OCCSS

Online Coronavirus Combat Supply Store

Our solution to **COVID-19**

01 - PLANNING

Phase I – presented by Kyle

- Project scope & system overview

02 – SYSTEM ANALYSIS

Phase II – presented by Luis

- System description with use case + data flow diagrams

03 – SYSTEM DESIGN

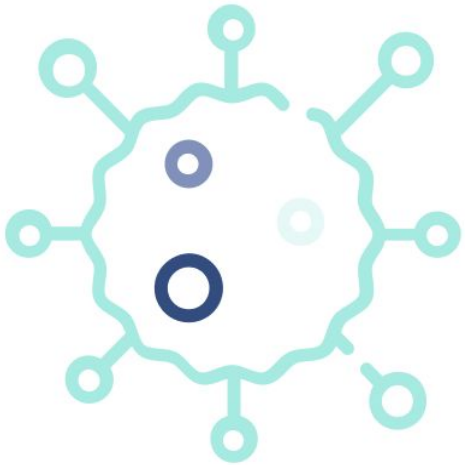
Phase III – presented by Bing

- Database design: E-R
- GUI design

04 – WORKING PROTOTYPE

Phase IV – presented by Aleena

- Working pages, test case execution, and operations



COVID-19 BREAKDOWN

- The dangers and symptoms surrounding COVID-19 are developing everyday, but we know:
  - Immunocompromised individuals are more at risk
  - Amount of exposure can heighten risk
  - Handwashing, sanitizing, wearing masks and social distancing reduce exposure

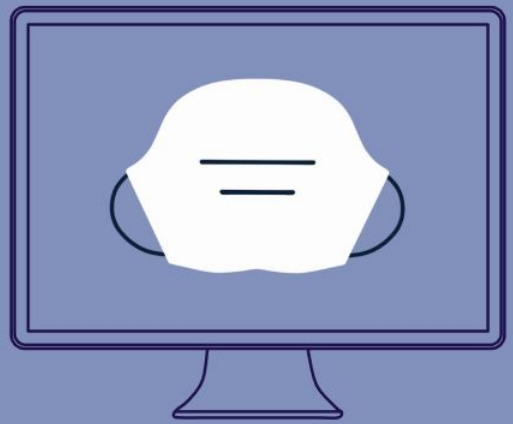
HOW ARE WE FIGHTING THESE ISSUES?

OCCSS DELIVERS

- Combats supply chain issues by being direct-to-consumer
- NO price gouging!
- Provides essentials to people unable to get them from lack of supply, in food deserts and areas around the world with supply shortages
- Important supplies: masks, gloves, grocery items, medicine, grooming & personal care items, & more

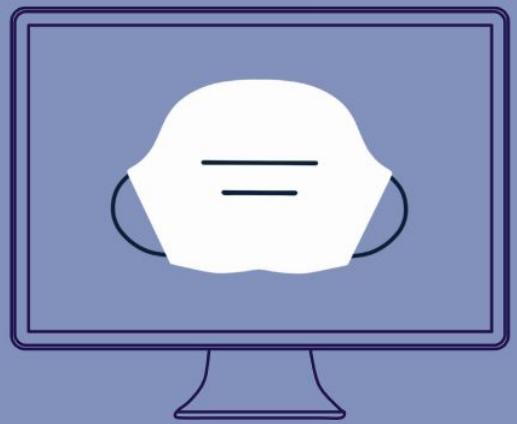
OCCSS: BASIC FUNCTIONALITY

- Users will need to register – giving basic information like address, email, etc.
- Added convenience for having customer information stored, and will help OCCSS with tracking and calculating supply needs
- Help to limit users from over-ordering, and will allow us to implement a subscription feature
- 2FA for user protection



OCCSS: BASIC FUNCTIONALITY

- Detailed item descriptions, keywords, and a search bar
- A no-return policy – discourages over-buying and will prevent the transmission of the virus
- Package tracking
- Other plans and possibilities:
  - Priority system for the most-needy individuals
  - Emergency button for dire essentials

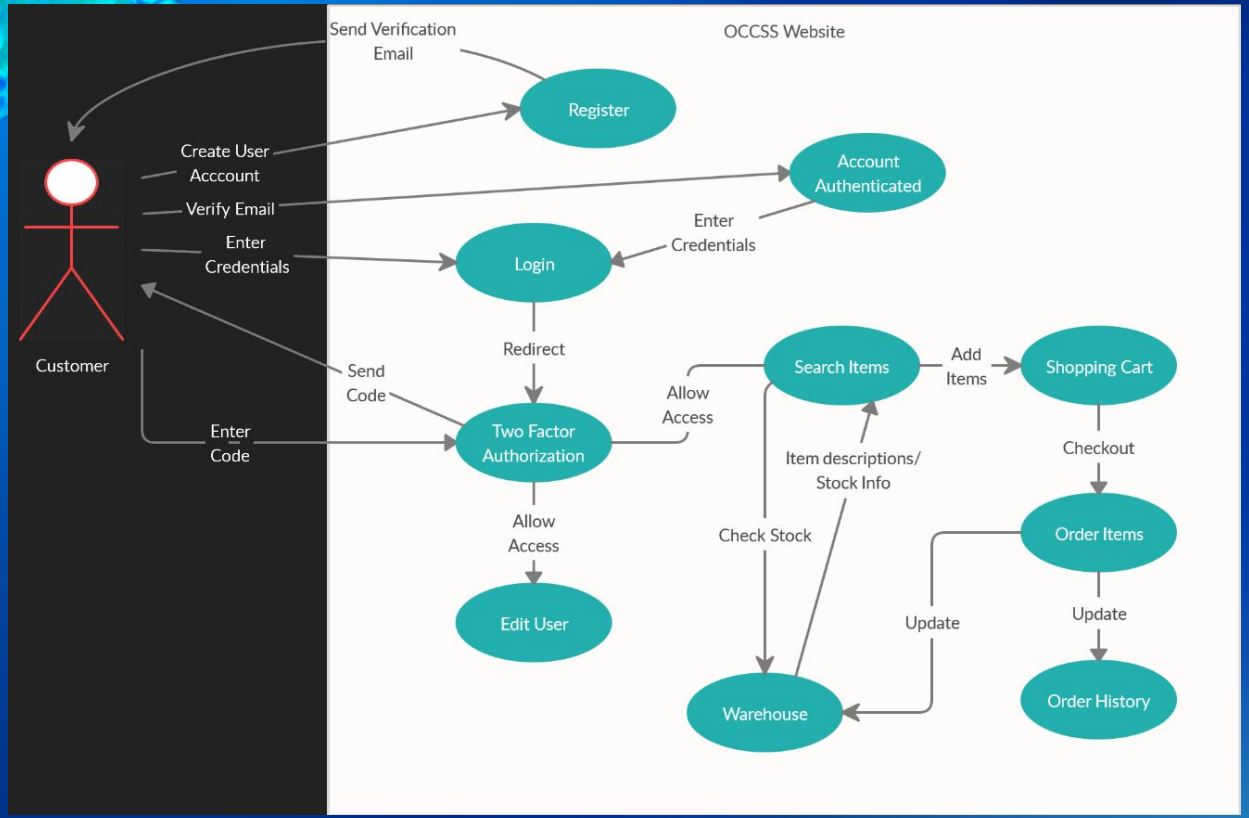


Phase 2

System Analysis

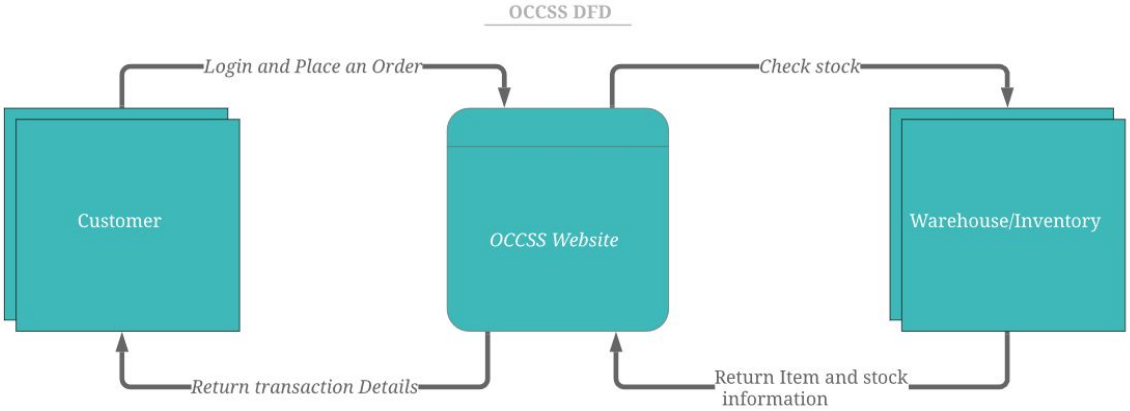
Context diagram DFD-0

Use Case Diagram



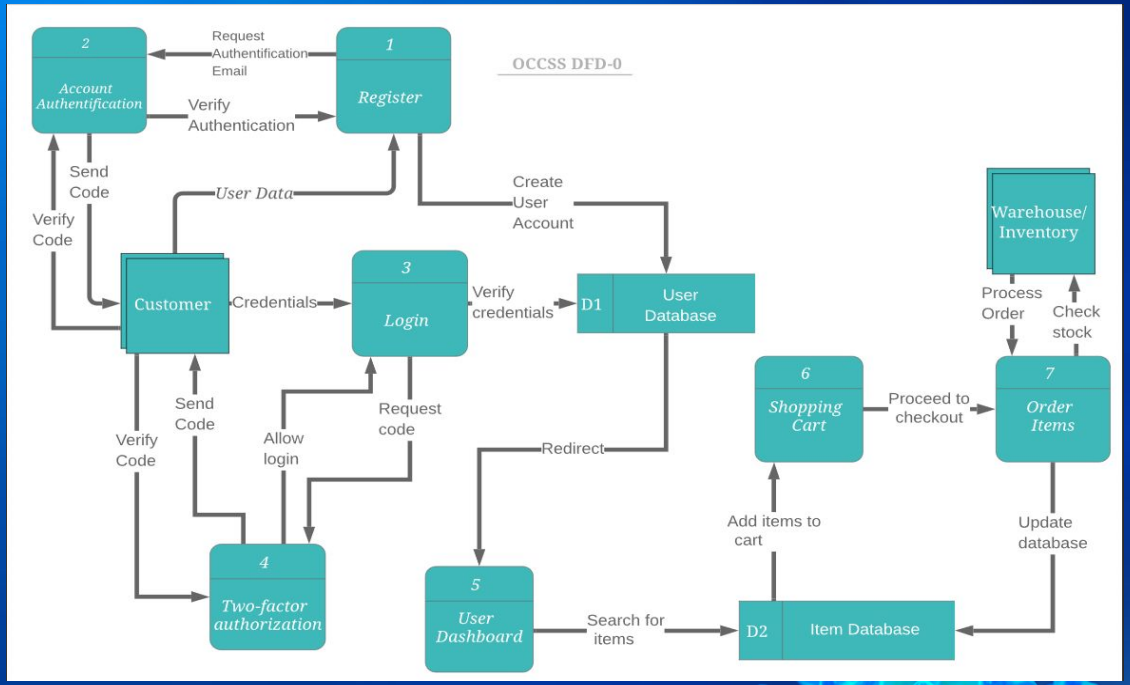
1. Served to give the general Idea of how the site should flow from the users point of view.
2. Limited to the user, website and Warehouse elements at this point of production.
3. When presenting the website this slide will be briefly revisited to show the relation with the actual website.

Data Flow Diagram



- General flow of the transactions between the customer and the warehouse/Inventory

Level 0-Data Flow Diagram



- In depth view of the inner workings of the OCCSS website.
- Customer and Warehouse are the entities at this point in production
- Our working pages are composed of Register, Account verification, Two Factor Authorization, Shopping Cart
- User Database and item database hold the data in the website

ONLINE CORONAVIRUS COMBAT SUPPLY STORE (OCCSS)

PHASE 3: SYSTEM DESIGN

Prof. Kevin Byron
CSC 350 1100

Aleena Tim
Chaobing Zheng
Kyle Laney
Luis Marcano

The way we completed phase 3

Pictures from week 10 lecture

- Entity relationships and mapping

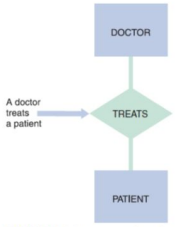


FIGURE 9-14 In an entity-relationship diagram, entities are labeled with singular nouns and relationships are labeled with verbs. The relationship is interpreted as a simple English sentence.

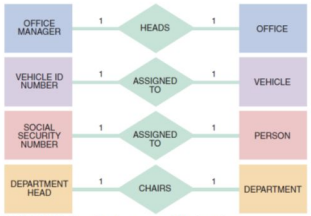


FIGURE 9-15 Examples of one-to-one (1:1) relationships.

- Entity relationships and mapping

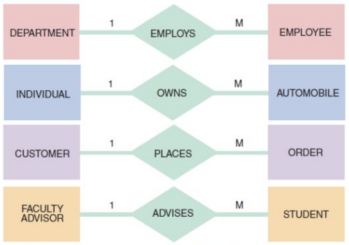
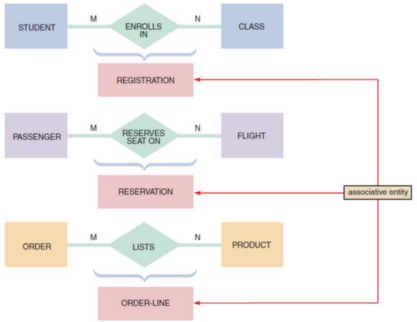


FIGURE 9-16 Examples of one-to-many (1:M) relationships.



Data design

- A table is in third normal form (3NF) if every non-key field depends on the primary key
- An example of a table not in 3NF:
  - CUSTOMER (CUSTOMER-NUM, CUSTOMER-NAME, ADDRESS, SALES-REP-NUM, SALES-REP-NAME)

in 2NF, the nonkey field SALES-REP-NAME is functionally dependent on another nonkey field, SALES-REP-NUM

CUSTOMER IN 2NF

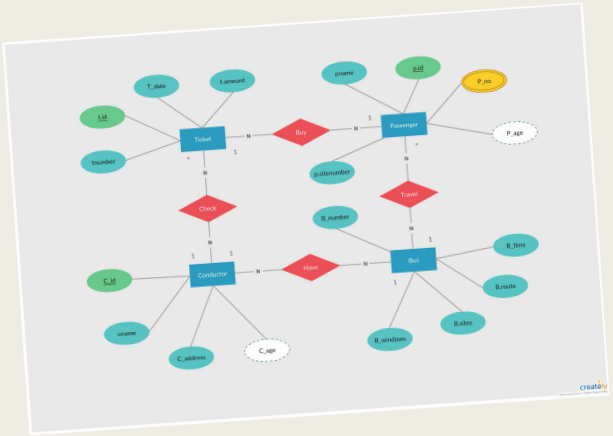
RECORD#	CUSTOMER-NUM	CUSTOMER-NAME	ADDRESS	SALES-REP-NUM	SALES-REP-NAME
1	108	Benedict, Louise	San Diego, CA	41	Kaplan, James
2	233	Corell, Helen	Nashua, NH	22	McBride, Jon
3	254	Gomez, J.P.	Butte, MT	38	Stein, Ellen
4	431	Lee, M.	Snow Camp, NC	74	Roman, Harold
5	779	Paulski, Diane	Lead, SD	38	Stein, Ellen
6	800	Zuider, Z.	Greer, SC	74	Roman, Harold

FIGURE 9-25 2NF design for the CUSTOMER table.

We first re-read the content of lecture again, and have a new understanding of the ER diagram and Table from the textbook. Then Luis put forward an idea that we can use the “double" mode (will be discussed later).

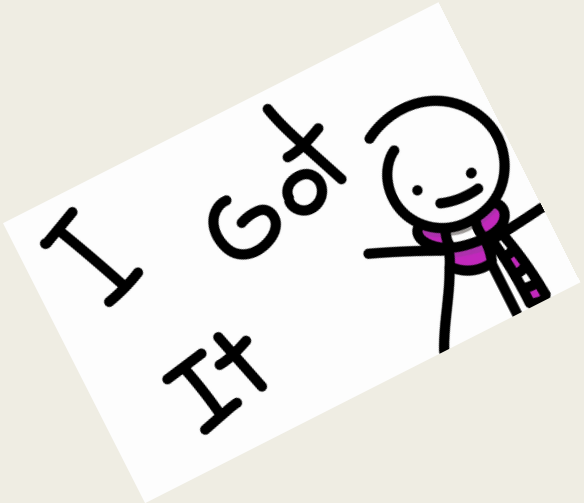
What we did for Phase three?

- (1) Database Design: E-R (entity relationship) diagram and its corresponding relational tables
- (2) GUI(Graphical user interfaces) design: the layout and design of Web pages without code

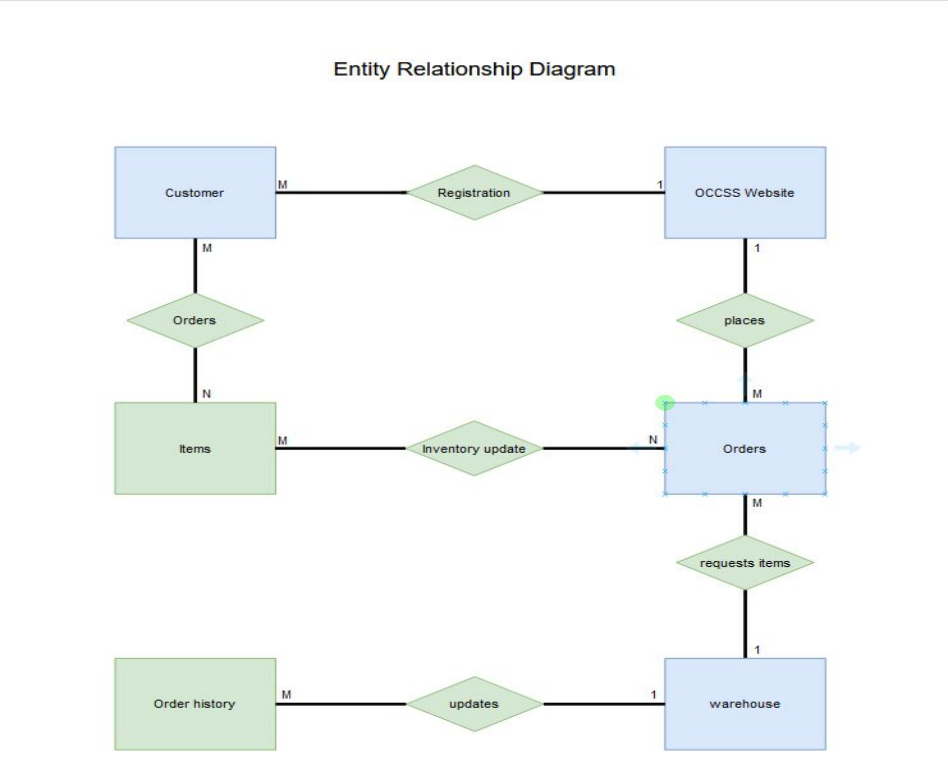


What is E-R (entity relationship) diagram?

- An entity-relationship diagram (ERD) shows the relationships of entity sets stored in a database. An entity in this context is an object, a component of data. An entity set is a collection of similar entities. These entities can have attributes that define its properties.
- Basically, it is a type of flowchart that illustrates how “entities” such as people, objects or concepts relate to each other within a system.



How's our E-R Diagram?



Instead of choose by Many to Many, or one to many, we decide to use both of them to make our E-R diagram more flexible and complete.

Corresponding relational tables by E-R Diagram

Data Normalization fields in 3NF

Customer(**Customer-Number**, customer_firstname, customer_lastname, customer_address, customer_phone, customer_email, customer_password, customer_two_factor)
Order history(**Order-Number**, customer_number, date, item_id)
Item(**Item-ID**, item_name, Item-price, item_description, item_quantity)

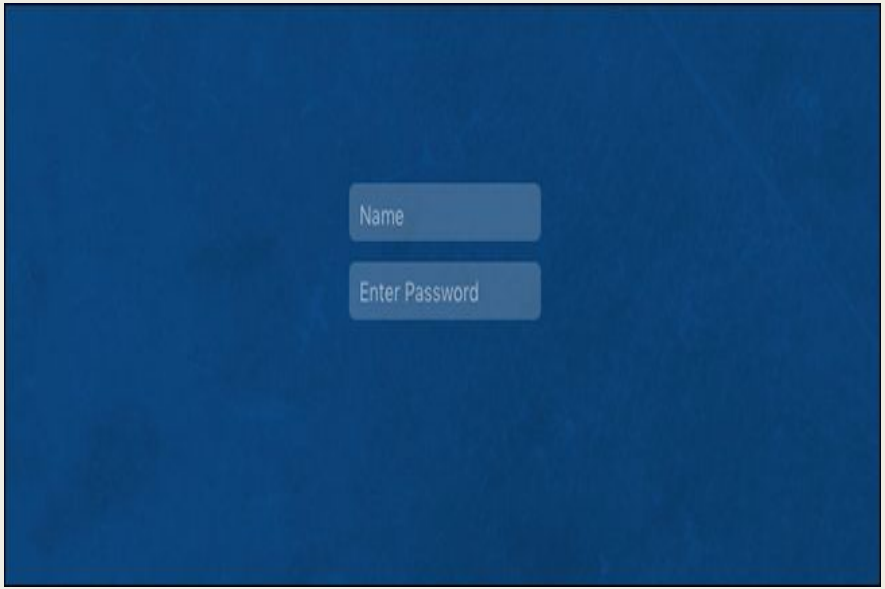
Underline means It is unique

We used a simple and easy to understand way to design the ERD and its forms. Guests, products and orders use their own names to distinguish and encoding, which is not easy to confuse us and easy to recognize.

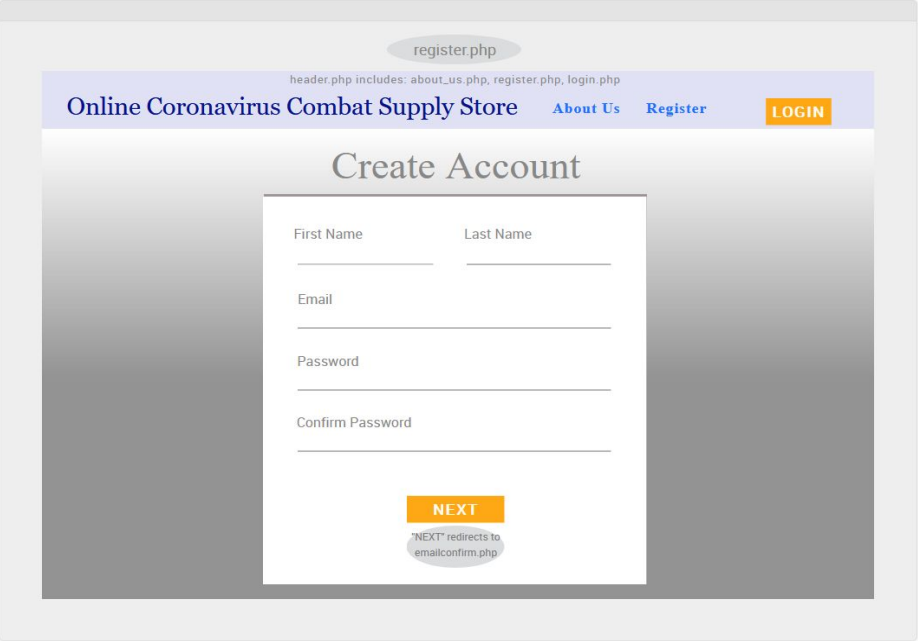
What is GUI(Graphical user interfaces)?

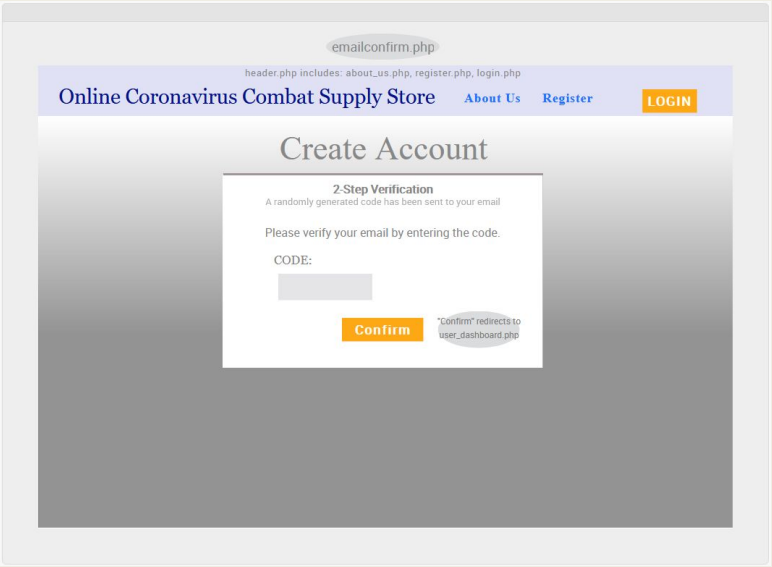
GUI. Stands for "Graphical User Interface" It is a user interface that includes graphical elements, such as windows, icons, and buttons. The term was created in the 1970s to distinguish graphical interfaces from text-based ones, such as command-line interfaces.

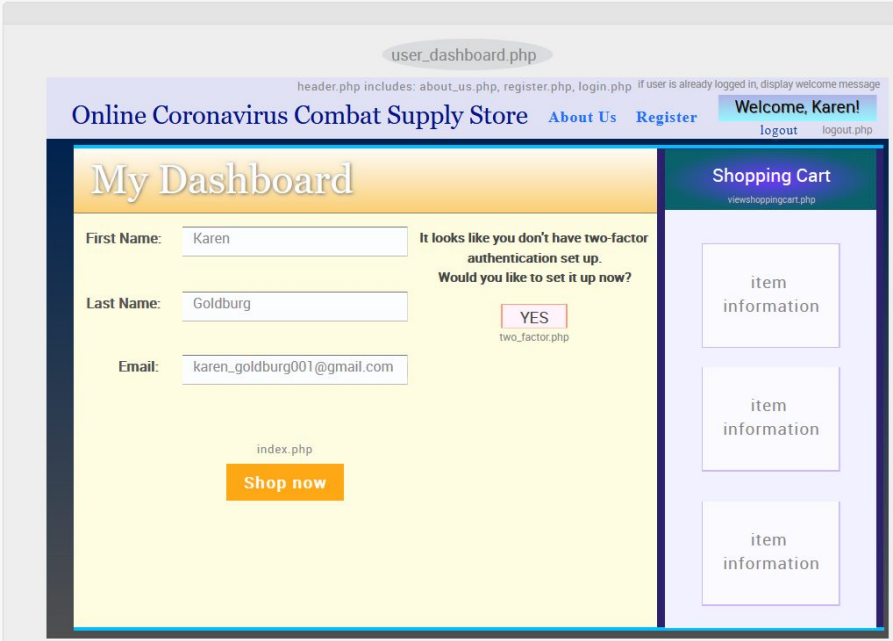
Basically, GUI is use to simulate the final result so we can set up the steps to achieve it

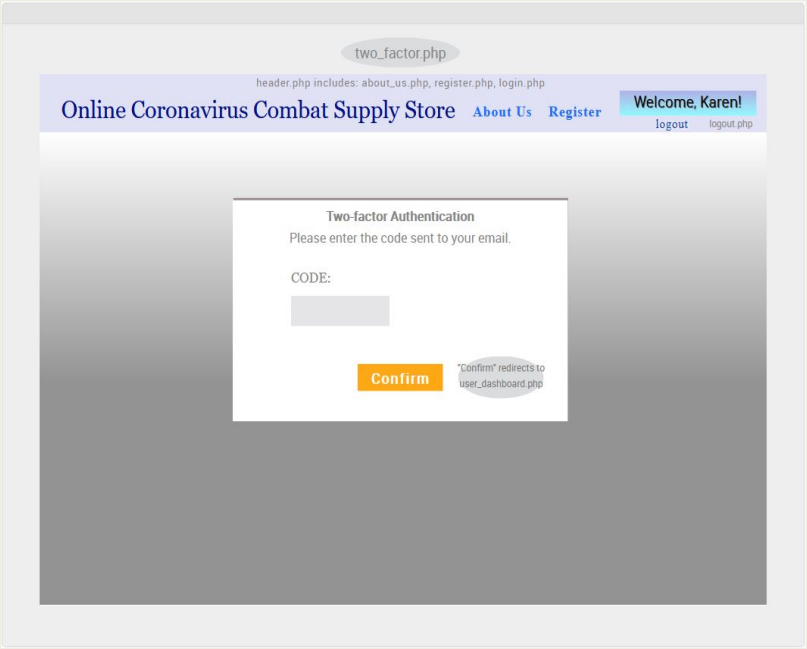


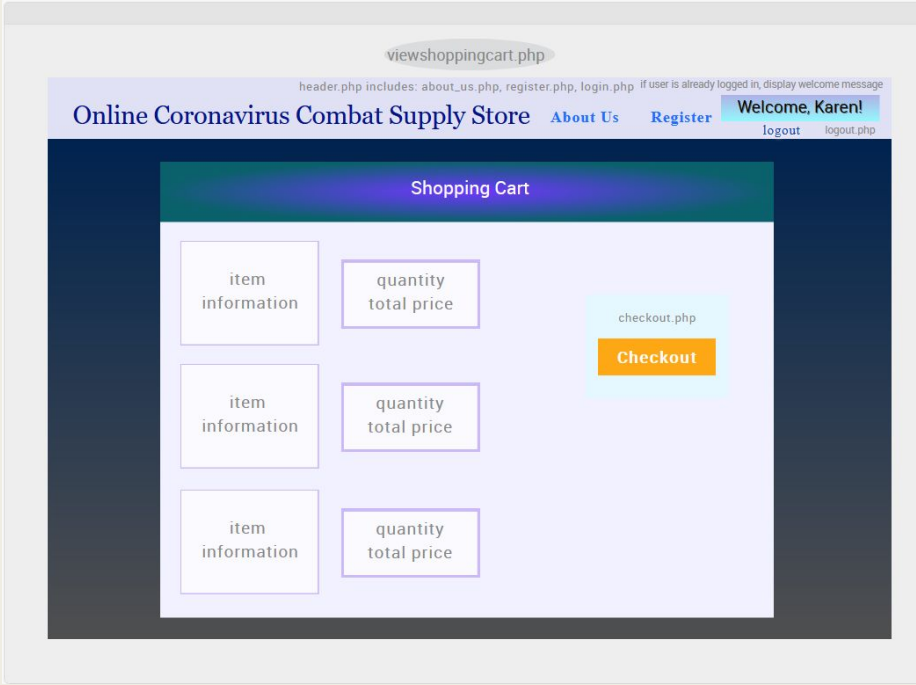
Our GUI Design:



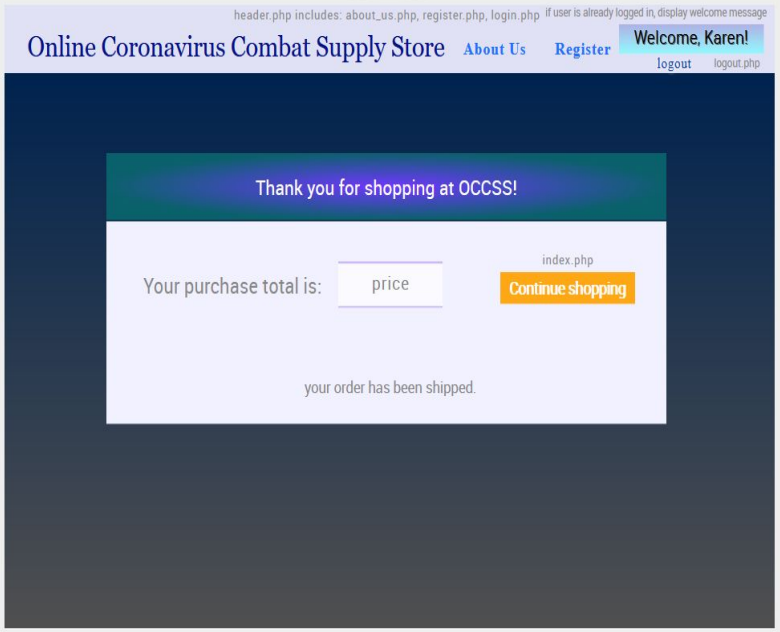

emailconfirm.php
header.php includes: about_us.php, register.php, login.php
Online Coronavirus Combat Supply Store
About Us
Register
LOGIN
Create Account
2-Step Verification
A randomly generated code has been sent to your email
Please verify your email by entering the code.
CODE:
Confirm
"Confirm" redirects to user_dashboard.php


user_dashboard.php
header.php includes: about_us.php, register.php, login.php
if user is already logged in, display welcome message
Online Coronavirus Combat Supply Store
About Us
Register
Welcome, Karen!
logout
logout.php
My Dashboard
First Name:
Karen
Last Name:
Goldburg
Email:
karen_goldburg001@gmail.com
It looks like you don't have two-factor authentication set up.
Would you like to set it up now?
YES
two_factor.php
index.php
Shop now
Shopping Cart
viewshoppingcart.php
item information
item information
item information

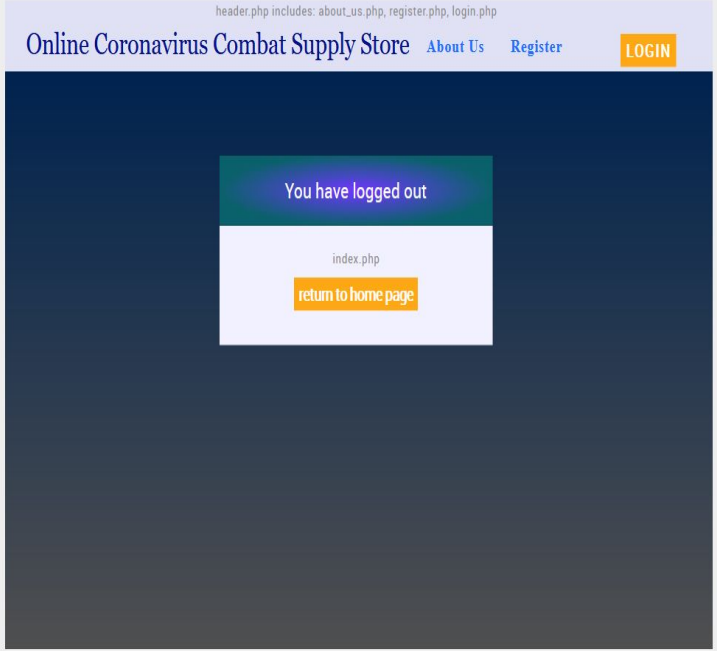

two_factor.php
header.php includes: about_us.php, register.php, login.php
Online Coronavirus Combat Supply Store
About Us
Register
Welcome, Karen!
logout
logout.php
Two-factor Authentication
Please enter the code sent to your email.
CODE:
Confirm
"Confirm" redirects to user_dashboard.php

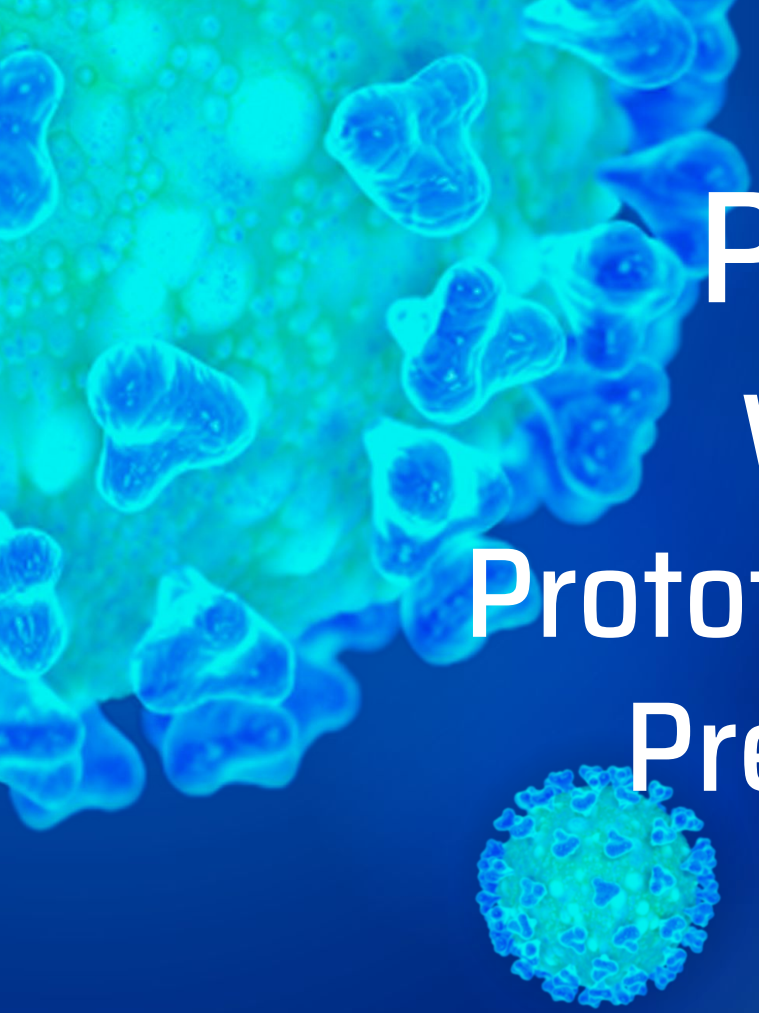

viewshoppingcart.php
header.php includes: about_us.php, register.php, login.php
if user is already logged in, display welcome message
Online Coronavirus Combat Supply Store
About Us
Register
Welcome, Karen!
logout
logout.php
Shopping Cart
item information
quantity total price
item information
quantity total price
item information
quantity total price
checkout.php
Checkout

checkout.php



logout.php

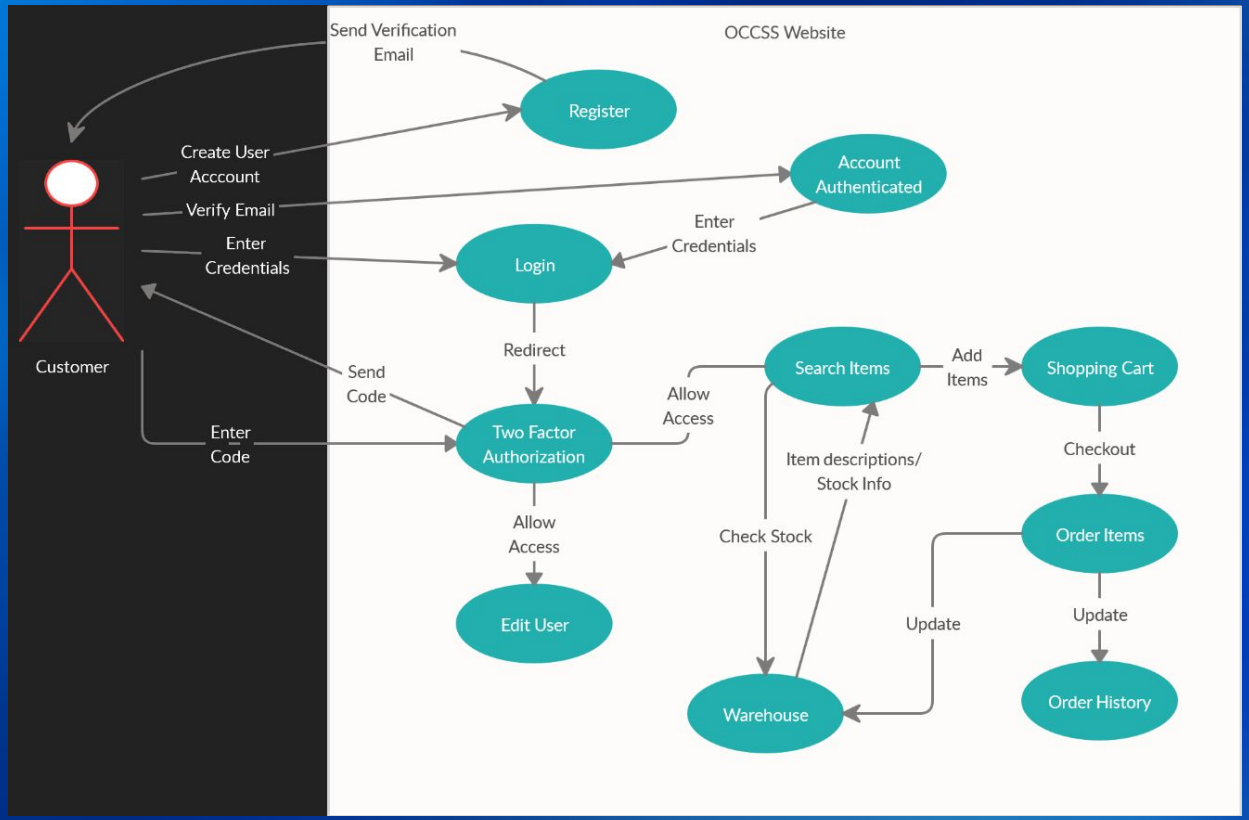




Phase 4

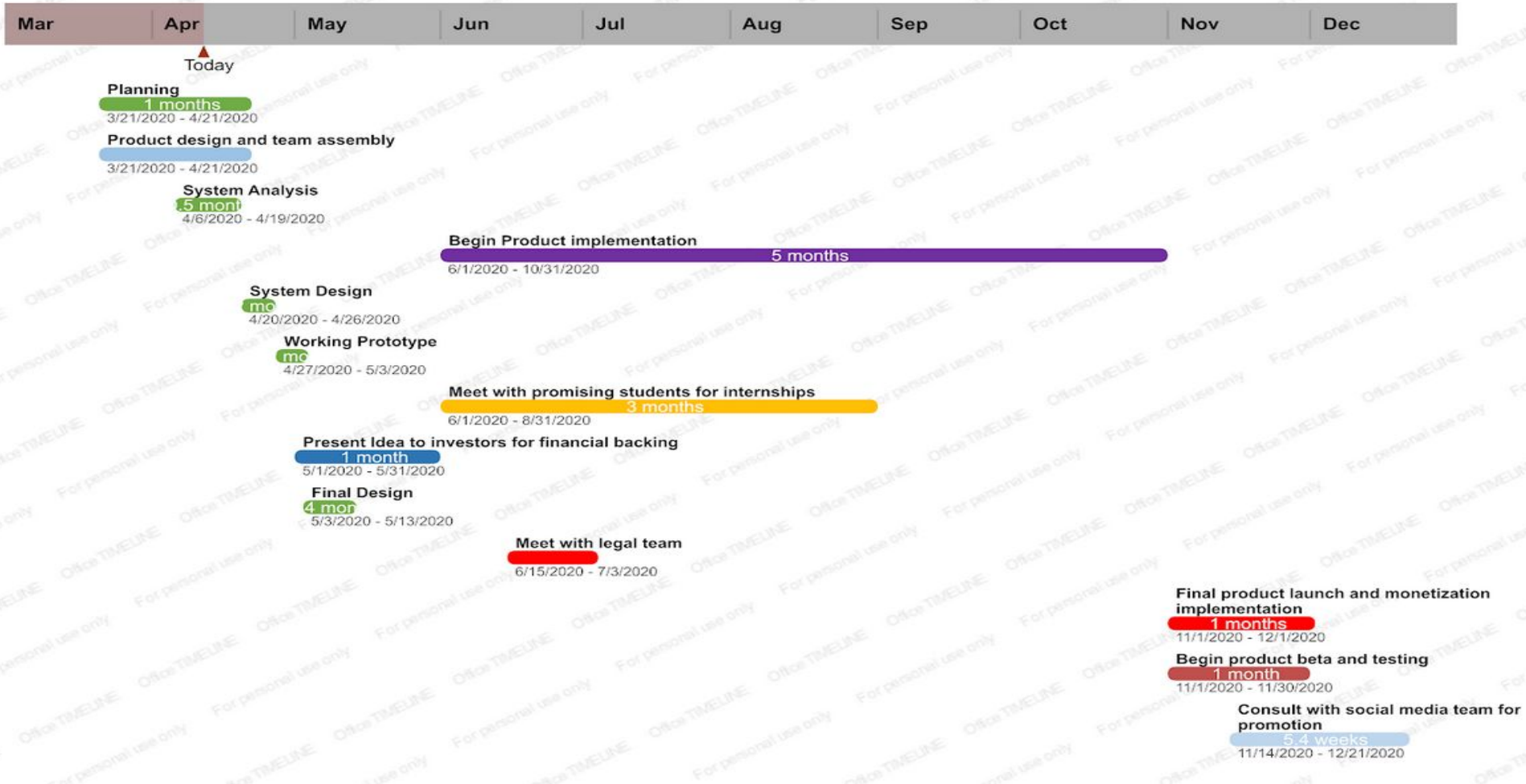
Working Prototype/Website Presentation

Use Case Diagram (revisited)



Website Presentation

Team-2: Gantt chart



Constraints

- Update the inventory of the items table after every purchase

- Insert the user’s information **after** the 2-Step Verification process

Thank you for your time.