

**ISTM 6201 Information Systems Development And Applications**  
*Fall 2022*



**Part III: System Design and Implementation**

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*Prepared for W. Lee Meeks*  
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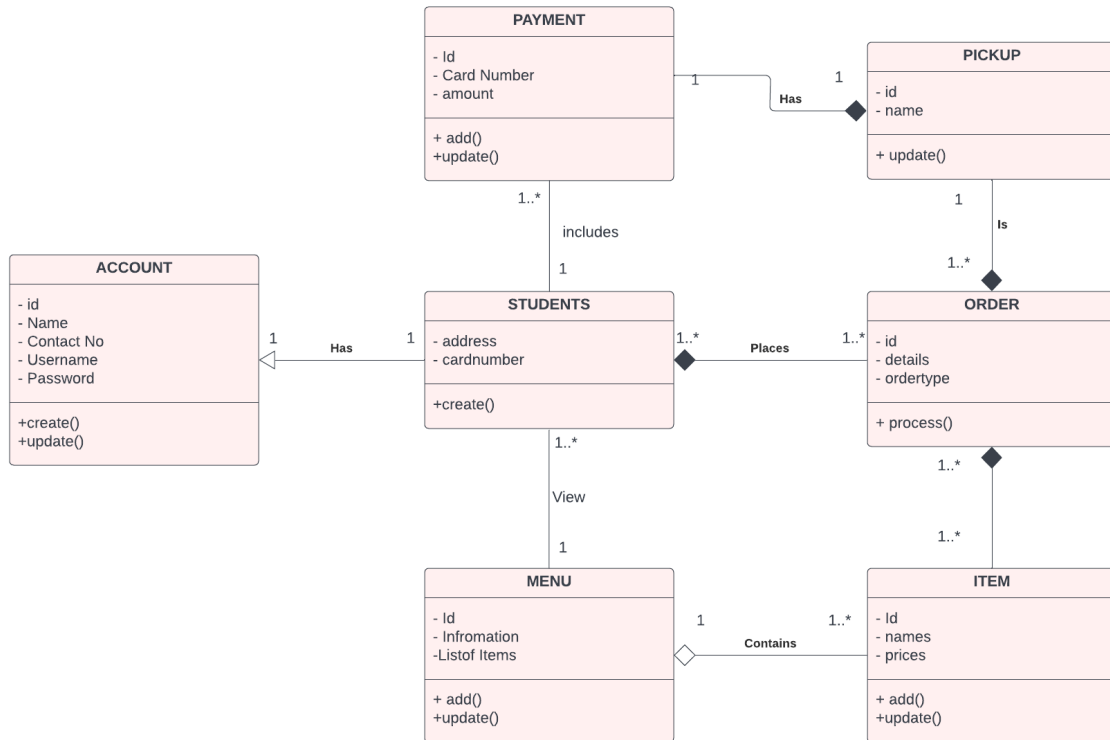
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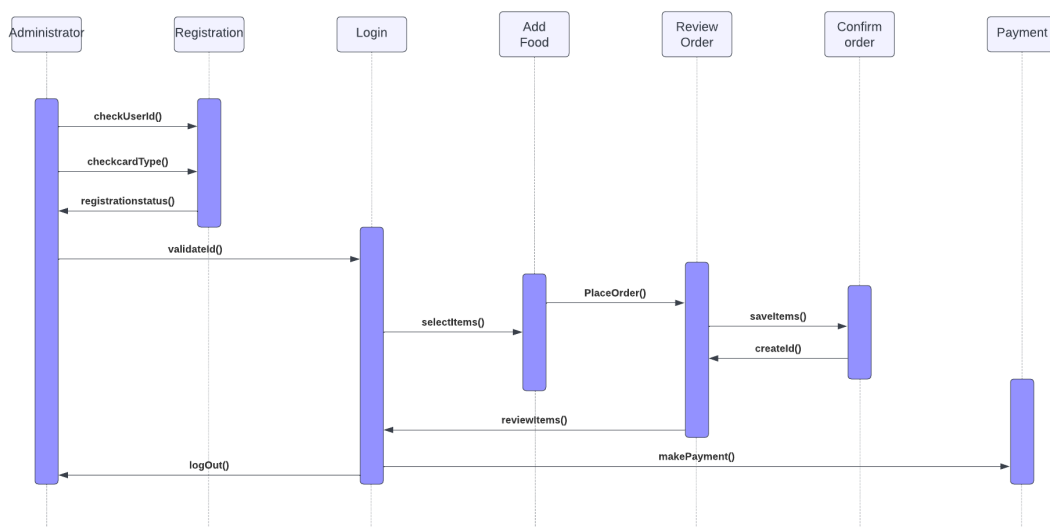
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## 1.1 System Design

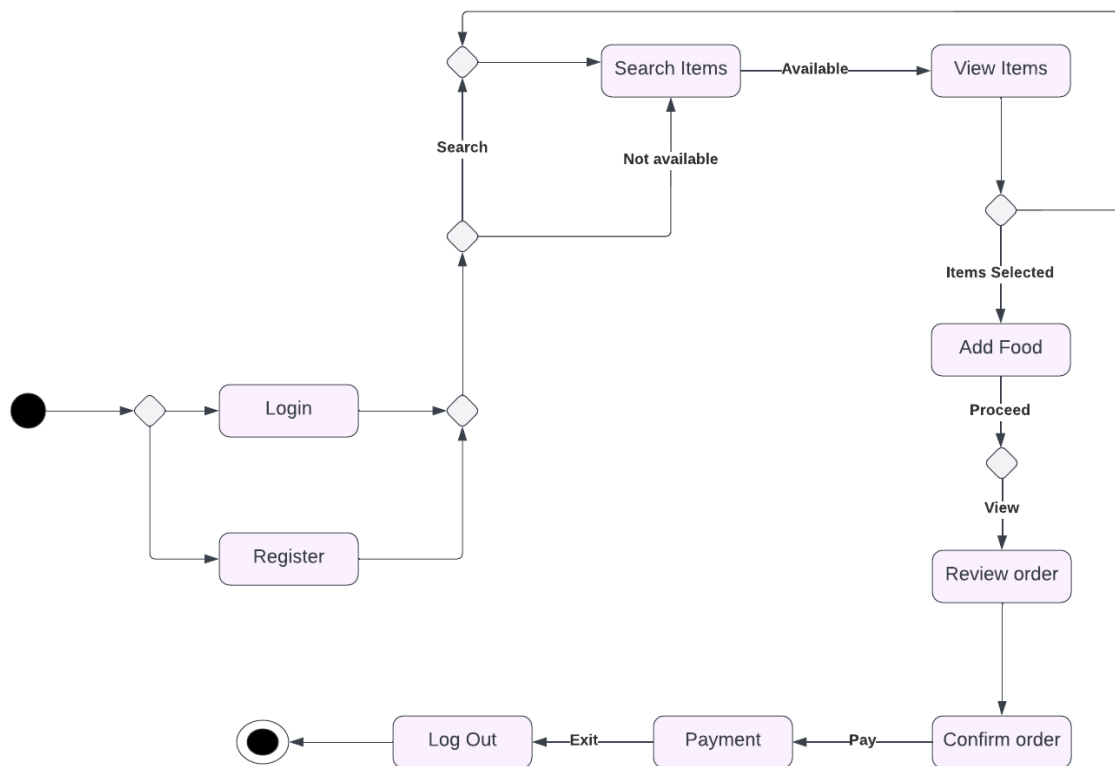
### 1.1.1 Class Diagram



### 1.1.2 Sequence Diagram



### 1.1.3 State Diagram



## 1.2 Forms and Reports

### 1.2.1 Forms

#### 1.2.1.1 Search Items

This is the form for a Customer to see the menu and their prices.

#### 1.2.1.2 View cart

This is the form for a Customer to view her cart to verify and validate the item(s) and the price on the list is accurate.

#### 1.2.1.3 Confirm Order/ Make Payment

This form is used to confirm payment details that were earlier entered: Pickup Time and card information. Tips is an optional field and will not prevent the customer from placing an order if ignored. The customer will submit the order for processing from this page

#### 1.2.1.4 Delivery Feedback

This form is the last process that will help students to give feedback and more information about the quality and quantity of food products provided by the pantry.

### 1.2.2 Reports

#### 3.2.2.1 Customer – Order Confirmation

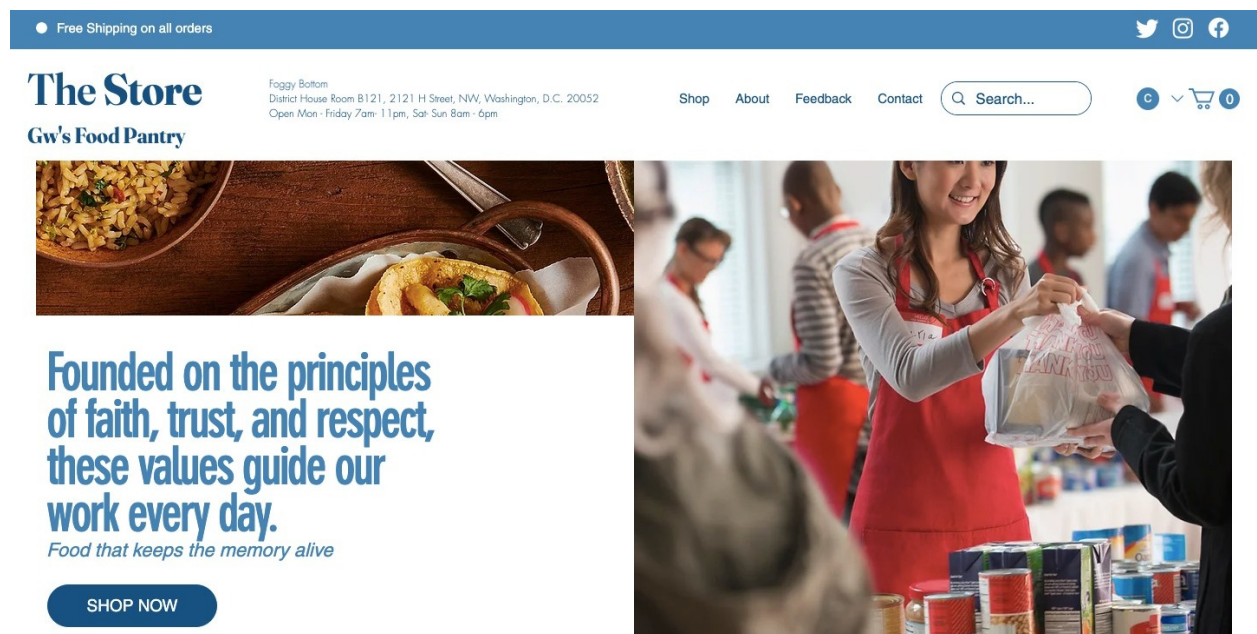
This is a customer receipt that is generated when a customer places and pays for an order.

#### 3.2.2.2 Store Staff – Order Received

This is the order information that the store staff receives on the business's side of the system. This shows the staff what orders were placed by customers, and the store staff can act on it by completing the order or canceling it.

## 1.3 Implementation

### 1.3.1 Storyboard Prototyping Screen



**Fig: Prototype Screens for 'Homepage' Forms**

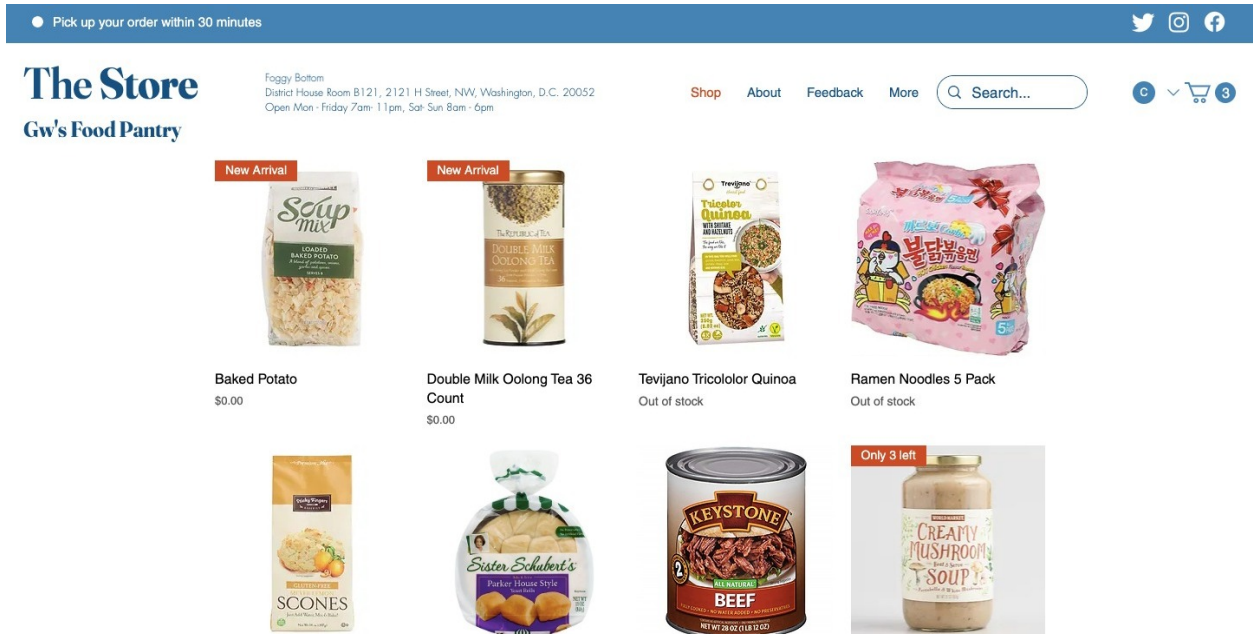


Fig: Prototype Screens for 'Search Items' Forms

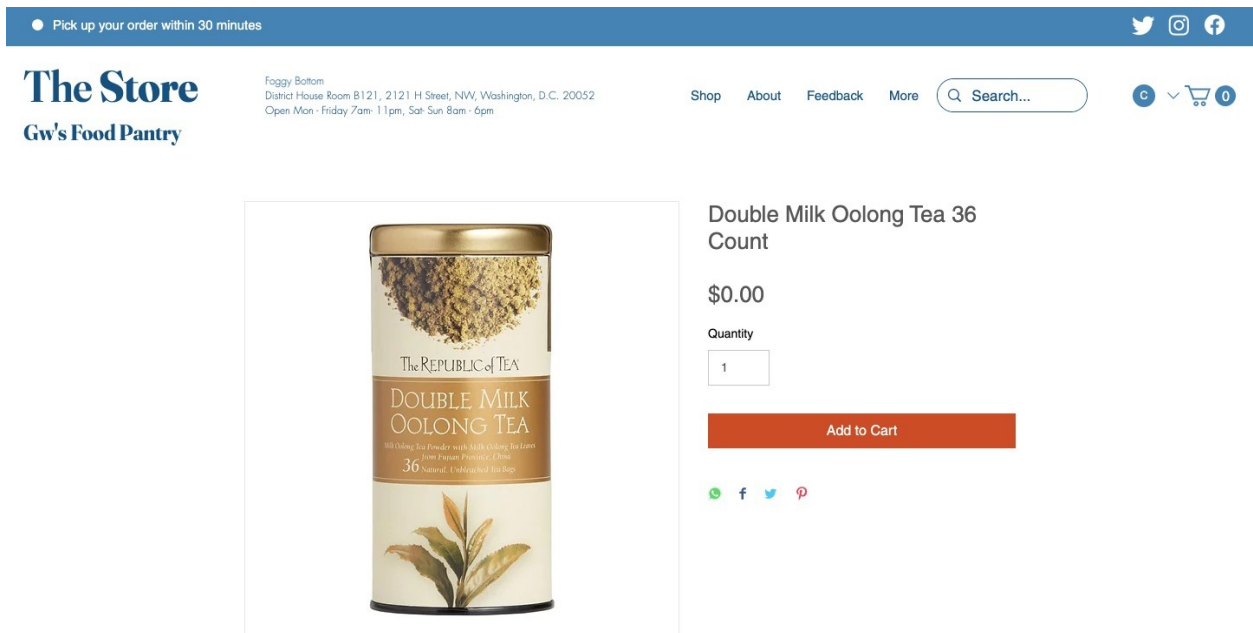
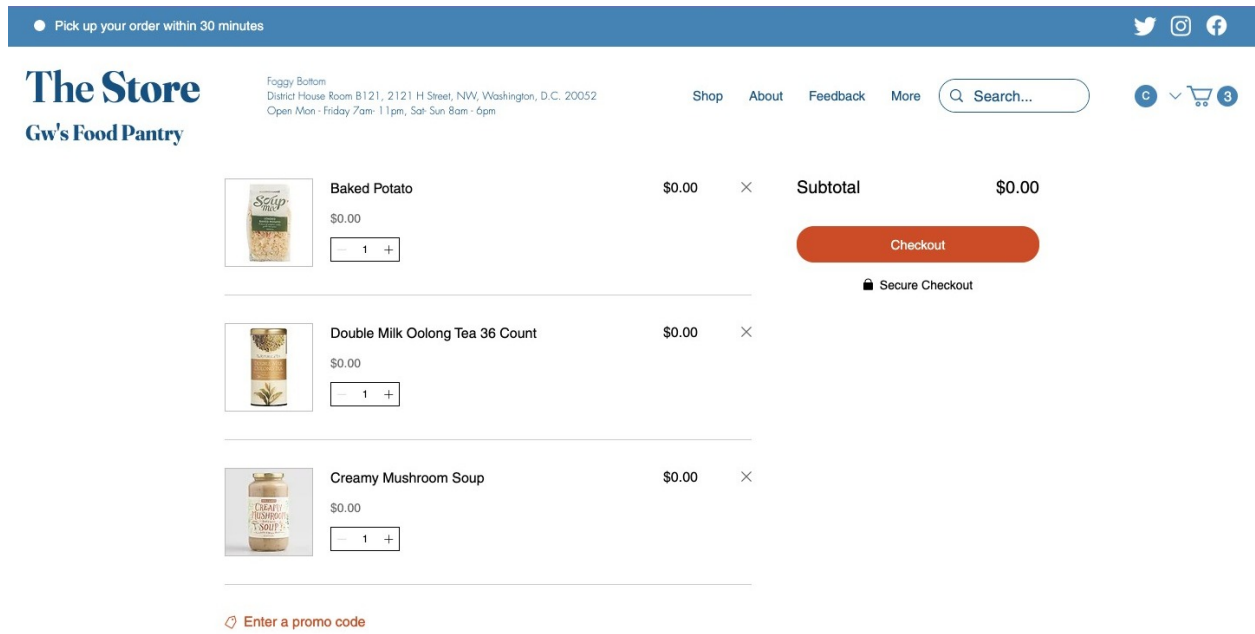
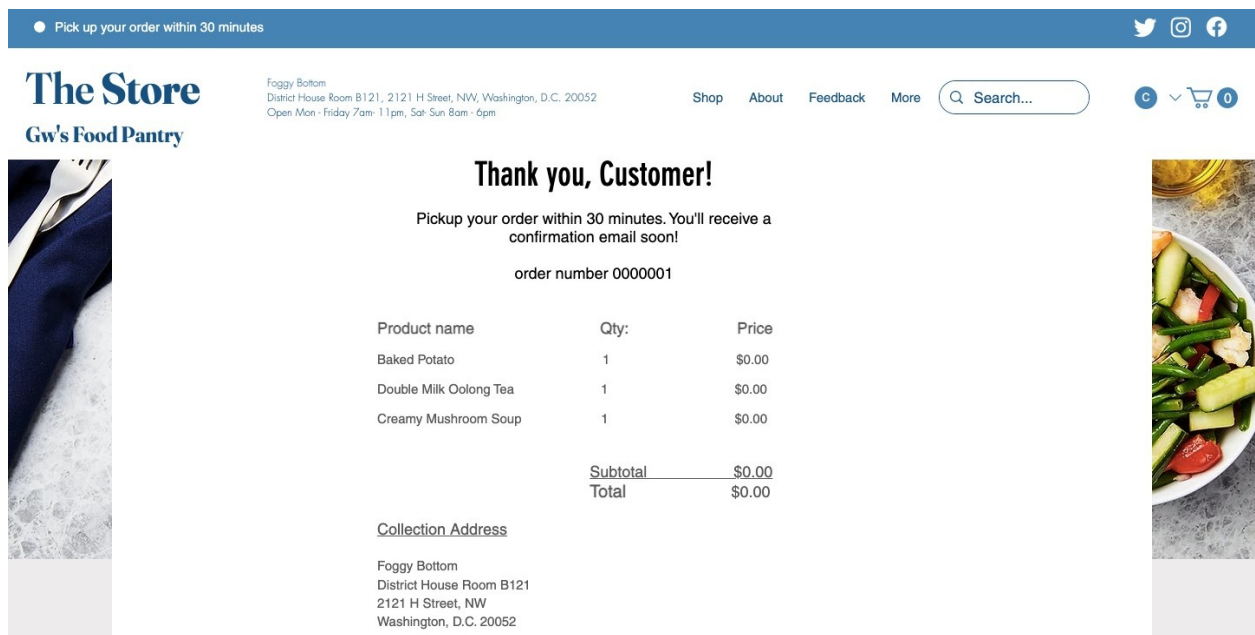


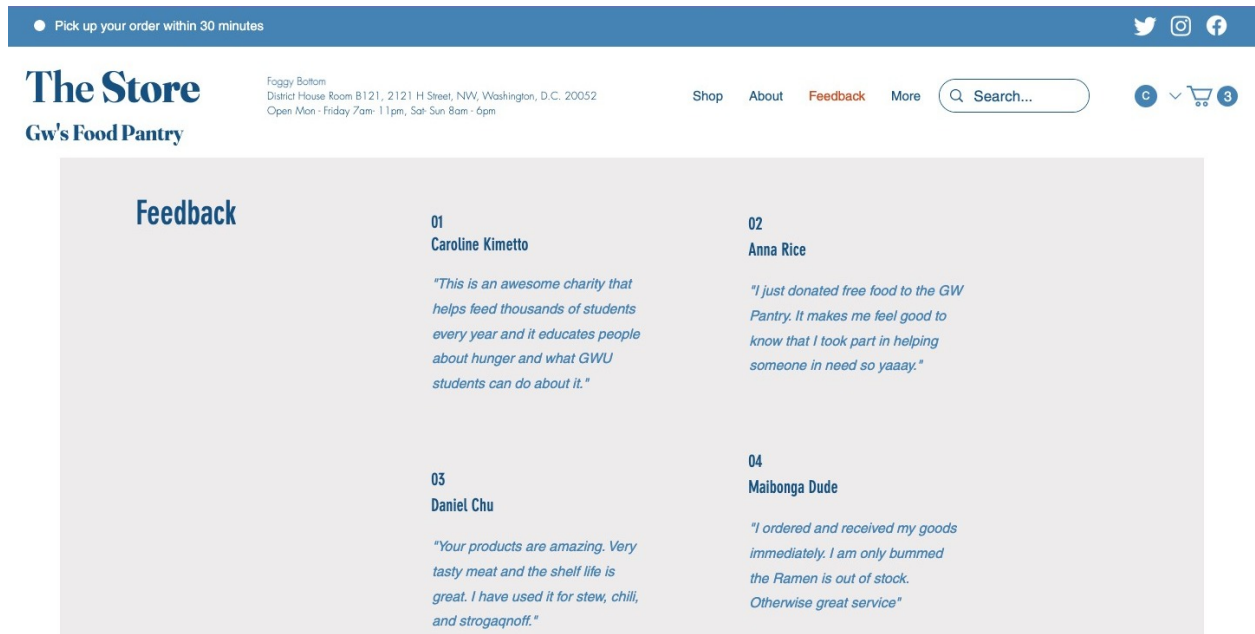
Fig: Prototype Screens 1 for 'Add Items to Cart' and 'View Cart' Forms



**Fig: Prototype Screens 1 for 'Add Items to Cart' and 'View Cart' Forms**



**Fig: Prototype Screens for Order Confirmation Form**



**Fig: Delivery Feedback Form**

### 1.3.2 Testing Plans

The test plan for the new GW 'The Store' was created from the very beginning of the system development and will continue to change as the system progresses. It is intended to be used throughout the system development life cycle (SDLC). The test strategy calls for the creation of test use cases to evaluate both functional and non-functional requirements based on all system-related outputs. Throughout the System Development Life Cycle, the GW Pantry system test plan will go through various test phases, including unit testing, integration testing, system testing, security testing, and acceptance testing.

The purpose of unit testing is to determine whether the classes adhere to the functional specifications. It will concentrate on the type of black box testing that is powered by a class-related behavioral state machine.

Since the new system will interface with internal systems like accounting and finance systems as well as current systems (such as delivery systems), integration testing, which tests many modules simultaneously, is necessary.



System testing is done to ensure that all system classes work flawlessly together. To make sure user interfaces are efficient and effective, we will test their usability. Additionally, the system will undergo performance testing to ensure that the anticipated volume of order reports entered through it in real-time won't overload it. To confirm that the users of the company's user accounts are who they claim to be and have the right to use the system, security testing will carry out authentication and authorization testing.

### **1.3.3 Conversion or Installation Strategy**

The technical part of replacing the outdated system—the manual pantry reporting system—with an automated system is called the conversion approach. The pupils will switch from receiving product updates via Instagram to a sophisticated automated application system. The company's IT specialist will manage the technical components, such as installing software and converting data from the as-is system to the to-be system, and who will accomplish the tasks listed in the migration plan.

First off, since this will be an app that can be installed, the corporation won't need to install any hardware. Second, the business will need to set up software to aid in the development of the incident reporting system. Third, since the as-system is a manual reporting system, the conversion data from the as-is system to the new formats are not needed in the to-be system or saved in the to-be system's files/databases.

However, we will use SQL scripts to import data from the sponsoring company's database system into the future system. Fortunately, the safety department supervisors and the students making purchases at the pantry are both computer proficient and regularly use the new system. It will not be challenging for any stakeholder to switch from the manual reporting system to the web application system because it is a necessary change. Training for the safety employee's department on the new system to report an incident and implement solutions for the incident is necessary, even though some change management will be needed.

## **1.4 Citation**

[https://curbinghunger.org/give-healthy-food-drive/?gclid=CjwKCAiAp7GcBhA0EiwA9U0mttEq6OUa-dGqfsixtMvIb9Ukr1lJImh7uE5UX68GWjB1V7MiEXOrCBoCis4QAvD\\_BwE](https://curbinghunger.org/give-healthy-food-drive/?gclid=CjwKCAiAp7GcBhA0EiwA9U0mttEq6OUa-dGqfsixtMvIb9Ukr1lJImh7uE5UX68GWjB1V7MiEXOrCBoCis4QAvD_BwE)

<https://studentlife.gwu.edu/store>