Engaging Science Education for Teens

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Week 2 - UI Design and Prototyping Report

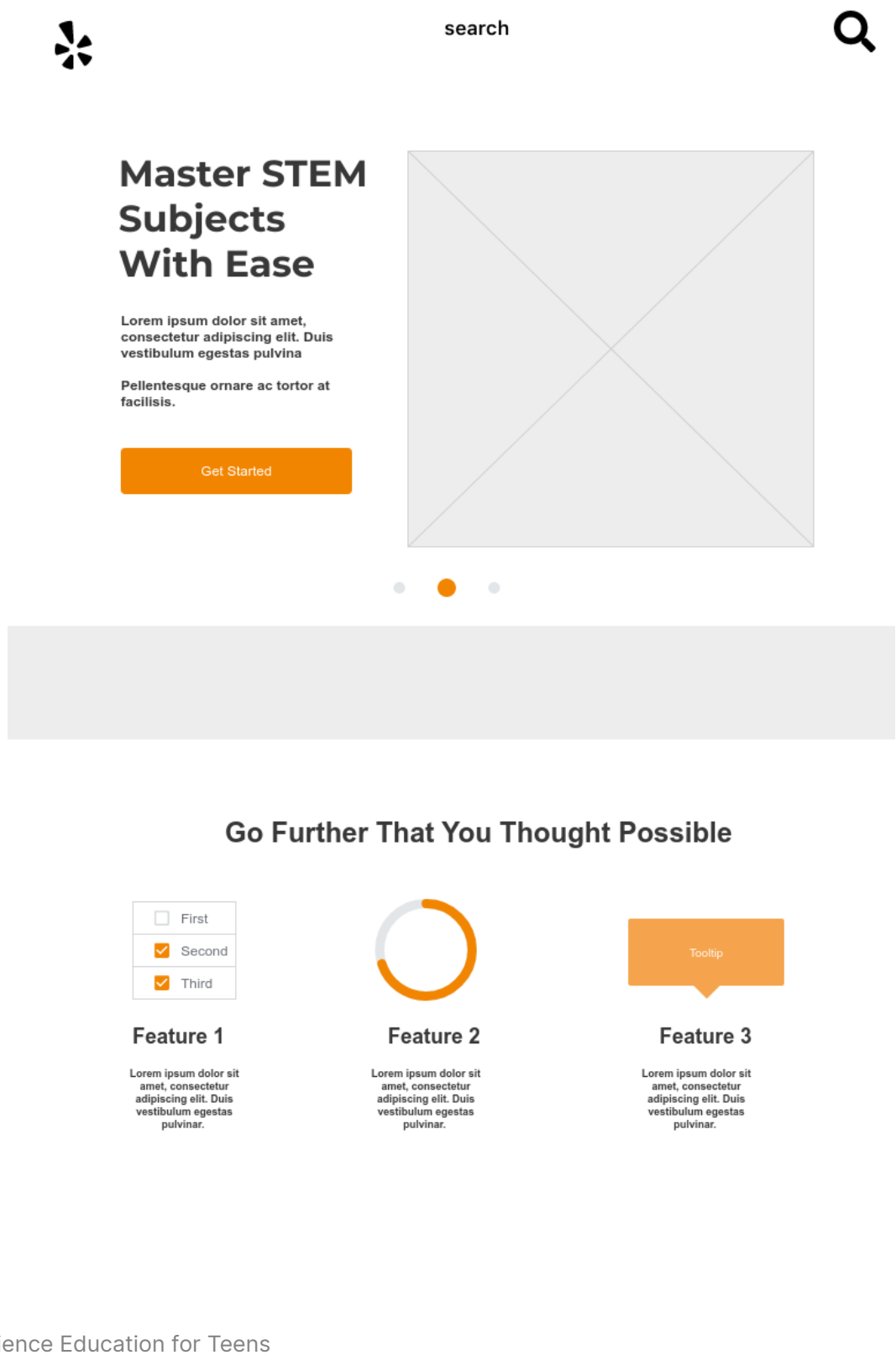
1. Introduction

- The goal of this project is to create a **website** that teaches **STEM** *(Science, Technology, Engineering, Mathematics)* material to teenage students.
- It will be narrative-driven, highly visual and applying best practices and science-informed teaching strategies. It will implement an audio voice-over that students can activate whenever they get stuck on a topic.
- It will include many features to aid student's learning, including: 1. an audio player on the page that's accessible at all times; 2. a progress bar; 3. a mobile-responsive design; 4. a flashcard app.

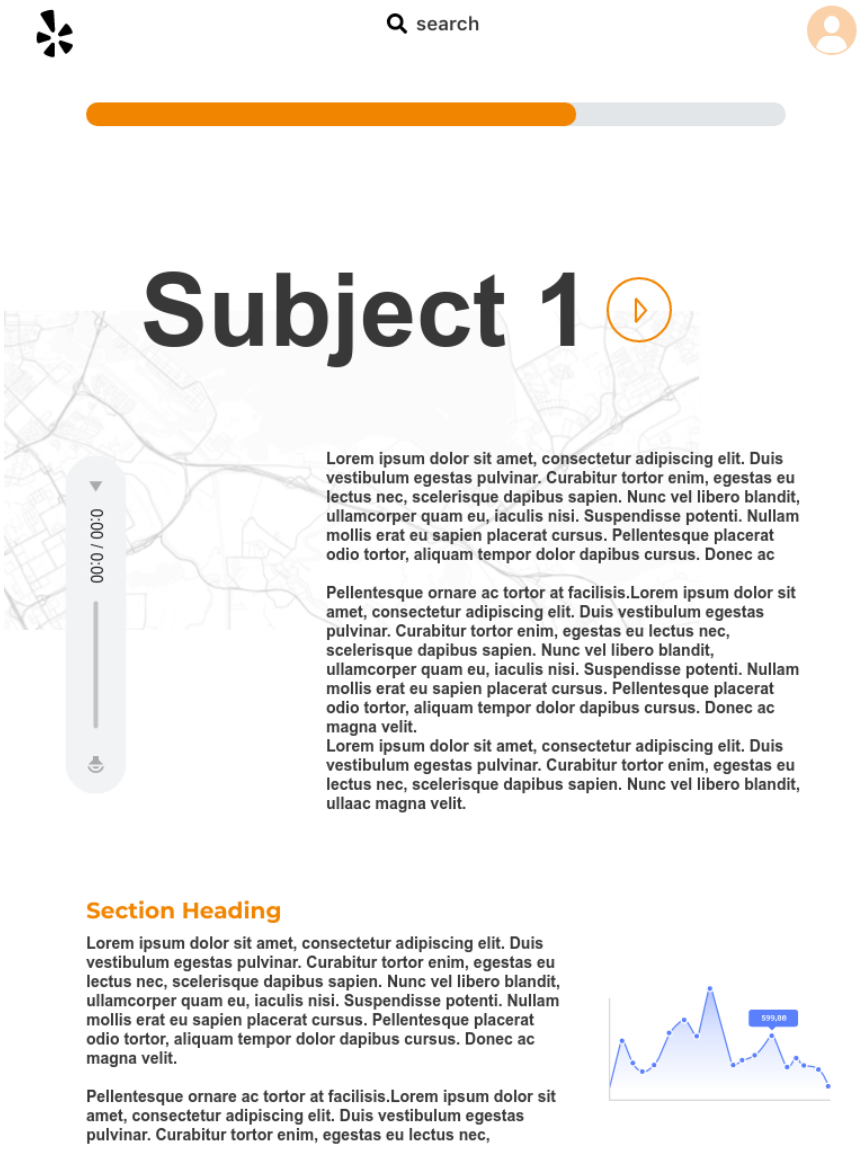
2. User Interface Design and Prototype

- To help flesh out the visual idea and communicate it better to others, I drafted/prototyped two pages from the website - the homepage and a single lesson page.

2.1.1. Homepage Mockup



2.1.2. Single Lesson Page Mockup



- The goal for the user experience and interface is to achieve an **inviting, light-hearted** and **fun** learning environment.

  The website is not meant to feel too much like a typical online classroom, but more like a series
  of in-depth articles about complex ideas, tackled with the help of an expert voice-over guide - accessed through the audio player.

- This being the case, all of the website elements/features must be designed and implemented with this philosophy in mind and avoid falling into conventions that will make it too clunky.
    - 1. **Audio player**: Has been designed to sit on the left of the screen and be unobtrusive.
      2. **Progress bar**: Has been designed to always be visible on the top of the page.
      3. **Responsive design**: All elements except the course content will be designed to become hidden on mobile devices, once the the lesson starts.
      4. **Flashcard app**: Will be designed to appear on the lesson completion screen.

3. Navigation Structure

3.1. Navigation Structure Overview

Because this website is a learning environment, it will be important to provide an intuitive way of finding their way around it. Less time for searching means more time spent learning.

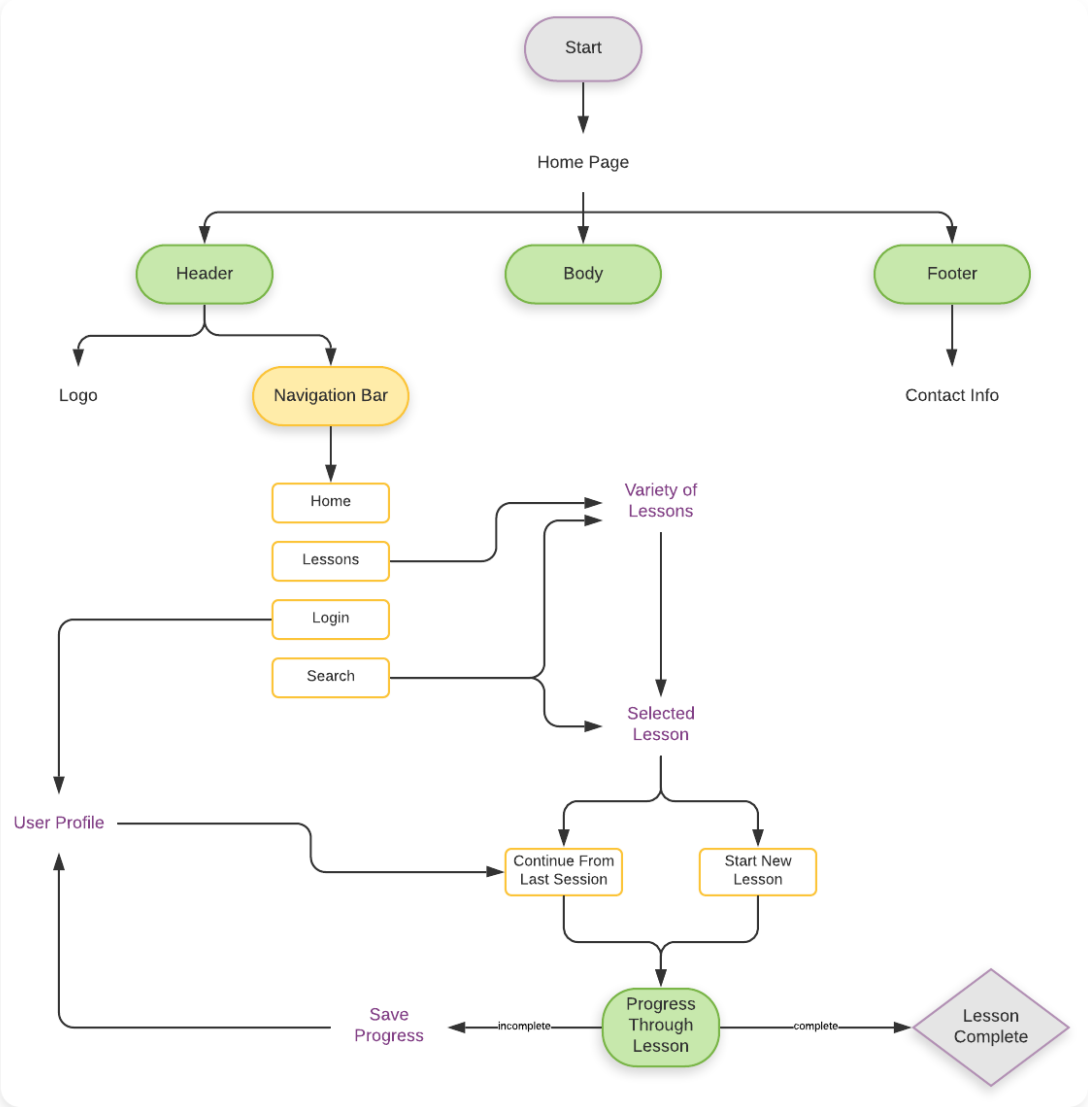
It is well known that websites are not merely a separate artifact, removed from the rest of the organisation and it's goals. A successful website aligns with, and meets your organisation's strategic objectives while satisfying the needs of the user.

This fact, the need to balance these goals, is what calls for devising a consistent UI and experience.

The main driving force for the organising of information on the website will be the specific lesson that a student is currently doing.

3.2. Typical User Flow

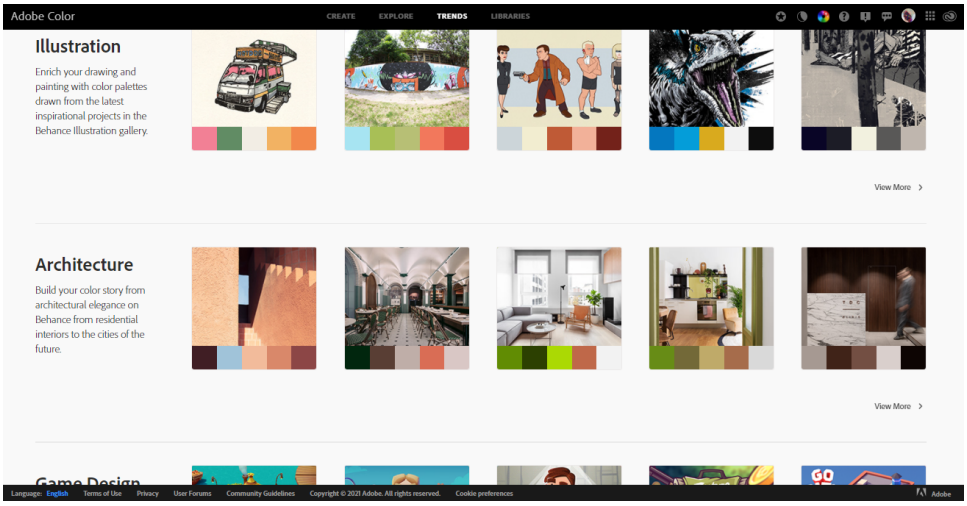
User experience journey for completing a lesson



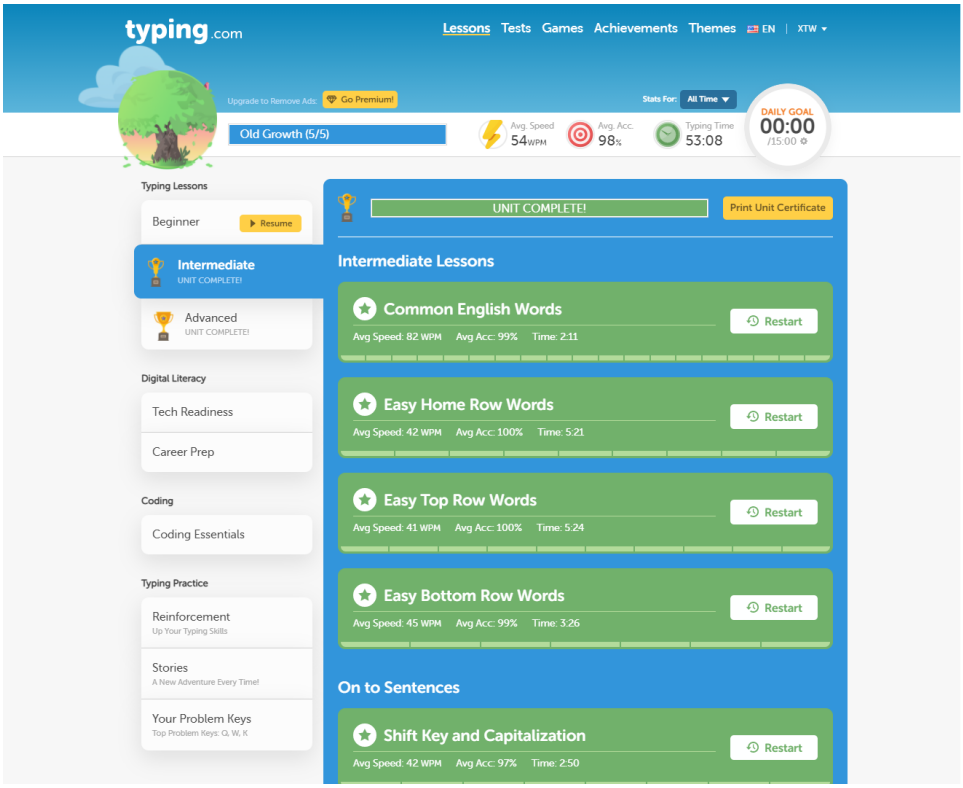
4. References

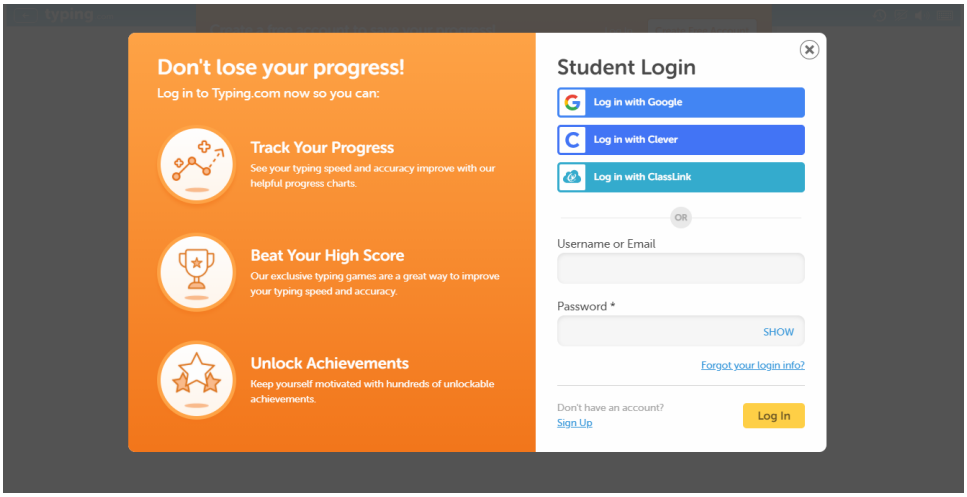
- https://www.w3schools.com/: For information on how to implement difficult components (e.g. parallax, audio player, progress bar)

▼ Colour scheme. https://color.adobe.com/trends

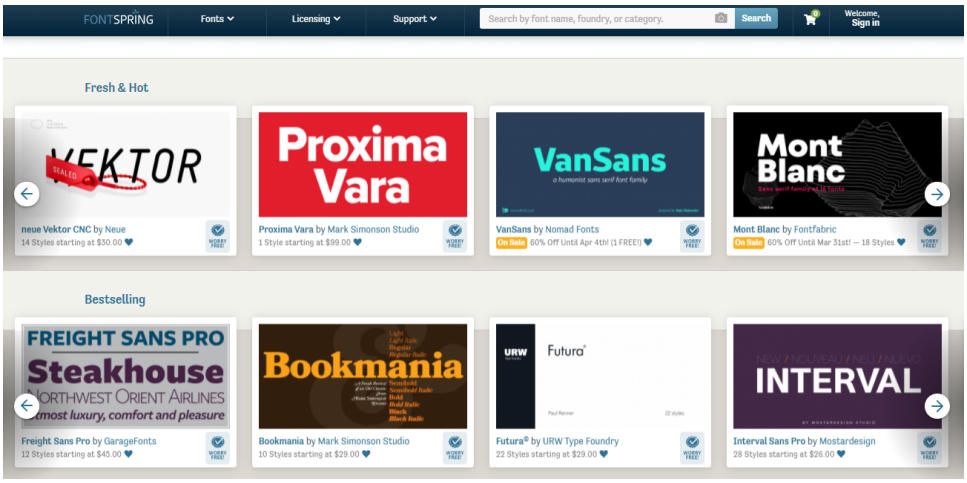


▼ Visual layout inspiration: https://www.typing.com/student/lessons

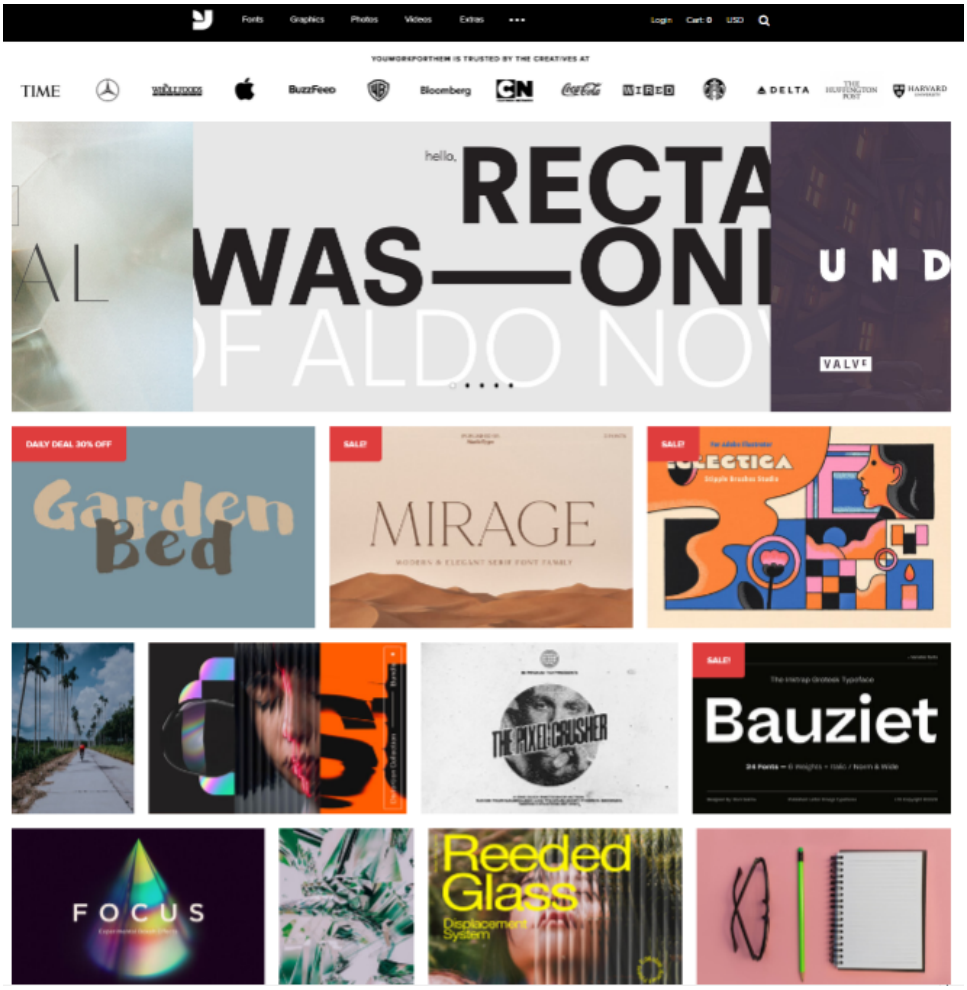




▼ fonts. https://www.fontspring.com/



https://www.youworkforthem.com/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