

SEMINAR

What is “atomic design”? Does it help with an understanding of CSS naming conventions such as BEM?

A yellow circular logo containing the text "VISHNU & MANU" in a serif font.

VISHNU
&
MANU

PRETTY DESIGN



FRANKENSTEINSTEIN



ATOMIC DESIGN



ATOMIC DESIGN

A methodology that involves breaking down UI into its basic components. Which are then reused throughout the site.

BRAD FROST





“

In searching for inspiration and parallels, I kept coming back to chemistry. The thought is that all matter (whether solid, liquid, gas, simple, complex, etc) is comprised of atoms. Those atomic units bond together to form molecules, which in turn combine into more complex organisms to ultimately create all matter in our universe.

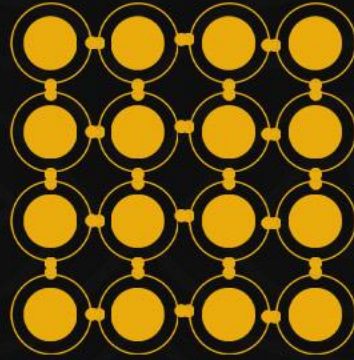
-BRAD FROST



ATOMS



MOLECULES



ORAGNISMS



TEMPLATES



PAGES



ATOMS

The most basic, yet functional (HTML) elements such as input fields, buttons, text labels. Things that can't be broken down any further.



ATOMS

Default

Search

Hover

Search

Ghost

Search

Type styles

Heading 1 - 50px

Heading 1 - 50px

Heading 2 - 37px

Heading 2 - 37px

Body 1 - 20px

Body 1 - 20px

Default

Enter Keyword

Active

Enter Keyword

Error message

Colours

#4D4D4D

#999999

#F5B40C

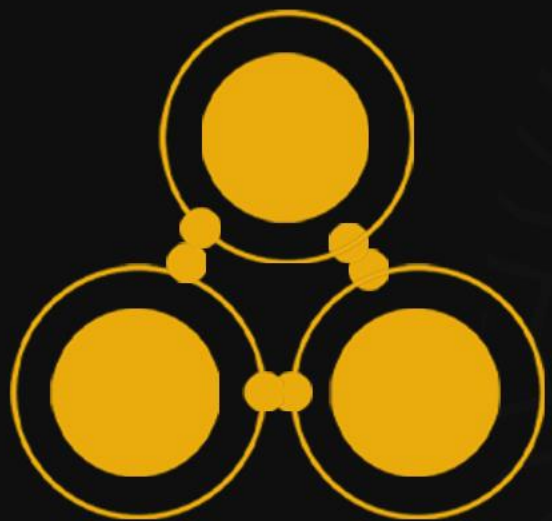
#141414

#FFFFFF



MOLECULES

Molecules are more complex. Those things are built from several single Atoms. They form simple UI elements groups.

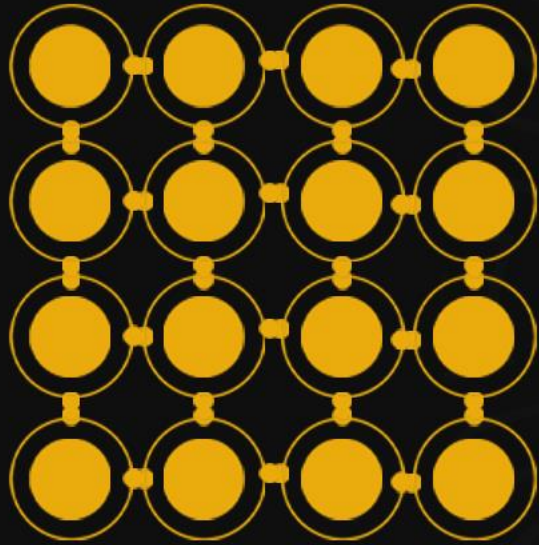


MOLECULES

Search the site

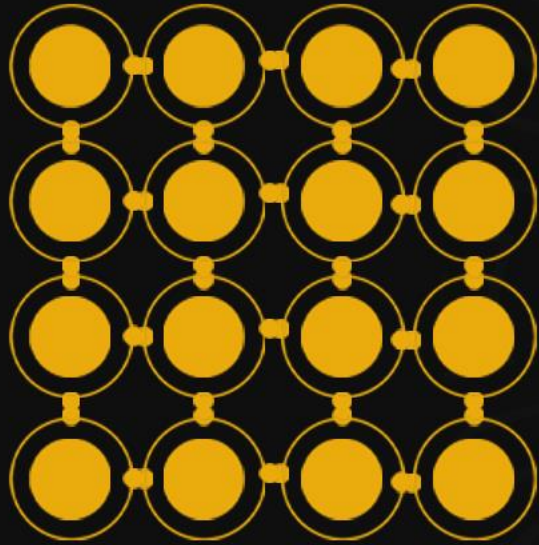
Enter keyword

Search



ORGANISMS

Organisms are more deliberate beings which form more distinct UI sections, like a full input form. They are constructed out of several molecules & atoms.



ORGANISMS

The wireframe shows a website layout on a dark background with a yellow border and grid. At the top, there is a dark grey header bar containing a placeholder for a logo (a rectangle with an 'X') on the left and four navigation buttons labeled 'Home', 'About', 'Contact', and 'Search' on the right. Below the header is a dark grey secondary bar containing a 'Language' dropdown menu on the left, a horizontal line representing a search bar in the center, and four square placeholder icons on the right. The main content area is divided into four input fields: 'Name' and 'Date' in the top row, and 'Email' and 'Message' in the bottom row. Each field contains a placeholder 'xxx' or 'xx / xx / xx'.

Name	Date
xxx	xx / xx / xx
Email	Message
xxx	xxx

HOW DOES IT WORK ?

Title

Search the site

ATOM

Form field

Enter keyword

ATOM

Button

Search

ATOM

HOW DOES IT WORK ?

Search the site

Enter keyword

Search

MOLECULE

HOW DOES IT WORK ?

Search the site

Enter keyword

Search



MOLECULE

ATOM



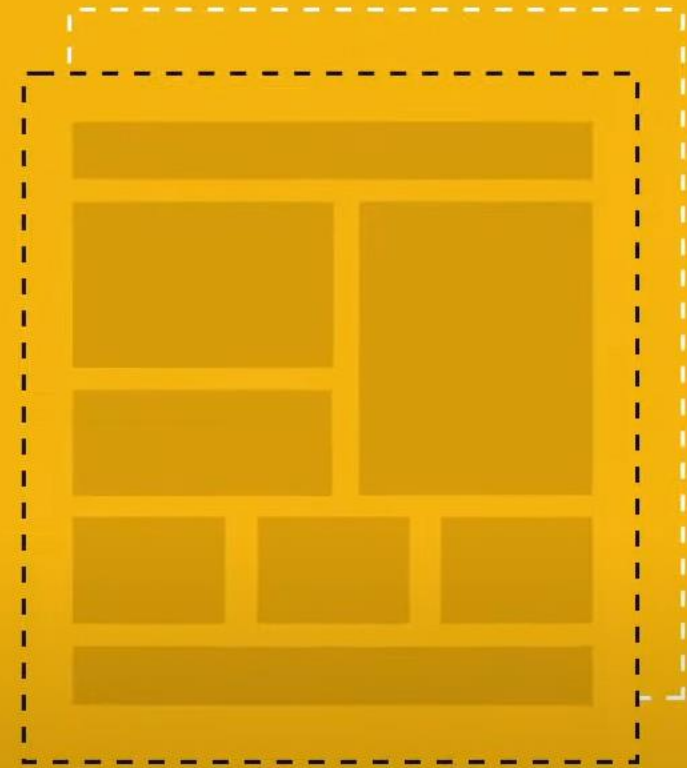
Templates are page-level structures. Blueprints, which are later filled with the content. It's crucial to remember that they serve as structures!

TEMPLATES

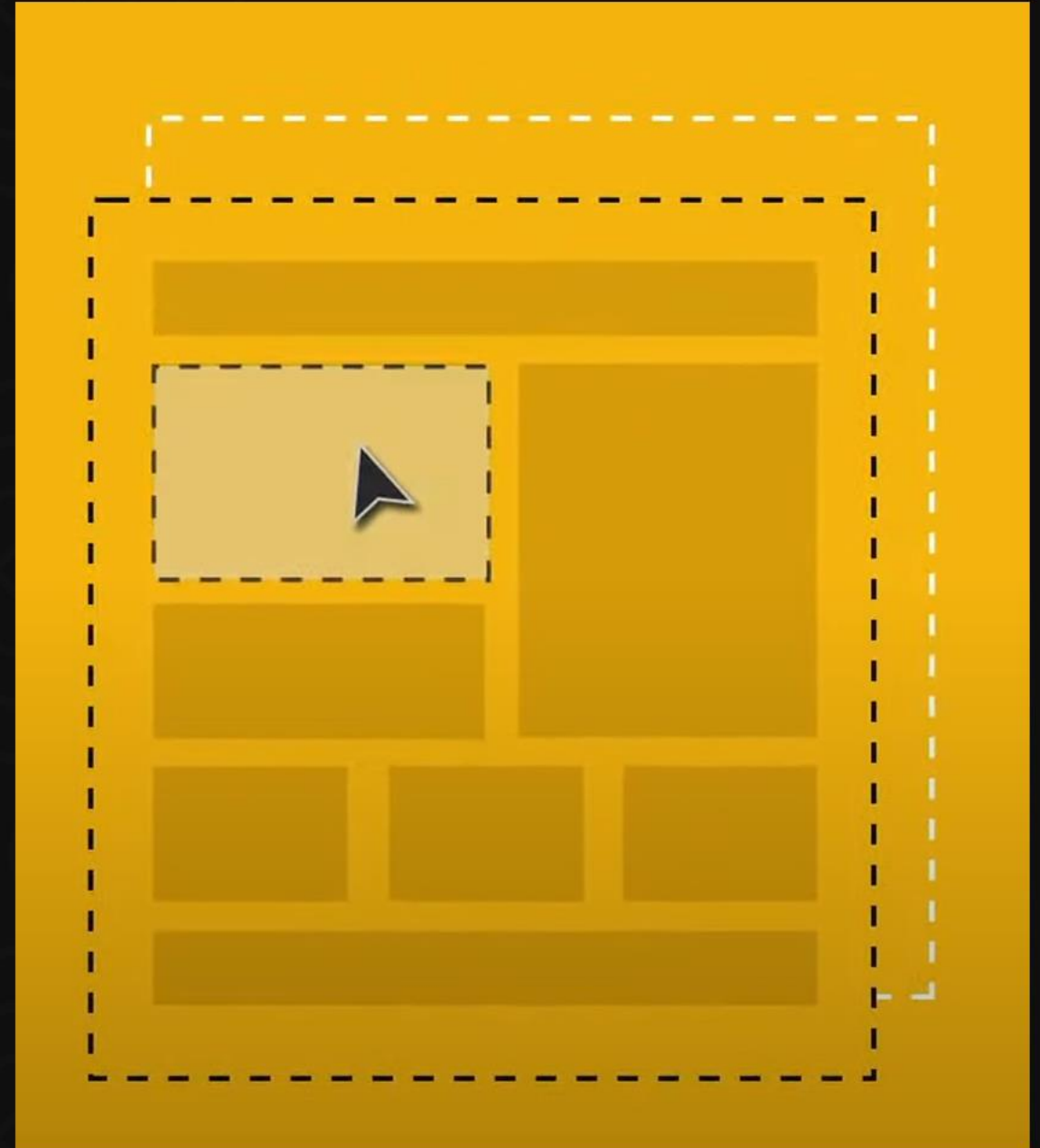
Search the site

Enter keyword

Search



Templates consists of multiple organisms. Its a wireframe of fully fuctional page without actual content.





PAGES

A final stage in Atomic Design framework. Those are templates filled with actual content, final UI pieces in our design.



Pages are the highest level of fidelity and because they're the most tangible, it's typically where most people in the process spend most of their time and what most reviews revolve around.



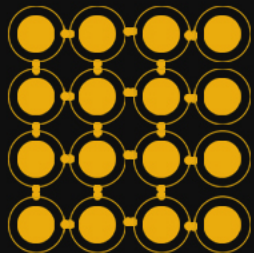
ATOMS

Basic UI elements



MOLECULES

Doing Components



ORGANISMS

Sections of Interface



TEMPLATES

Holds as a Glue



PAGES

What the World sees



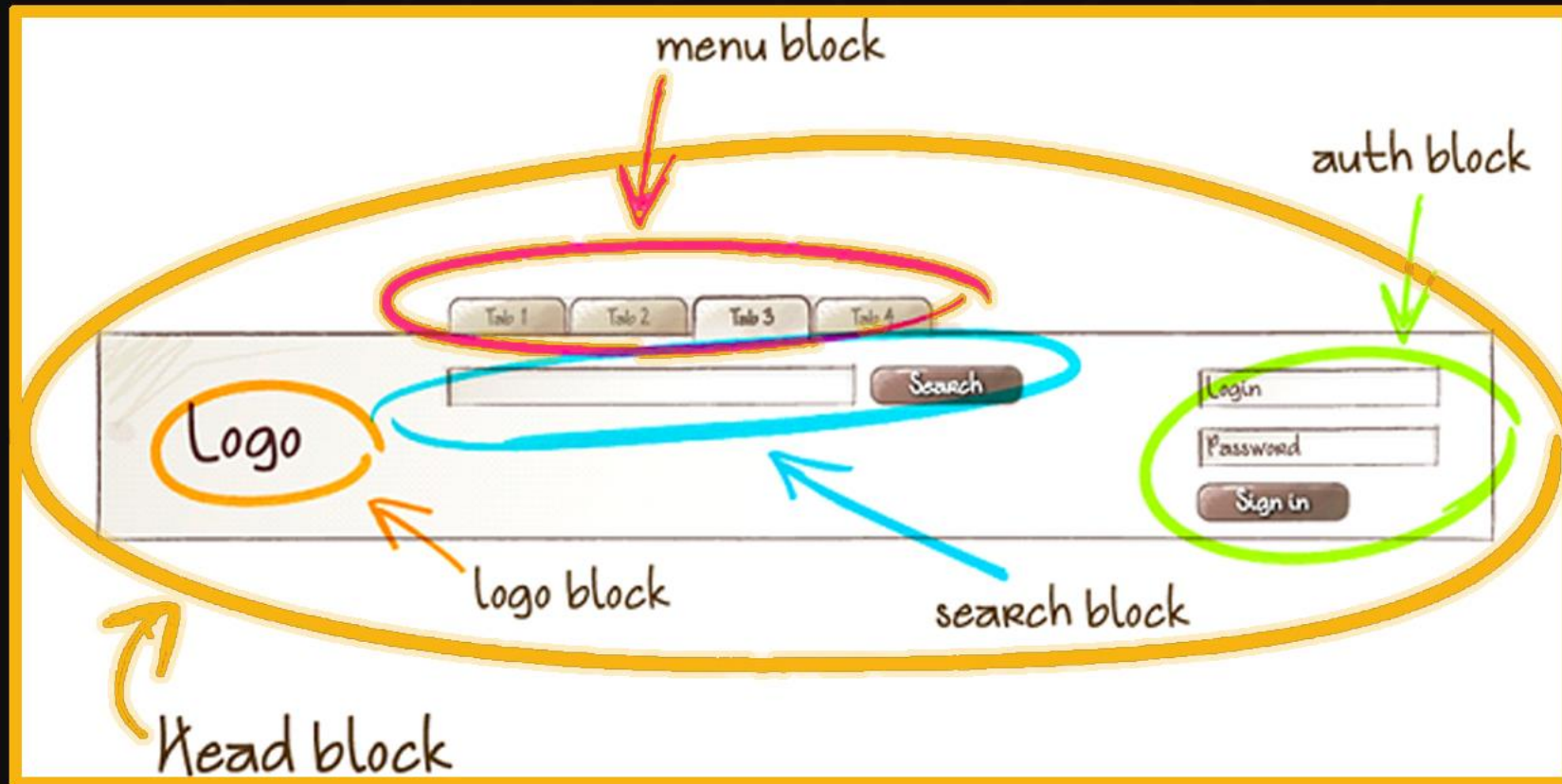
Does it help with
an understanding
of CSS naming
conventions such
as BEM?

Before deciding on this, let's understand what BEM is.

What is BEM?

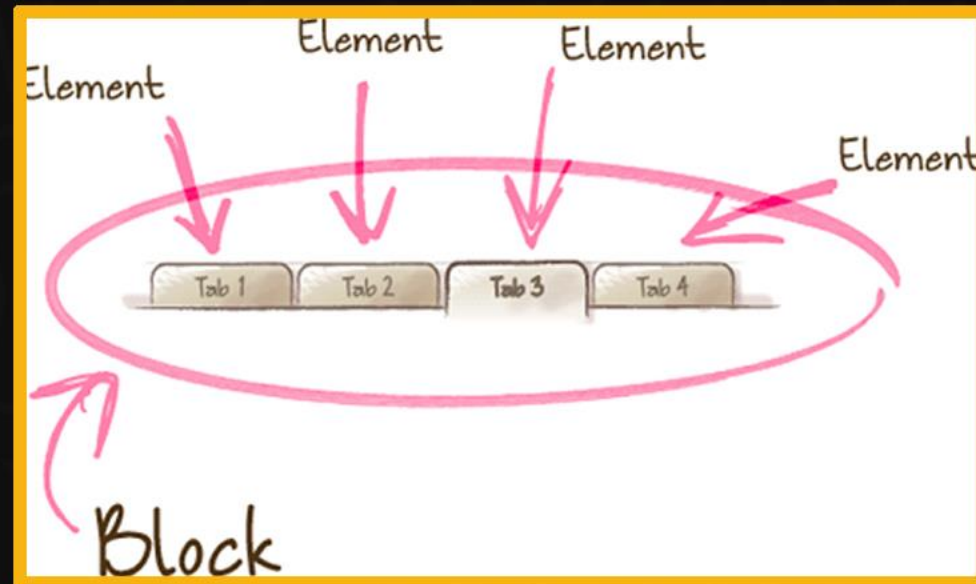
Block Element Modifier

Blocks – groups of elements



Element – the atomic level of HTML elements

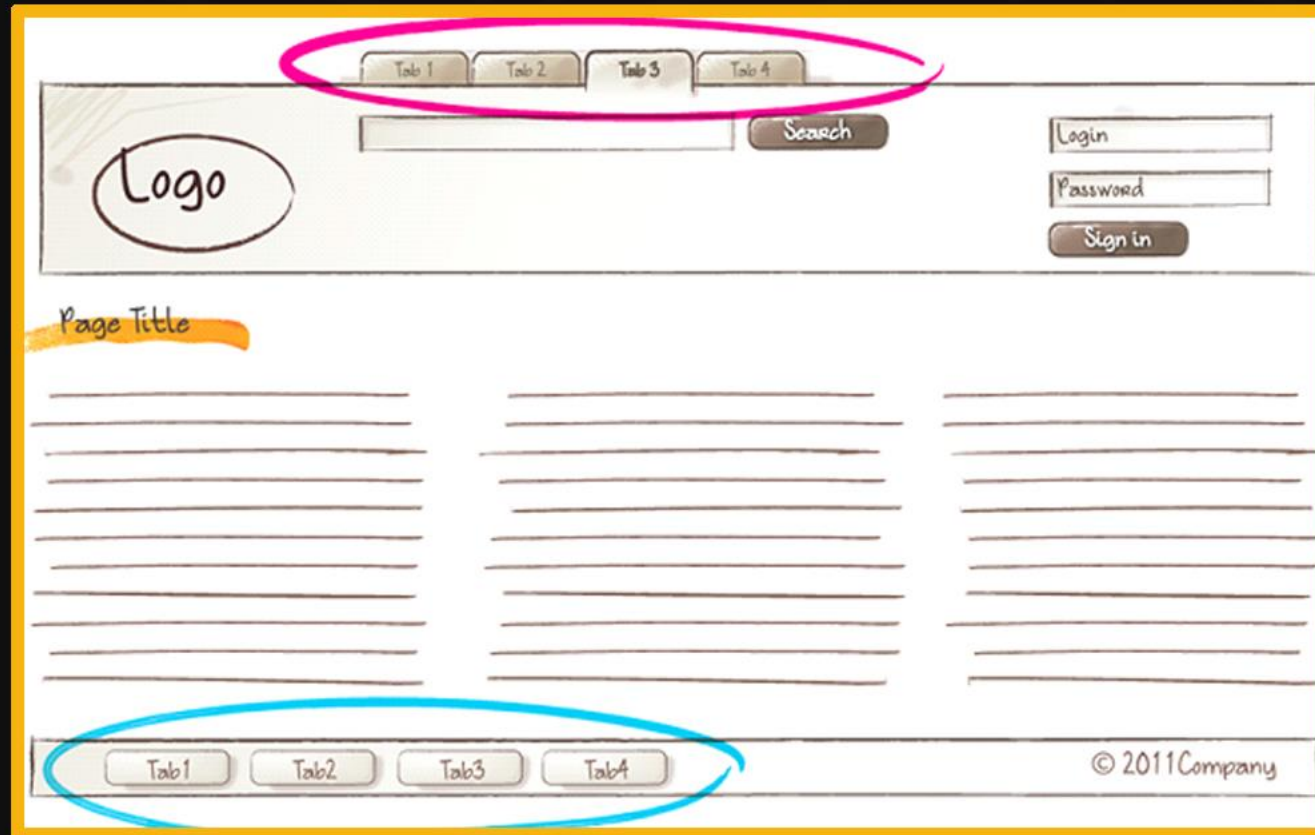
Part of a block. According to this convention, a menu item is not used outside of the context of a menu block, and therefore it is an element.



Modifier – See the active tab in the tab group

Eg: `menu _ _ tab - - active`

Defines the appearance and behavior of a block or an element.



Naming Conventions

block-name __ elem-name _ mod-name _ mod-val

1. The element name is separated from the block name by a double underscore (_ _)
2. The modifier name is separated from the block or element name by a single underscore (_)
3. The modifier value is separated from the modifier name by a single underscore (_)

Example

menu_ _item

menu_ _item_visible

menu_ _item_type_radio

Other naming conventions

Two--Dash Style ->

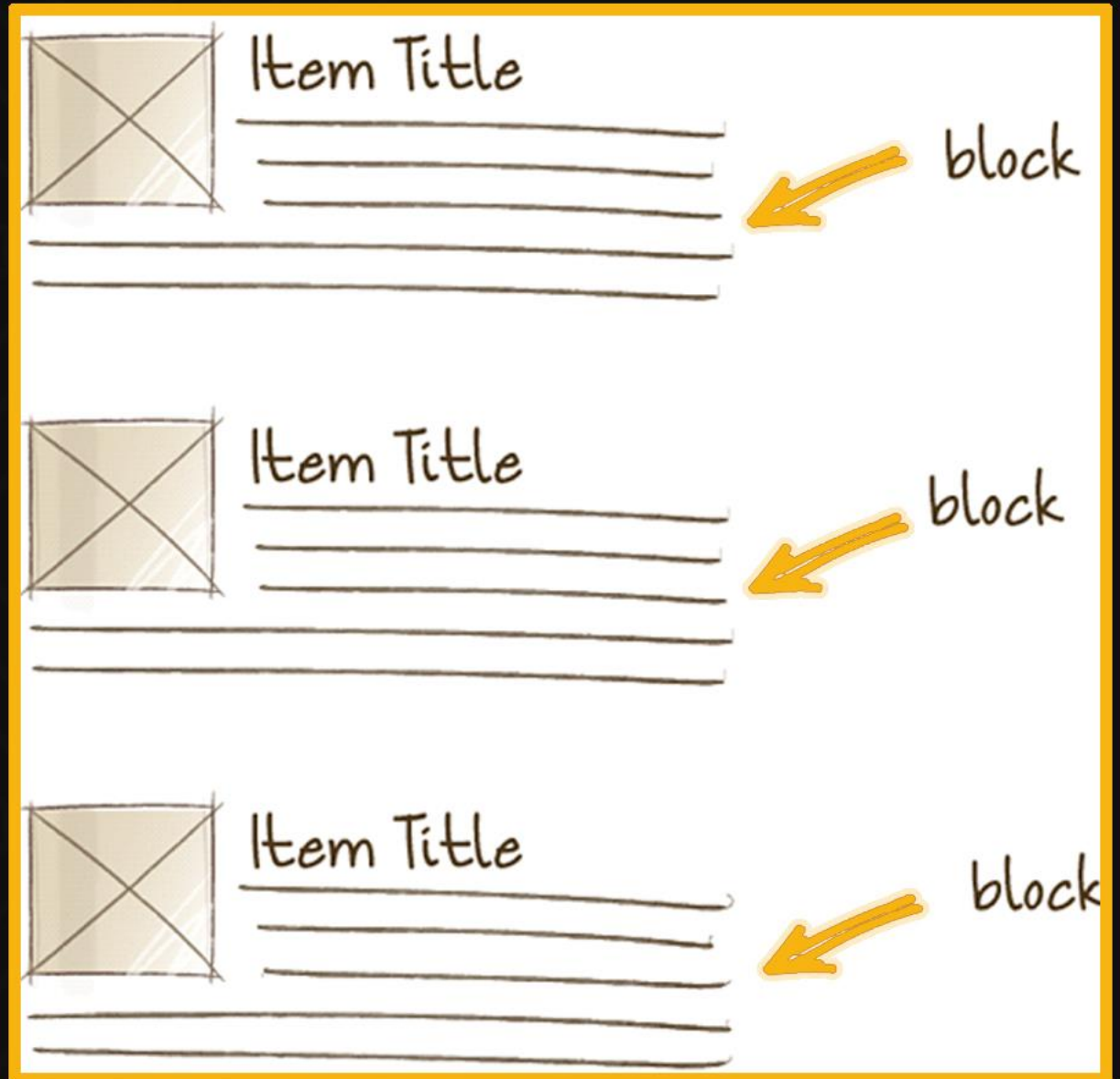
block-name _ _elem-name--mod-name--mod-val

camelCase Style ->

blockName-elemName _ modName _ modVal

ADVANTAGES

REUSE



Easily Maintainable

If we want to change the style of a `block_element`, we just need to update the block level styles, which will automatically update the whole application.

Self Documented Codebase

A developer would be able to understand the HTML DOM structure with just looking at the CSS file which is following BEM convention.

Supports css preprocessors like
SCSS/SASS

Example

In SCSS/SASS

```
1  .menu {
2    // menu block styles
3    background-color: red;
4
5    &__item {
6      // block__element styles
7      color: white;
8
9      &__hidden {
10     | // block__element_modifier styles
11     | display: none;
12     | }
13     }
14 }
```


The above SCSS/SASS will be converted to the following CSS

```
1  |.menu {
2    background-color: red;
3  }
4
5  .menu__item {
6    color: white;
7  }
8
9  .menu__item_hidden {
10   display: none;
11 }
12 /*# sourceMappingURL=style.css.map */
```

Live Demo?

Does Atomic Design help with an understanding of CSS naming conventions such as BEM?

Yes. It Does.

Since Atomic Design is about dividing the HTML pages into atomic and molecular levels, BEM is also similar to that methodology.

In BEM, a group of re-usable elements are grouped as blocks, which is similar to atoms grouped as molecules.

QUESTIONS



THANK YOU

