTML, CSS and scripts.
- The browser runs the page's JavaScript.
- A domain address alone does not deliver those files.

Publishing and later revision must deliver the intended version

- Remove private drafts and check media permissions.
- Deliver the required files through the approved process.
- Inspect the actual URL and keep a known working copy.

The website, report and talk should support the same academic claim

- The page gives a question, result and limits.
- The report supplies detailed methods and references.
- The talk directs listeners to the intended version.

A promotion plan names who, what, when and why

- Aim to help a defined audience find the approved work.
- Prepare an accurate description and usable destination.
- Follow centre and platform requirements.

Displays, reach and link clicks describe different events

- Impressions count displays under the platform's definition.
- Reach generally concerns distinct accounts under its definition.
- Clicks do not prove successful loading or reading.

A worked rate calculation needs a stated denominator

- A: 20 link clicks from 400 impressions.
- B: 25 link clicks from 250 impressions.
- Compare clicks and rates without confusing them with readership.

$$A: \frac{20}{400} \times 100\% = 5\% \qquad B: \frac{25}{250} \times 100\% = 10\%$$

A better observed rate is not proof of a causal explanation

- Audience, timing and repeated events may differ.
- A click does not establish that the report was read.
- Change one thing and record relevant context.

Check the fragment, filter and basic fallback

- Method targets the section whose ID is method.
- Cycling shows six responses in one visible category.
- Without JavaScript, the full table and links remain useful.

Check yourself

- A domain needs hosting, delivery and actual-URL checks.
- C: 24 clicks from 600 impressions gives 4%.
- Show real files and required evidence of completed work.

$$\frac{24}{600} \times 100\% = 4\%$$