

Midterm Project: VitaFood

Ideation

vitaFood

A Healthy Dietary Advice App for Improving Micronutrient Deficiencies

Hidden hunger (also known as micronutrient deficiencies) is a deficiency in micronutrients that are essential for body function. Hidden hunger affects two billion people around the world and can have a serious impact and burden on both peoples health and society. After researching the issue, I realized that most people don't know about hidden hunger or if they are suffering from it, and that currently, the solutions to this problem are not very effective. Therefore, I designed a special food package to attract people to pay attention to this problem. And with the app, it guides people to live a healthier way of eating.





Background Information

- Hidden hunger (also known as micronutrient deficiencies) is a deficiency in micronutrients that are essential for body function.
- Hidden hunger affects two billion people around the world and can have a serious impact and burden on both people's health and society.

Background Research

Hidden Hunger

According to the World Health Organization (WHO), hidden hunger (also known as micronutrient deficiencies) is defined as the need for one or more of the 26 micronutrients that are essential for adequate body function.

It affects more than 2 billion individuals globally (FAO 2013).

1 in 3 people are affected by hidden hunger.

26 essential micronutrients are needed.

PREVALENCE OF ANEMIA AMONG PRESCHOOL-AGE CHILDREN, 1993-2005

Hidden hunger in children:

Micronutrient deficiencies can prevent children from reaching their physical and intellectual potential and even cause an estimated 1.1 million of the 3.1 million child deaths that occur each year as a result of undernutrition (Black et al. 2013; Black et al. 2008).

1 in 2 children under the age of 5 worldwide are lacking the right nutrients. Over 149 million kids under five are shorter than they should be.

" You might not feel it in the belly, but it strikes at the core of your health and vitality."

-Kul C. Gautam, former deputy executive director of UNICEF

Impact and consequences on people

- obesity
- stunting
- goiter
- higher mortality rate
- weakening the immune system
- fatigue
- anemia caused by iron deficiency
- learning impairment
- night blindness due to vitamin A deficiency
- scurvy
- chronic diseases
- mental impairment

Possible solutions on hidden hunger

food-based approaches:
dietary diversification
fortification of commercial foods
biofortification

In the short term:
vitamin and mineral supplements

behavioral change communication:
educate people about health services, sanitation and hygiene, and caring practices, as well as the need for greater empowerment of women at all levels.

Affects on the society and economy

In addition to affecting human health, hidden hunger can **curtail socioeconomic development**, particularly in **low- and middle-income countries**.

cutting gross domestic product by 0.7-2 percent

Although a larger proportion of the burden of hidden hunger is found in the developing world, micronutrient deficiency, particularly iron and iodine deficiency, is **also widespread in the developed world**.

Saltzman, A., Biró, E., Wiesman, D., Presel, N., Yohannes, Y., Menon, P., & Thompson, J. (2014). 2014 Global Hunger Index: The challenge of hidden hunger. Int'l Food Policy Res. Inst.

Background Information

After researching the issue, I realized that most people don't know about hidden hunger or if they are suffering from it, and that currently, the solutions to this problem are not very effective.

Competitive Analysis					
Methods	Vitamin & mineral supplements	Meal delivery service (MDS) / Meal kit delivery		Functional Agriculture	
First Appearance	1995	2007			2008 (concept)
Famous company		  			no branding
Price	    		    		  
Easy to Get	    		    		  
Coverage	    		    		  
Pros	Easy to obtain / low cost Easily accessible		Convenient / good nutrition / time saving		Wide coverage after roll-out Low cost Sustainable
Cons	Too many vitamins can be bad / take too much without reading it		Need regular / expensive / those who can afford it often less likely to have nutritional deficiencies		Development time for development / Lack of branding / Low level of satisfaction and trust



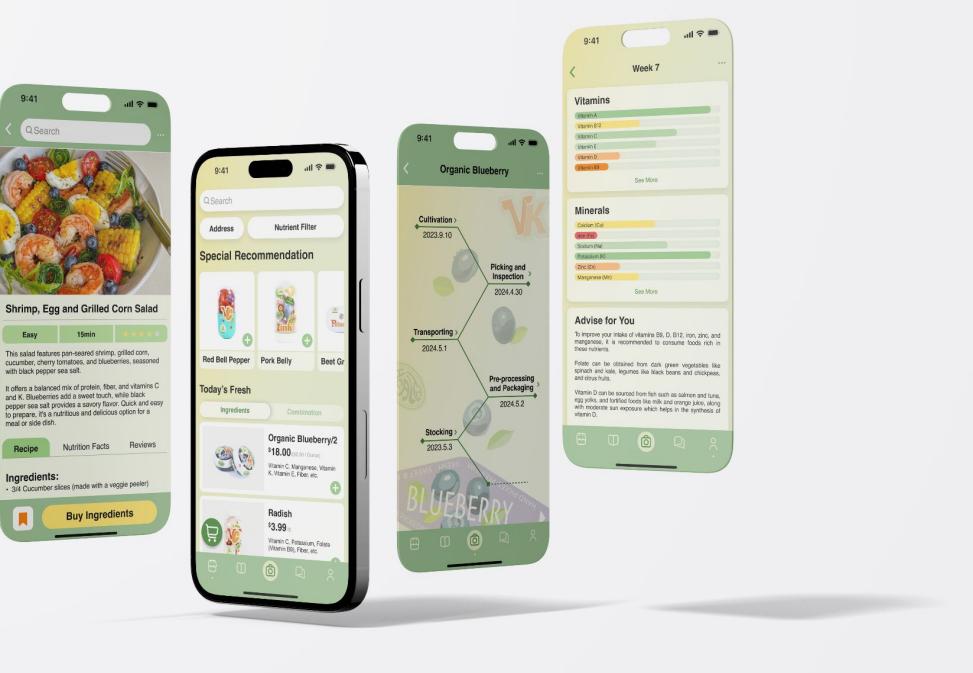
Branding & Packaging



Combine the brand name with the image of foods to create a lively and vibrant shape. Green and white were chosen as the main colors, embellished with sky blue and orange to convey the brands simple and healthy concept.



Redesign



Web

Redesign



VitaFood

Address Search

Log in/
Sign up 

SHOP RECIPES FORUM

Categories

- Fresh Fruits
- Fresh Vegetables
- Meat & Seafood
- Dairy, Cheese & Eggs
- Seasonal Fresh
- Special Offer

Special Recommendation



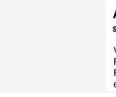
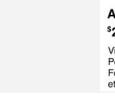
Today's Fresh

Nutrient Filter
Selecting the best option for you
based on nutritional elements

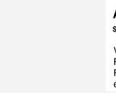
Vitamin A	Thiamine	Riboflavin
Folate	Vitamin C	Vitamin B6
Vitamin B12	Niacin	Vitamin D
Vitamin E	Calcium	Selenium
Vitamin K	Iodine	Zinc
Sodium	Potassium	Iron

Clear OK

Ingredients

 Blueberry \$18.00 /(\$2.00 / Ounce) Vitamin C, Manganese, Vitamin K, Vitamin E, etc.	 Blueberry \$18.00 /(\$2.00 / Ounce) Vitamin C, Manganese, Vitamin K, Vitamin E, etc.	 Blueberry \$18.00 /(\$2.00 / Ounce) Vitamin C, Manganese, Vitamin K, Vitamin E, etc.
 Radish \$3.99 /lb Vitamin C, Potassium, Folate (Vitamin B9), etc.	 Radish \$3.99 /lb Vitamin C, Potassium, Folate (Vitamin B9), etc.	 Radish \$3.99 /lb Vitamin C, Potassium, Folate (Vitamin B9), etc.
 Asparagus \$2.99 /lb Vitamin C, Potassium, Folate (Vitamin B9), etc.	 Asparagus \$2.99 /lb Vitamin C, Potassium, Folate (Vitamin B9), etc.	 Asparagus \$2.99 /lb Vitamin C, Potassium, Folate (Vitamin B9), etc.

Combination

 Blueberry \$18.00 /(\$2.00 / Ounce) Vitamin C, Manganese, Vitamin K, Vitamin E, etc.	 Blueberry \$18.00 /(\$2.00 / Ounce) Vitamin C, Manganese, Vitamin K, Vitamin E, etc.	 Blueberry \$18.00 /(\$2.00 / Ounce) Vitamin C, Manganese, Vitamin K, Vitamin E, etc.
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Redesign

Header

NavBar

SearchBar

NavBar 2

Cards style 1

Filter by nutrients

Cart

Cards style 2

Special Recommendation

Today's Fresh

Ingredients

Combination

Cart

View Cart

Outcome

VitaFood.

Search  6

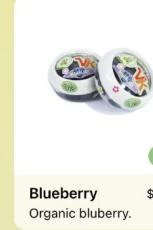
Special Recommendation

Category

- Seasonal Fresh
- Fresh Fruits
- Fresh Vegetables
- Meat & Seafood
- Dairy, Cheese & Eggs
- Special Offer



Beet
Green Beet. \$ 10



Blueberry
Organic blueberry. \$ 10



Pork
Full of zinc. \$ 10



Raddish
Vitamin C, Potassium, \$ 10

Today's Fresh



Beet
Green Beet. \$ 10



Blueberry
Organic blueberry. Vitamin C, Manganese, Vitamin K, Vitamin E, etc. \$ 10



Pork
Full of zinc. \$ 10



Raddish
Vitamin C, Potassium, Folate (Vitamin B9), etc. \$ 10

Outcome

The image displays two side-by-side screenshots of a mobile application named "VitaFood". Both screenshots show a search results page for the query "blueberry".

Left Screenshot:

- Search Bar:** blueberry
- Category Sidebar:** Seasonal Fresh, Fresh Fruits, Fresh Vegetables, Meat & Seafood, Dairy, Cheese & Eggs, Special Offer.
- Results:** A grid of 10 items:
 - Blueberry \$10: Organic bluberry. Vitamin C, Manganese, Vitamin K, Vitamin E, etc. Add To Cart.
 - Blueberry \$10: Organic bluberry. Add To Cart.
 - grayscale photography of round fruits \$9: Blueberries Add To Cart.
 - blueberries on white ceramic container \$9: From Unsplash Add To Cart.
 - berry lot \$14: From Unsplash Add To Cart.
 - blue round fruits on green \$23: Add To Cart.
 - brown round ornament on brown \$6: Add To Cart.
 - blue and white round fruits \$7: Add To Cart.

Right Screenshot:

- Search Bar:** blueberry
- Category Sidebar:** Seasonal Fresh, Fresh Fruits, Fresh Vegetables, Meat & Seafood, Dairy, Cheese & Eggs, Special Offer.
- Results:** A grid of 10 items:
 - Blueberry \$10: Organic bluberry. Vitamin C, Manganese, Vitamin K, Vitamin E, etc. Add To Cart.
 - Blueberry \$10: Organic bluberry. Add To Cart.
 - grayscale \$9: Blueberries Add To Cart.
 - blueberry \$9: From Unsplash Add To Cart.
 - berry lot \$14: From Unsplash Add To Cart.
 - blue \$23: From Unsplash Add To Cart.
 - brown \$6: From Unsplash Add To Cart.
 - blue and \$7: From Unsplash Add To Cart.

Outcome

VitaFood.

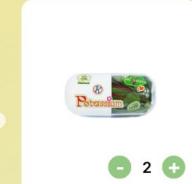
Special Recommendation

avocado 

Category

- | Seasonal Fresh
- Fresh Fruits
- Fresh Vegetables
- Meat & Seafood
- Dairy, Cheese & Eggs
- Special Offer

Today's Fresh

 Beet Green Beet. -	2	+
 Blueberry Organic blueberry. +		
 Pork Full of zinc. -	1	+

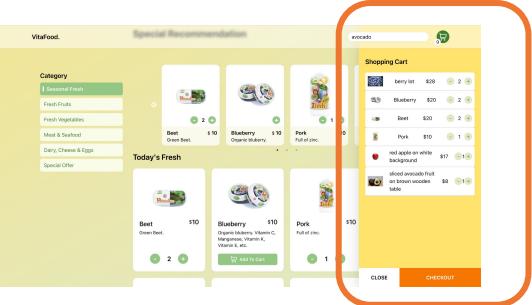
Add To Cart

Shopping Cart

 berry lot	\$28	-	2	+
 Blueberry	\$20	-	2	+
 Beet	\$20	-	2	+
 Pork	\$10	-	1	+
red apple on white background	\$17	-	1	+
sliced avocado fruit on brown wooden table	\$8	-	1	+

CLOSE **CHECKOUT**

A Little Codes: Shopping Cart



Shopping Cart:

Carts:

```
6
7 const CartItem = (props) => {
8   const { productId, quantity, product } = props.data
9   const [detail, setDetail] = useState({})
10  const dispatch = useDispatch()
11
12  useEffect(() => {
13    // const findDetail = products.filter(product => product.id === productId)
14    // setDetail(findDetail)
15
16    const found = products.find(p => p.id === productId);
17    if (found) {
18      setDetail(found);
19    } else if (product) {
20      setDetail(product);
21    } else {
22      setDetail(null);
23    }
24  }, [productId])
25
26  if (!detail) return null;
27
28  const handleMinusQuantity = () => {
29    dispatch(changeQuantity({
30      productId: productId,
31      quantity: quantity - 1
32    }));
33  }
34
35  const handlePlusQuantity = () => {
36    dispatch(changeQuantity({
37      productId: productId,
38      quantity: quantity + 1
39    }));
40
41
42  return (
43    <div className="flex justify-between items-center bg-white text-black p-2 border rounded-full w-10 h-10 object-contain" />
44      <img src={detail.image} alt="" className="w-12 h-10 object-contain" />
45      <h3>{detail.name}</h3>
46      <p>${detail.price * quantity}</p>
47      <div className="w-20 flex justify-between items-center">
48        <button className="bg-[#E1E9C5] rounded-full w-6 h-6 font-semibold text-white py-1 px-2" onClick={() => handleMinusQuantity()}>-</button>
49        <span className="relative top-[0.5px]">{quantity}</span>
50        <button className="bg-[#E1E9C5] rounded-full w-6 h-6 font-semibold text-white py-1 px-2" onClick={() => handlePlusQuantity()}>+</button>
51      </div>
52    )
53  )
54
55  </div>
56)
57
58
59
60  export default CartItem
```

Cart Item:

```
JS CartItem.js
JS CartTab.js
```

```
stores
JS Cart.js
JS index.js
```

```
1 import { createSlice } from "@reduxjs/toolkit";
2
3 const initialState = {
4   items: localStorage.getItem("carts") ? JSON.parse(localStorage.getItem("carts")) : [],
5   statusTab: false
6 }
7
8 const cartSlice = createSlice({
9   name: "cart",
10  initialState,
11  reducers: {
12    addCartItem(state, action) {
13      const { product, quantity } = action.payload
14      const productId = product.id
15      const indexProductId = (state.items).findIndex(item => item.productId === productId)
16
17      if (indexProductId === -1) {
18        state.items.push({ productId, quantity, product })
19      } else {
20        state.items[indexProductId].quantity += quantity
21        state.items[indexProductId].product = product
22      }
23    },
24    localStorage.setItem("carts", JSON.stringify(state.items))
25  },
26  extraReducers: {}
27}
28
29 changeQuantity(state, action) {
30   const { productId, quantity } = action.payload
31   const indexProductId = (state.items).findIndex(item => item.productId === productId)
32
33   // ignore it if can't find
34   if (indexProductId === -1) return
35
36   if (quantity > 0) {
37     state.items[indexProductId].quantity = quantity
38   } else {
39     // delete state.items[indexProductId]
40     state.items = (state.items).filter(item => item.productId !== productId)
41   }
42   localStorage.setItem("carts", JSON.stringify(state.items))
43
44   toggleStatusTab(state) {
45     if (state.statusTab === false) {
46       state.statusTab = true
47     } else {
48       state.statusTab = false
49     }
50   }
51 }
52
53 export const { addToCart, changeQuantity, toggleStatusTab } = cartSlice.actions
54 export default cartSlice.reducer
```

A Little Codes: Slide Card

VitaFood.

Special Recommendation

Search 0

Category

- Seasonal Fresh
- Fresh Fruits
- Fresh Vegetables
- Meat & Seafood
- Dairy, Cheese & Eggs

Today's Fresh

Elements Console Sources Network Performance Memory Application Privacy and security Lighthouse Recorder

```
<button type="button" data-role="none" class="slick-arrow slick-prev" style="display: block;"></button>
<div class="slick-track" style="width: 322px; opacity: 1; transform: translate3d(-1414px, 0px, 0px);>
  :before
    <div data-index="-4" tabindex="1" class="slick-slide slick-cloned" aria-hidden="true" style="width: 20px;"></div>
    <div data-index="-3" tabindex="1" class="slick-slide slick-cloned" aria-hidden="true" style="width: 20px;"></div>
    <div data-index="-2" tabindex="1" class="slick-slide slick-cloned" aria-hidden="true" style="width: 20px;"></div>
    <div data-index="-1" tabindex="1" class="slick-slide slick-cloned" aria-hidden="true" style="width: 20px;"></div>
    <div data-index="0" class="slick-slide tabindex="1" aria-hidden="true" style="outline: none; width: 20px;"></div>
    <div data-index="1" class="slick-slide tabindex="2" aria-hidden="true" style="outline: none; width: 20px;"></div>
    <div data-index="2" class="slick-slide tabindex="3" aria-hidden="true" style="outline: none; width: 20px;"></div>
    <div data-index="3" class="slick-slide slick-active slick-current" tabindex="4" aria-hidden="false" style="outline: none; width: 20px;"></div>
  </div>
  <div class="tabindex="1" style="width: 100%; display: inline-block;">
    <div class="grid grid-cols-3 items-center bg-[#F8FAEC] rounded-bxl p-2">
      <div class="grid grid-cols-2 object-contain w-full h-full p-2 item">
        <img alt="Radish" class="col-span-2 object-contain w-full h-full p-2 item">
      </div>
      <div class="grid grid-cols-3 items-center bg-[#F8FAEC] rounded-bxl p-2">
        <div class="col-start-2 pb-2 pr-3 -mt-5 -ml-5"></div>
      </div>
    </div>
  </div>
```

React Stick Docs API Examples GitHub

Get Started API Examples SimpleSlider Multiplettes Responsive Resizable Resizeable Multiplettes CenterMode Fade LazyLoad VariableWidth AdaptiveHeight AutoPlay PauseOnHover AutoPlayMethods AutoNextMethods AutoPrevMethods SwipeToSlide CustomPaging

Multiple Items

```
import React from "react";
import Slider from "react-slick";
import "slick-carousel/slick/slick.css";
import "slick-carousel/slick/slick-theme.css";

function MultipleItems() {
  const settings = {
    dots: true,
    infinite: true,
    speed: 500,
    slidesToShow: 4,
    slidesToScroll: 3,
    responsive: [
      { breakpoint: 1024, settings: { slidesToShow: 3, slidesToScroll: 2 } },
      { breakpoint: 640, settings: { slidesToShow: 2, slidesToScroll: 1 } }
    ]
  };

  const carts = useSelector(store => store.cart.items);
  const dispatch = useDispatch();

  return (
    <div className="slider-container">
```

Slide Card:

```
1 import React from "react";
2 import Slider from "react-slick";
3 import { products } from "../ProductList";
4 import { useSelector, useDispatch } from "react-redux";
5 import { addToCart, changeQuantity } from "../stores/Cart";
6 import "slick-carousel/slick/slick.css";
7 import "slick-carousel/slick/slick-theme.css";
8
9 const SlideCard = () => {
10   const settings = {
11     dots: true,
12     infinite: true,
13     speed: 500,
14     slidesToShow: 4,
15     slidesToScroll: 3,
16     responsive: [
17       { breakpoint: 1024, settings: { slidesToShow: 3, slidesToScroll: 2 } },
18       { breakpoint: 640, settings: { slidesToShow: 2, slidesToScroll: 1 } }
19     ]
20   };
21
22   const carts = useSelector(store => store.cart.items);
23   const dispatch = useDispatch();
24 }
```

A Little Codes: API

VitaFood.

Category

- Seasonal Fresh
- Fresh Fruits
- Fresh Vegetables
- Meat & Seafood
- Dairy, Cheese & Eggs
- Special Offer

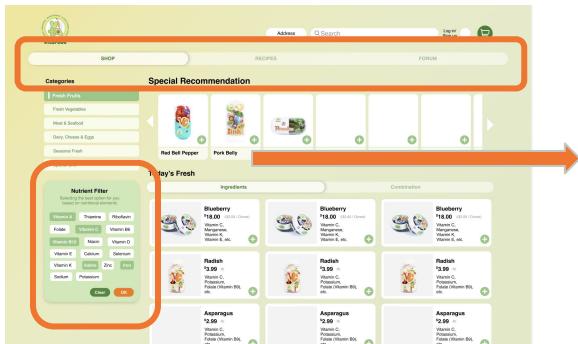
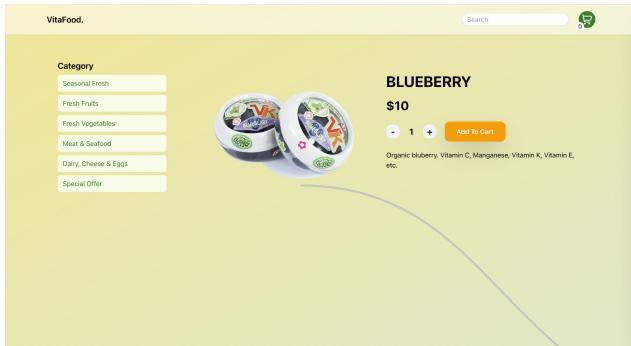
The screenshot shows a grocery store interface. On the left, there's a sidebar with categories like Seasonal Fresh, Fresh Fruits, and Fresh Vegetables. The main area displays a grid of products. Some products are from the store's inventory (e.g., Carrot for \$10, orange for \$24) and others are from Unsplash (e.g., green carrots for \$22, carrots for \$19, a pile of carrots for \$12, two carrots for \$19). Each product card includes an 'Add To Cart' button. An orange box highlights the search bar at the top, which contains the word 'carrot'.

Category	Item Description	Price
Seasonal Fresh	Carrot (Green Beet)	\$10
Fresh Fruits	orange (A bunch of carrots)	\$24
Fresh Vegetables	orange carrots (carrots)	\$13
Meat & Seafood	3 carrots (Carrots on a cut)	\$10
Dairy, Cheese & Eggs	green (From Unsplash)	\$22
Special Offer	carrots (Fresh Carrots)	\$19
	a pile of (Fresh carrots at a Farmer's Market)	\$12
	two (From Unsplash)	\$19

```
src > JS api.js > ...
1 import axios from "axios";
2
3 // Search images from Unsplash
4 const searchImages = async (term) => {
5   const response = await axios.get("https://api.unsplash.com/search/photos", {
6     headers: {
7       Authorization: "Client-ID " + process.env.REACT_APP_UNSPLASH_KEY,
8     },
9     params: {
10       query: term,
11       per_page: 12,
12     },
13   });
14
15   return response.data.results;
16
17 }
18
19
export default searchImages;
```

Future part

An empty detail page.

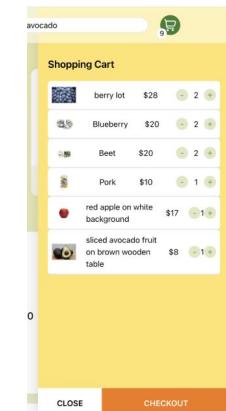


And some other pics need to be photoshopped and add.

It supposed to be like this.

The navbar and the filter.

A clear all button is needed.
And item from api now has a different height
from others.



What I modified after presentation:

Added a Load More button on the search result page.

VitaFood.

Category

- Seasonal Fresh
- Fresh Fruits
- Fresh Vegetables
- Meat & Seafood
- Dairy, Cheese & Eggs
- Special Offer

Search: carrots

Today's Fresh

Category	Item	Price
Seasonal Fresh	Beet	\$10
Fresh Fruits	Blueberry	\$10
Fresh Vegetables	Pork	\$10
Meat & Seafood	Raddish	\$10
Dairy, Cheese & Eggs		
Special Offer		

Add To Cart

carrots \$13
Fresh Carrots

a pile of \$22
Fresh carrots at Farmer's Market

two \$7
From Unsplash

carrot

CLOSEUP
Organic Carrots

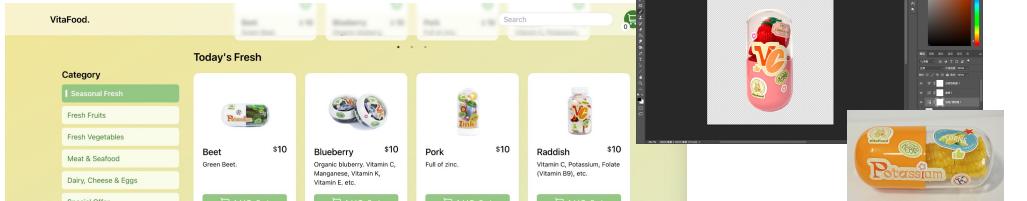
orange \$21
Unporn: Does size matter?

a bunch \$20
From Unsplash

orange \$9
Bright orange carrots

person \$14
From Unsplash

Load More



Added more product pics.

VitaFood.

Category

- Seasonal Fresh
- Fresh Fruits
- Fresh Vegetables
- Meat & Seafood
- Dairy, Cheese & Eggs
- Special Offer

Search: carrots

Shopping Cart

Item	Quantity	Price
Beet	2	\$20
Pork	1	\$10
Red pepper	1	\$5
Organic carrots	1	\$10
Total		\$50

Clear All

Checkout

Close

Added the clear button.
Fixed the text overflow problems.

References

Slide Card:

[MultipleItems | React Slick](#)

[How to make Card Slider in React JS | React Slick](#)

Shopping Cart:

[Shopping Cart In React Js For Newbies](#)

Tailwind css:

[Grid Template Columns - Tailwind CSS](#)

And MOST importantly, all notes from our class's Github repo (thanks so much 😊) :

https://github.com/Kadee80/Dynamic_Web_F25_Graduate/tree/main