



**COMP 307**  
Principles  
of Web  
Development

MCGILL UNIVERSITY

# COMP 307

## Principles of Web Development

### Lecture 17

#### Unit 5 – Backend Design

#### Single Paged Websites

#### Contents

Elements 1 page  
Real-estate



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# Class Outline

- Elements of single paged websites
- DIY
- React

## Contents

Elements 1 page  
Real-estate



# Readings

- MyCourses Readings
  - WWW How To
    - Review Ch 12, 13 and 15
- Internet Resources
  - <https://www.justinmind.com/blog/single-page-vs-multi-page-websites-design-battle/>

## Contents

Elements 1 page  
Real-estate



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# Elements of single paged website

Single Paged Websites

## Contents

Elements 1 page  
Real-estate



# What is a single page website?

- It is an **entire website** within a **single HTML document**.
- The entire “website” is in this document.
- Style trends:
  - **Simple look**
  - **Infinite vertical or horizontal scroll**
  - **Fixed page overlays** (with/without page flip animation)
- Problems:
  - **Limited design options**
  - **Initial load time could be long**
  - There are a **limited number of things you can do**



# Use Cases

- Mobile
  - Due to limited screen size
- Marketing
  - Keeping things simple and easy to understand
- Streaming
  - Do not need to display too many things

Studies show that having a single page can lead to increased conversions (>37.5%) than multi-page sites because users begin the process sooner and move through it more quickly, with nowhere to get lost or distracted.



# Simple Look

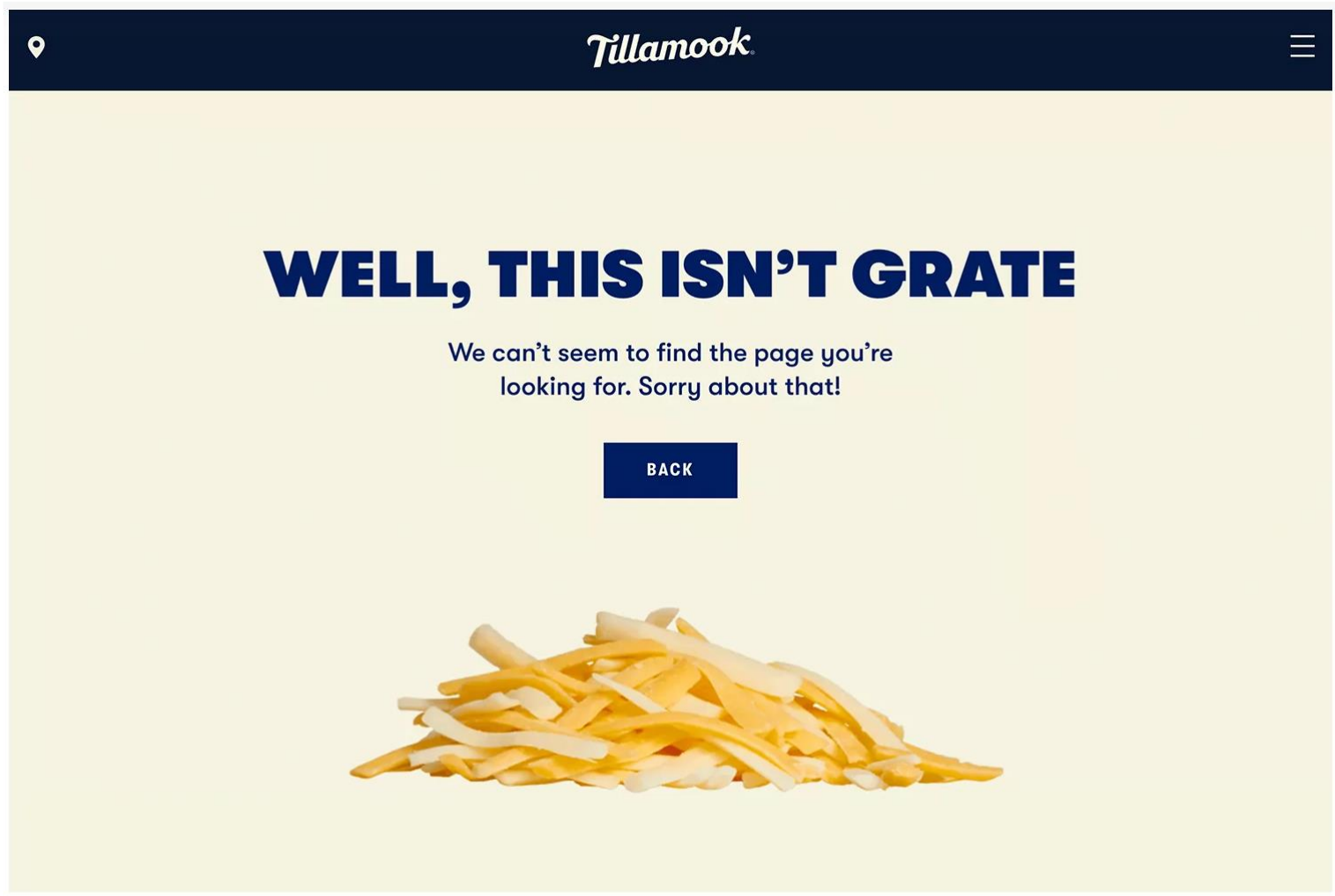


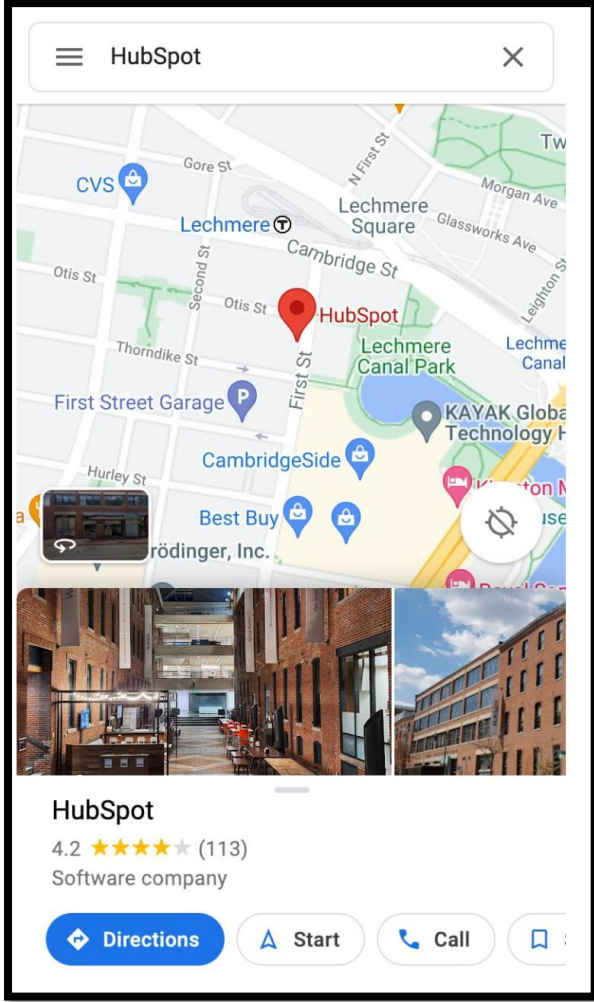
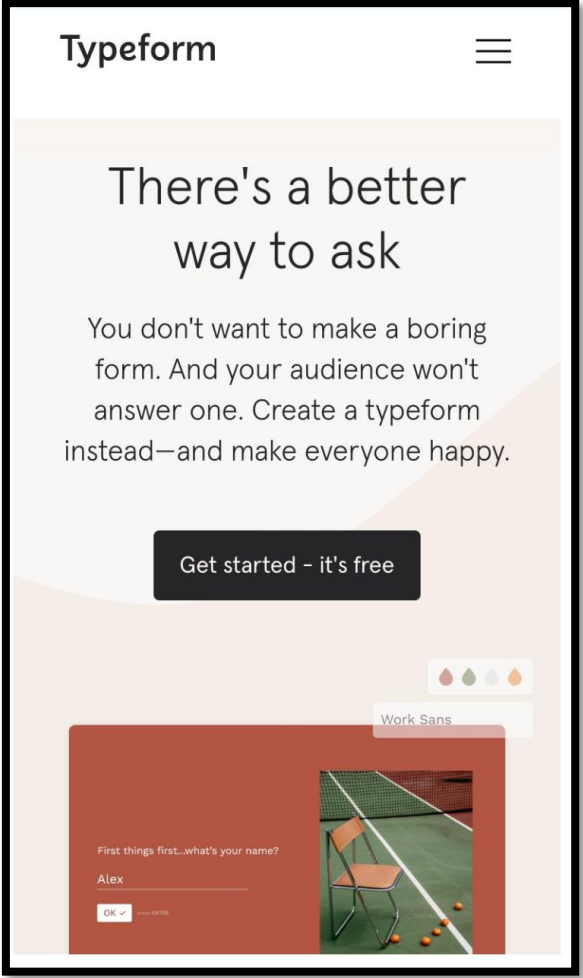
Image credit: Awwwards

Quick comprehension and quick buy-in.



# Real-estate

- The amount of space available for display



- Simple look ?
- Branding
- Menu
- Scrolling ?
- Messaging
- What is important ?
- Responsive
- Interactive ?
- Dynamic ?





# Question

Suggest a simple looking single page website for a phone for this case study:

- Students looking for an apartment or a roommate



# Technique 1

- Use the “**single HTML page**” to implement a **simple style** (e.g., scroll style) **that is responsive**.
- Populate the “pseudo-pages” with **all** the information you want displayed to the user at load time.
  - Option 1: **onload()** event with Ajax query to DB, or
  - Option 2: already there **in the HTML**
- **Control the display of the pseudo-pages by:**
  - Option1: Use **on-page anchors** to auto scroll to pseudo-page.
  - Option 2: Use **interactive design to reveal** the pseudo-page with techniques like accordion, dropdown, and hide/show <div>.



# Technique 2

- Use the “**single HTML page**” to implement a simple style (e.g., scroll style) that is **responsive** using **scaffolding (skeleton)**, this results in an empty but fully functional shell.
- Use **dynamic** design to upload data from the server to populate **certain parts** of the page (DOM). It will fill up the shell.
  - Onload() event, and
  - As user interacts with the page
- Use **interactive** design to control the clutter using things like accordion, dropdown, and hide/show.



# Example

- **On-page anchors**
  - Commonly this style's page is pre-loaded (but not always)
  - Example: <https://html.com/anchors-links/>
    - Notice their table of contents,
    - And this is a tutorial, they show you how to do it.
  - Example 2: <https://cookcollectivekitchen.com/>

[https://www.w3schools.com/tags/tag\\_a.asp](https://www.w3schools.com/tags/tag_a.asp)

<https://www.w3docs.com/snippets/html/how-to-create-an-anchor-link-to-jump-to-a-specific-part-of-a-page.html>

## Contents

Elements 1 page  
Real-estate



# Example

- **Reveal technique**
  - Preloaded
    - See attached Code
      - Example: <https://www.laralee.design/show-hide-javascript/>
  - React version
    - <https://showcase.roudstudio.com>
    - What is bad about this website?
    - What is good about this website?
    - How much work was it to build this website?



# Example

- **Scaffolding** (skeleton)
  - This is always from a database (of some type)
    - **Skeleton shape** exists for all pages
      - **App title**
      - **Sticky footer**
      - **Nav bar**
      - **Content area**
    - Accesses **database for content**
- See CD Collection code



# Question

- You are an artist who wants to highlight your creations. You not only want people to see your work, but you want them to learn about you, you want them to contact you to get contracts.
- Is a single page or multi-page website good for this person?
- How might they create a single page website? What issues should they be concerned about?



# Prepare for Next Class

- Assignments
  - Mini 6 (how is it going)
  - Project out Nov 7 (teams of 3 or 4)
- Labs this week
  - Lab E, out next class
- Do on your own
  - Try out all the examples from this lecture.