

ISTM 6201 Information Systems Development And Applications
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Part 2: Requirements Determination

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SECTION II: Requirements Determination and Analysis

1.1 Requirements Gathering Techniques

Since GW Pantry is a small community , it is doubtful that it will have a lot of reports, forms, or other documents available for secondary research. Therefore, for the purpose of determining needs, we shall rely on primary research techniques.

We'll make use of questionnaires, observations of Pantry's operations, and interviews. The owners and staff of The Store will be questioned in the interviews. Interviews will enable us to acquire high quality information without taking a lot of time because The Store is a small store with a small number of employees. Students of The Store will be surveyed in order to collect information. Despite being a small community, The Store serves hundreds of students. We will be able to efficiently acquire important information on potential features to include in our application by using questionnaires, which are well suited for getting information from such a wide stakeholder group. Finally, we shall watch and record The Store operational procedures. We will be able to determine which business processes can be enhanced or automated using our application by observing and documenting The Store manual ordering procedure.

1.2 Stakeholders Involved in Requirements Gathering

The stakeholders directly involved in The Store current process would stand to gain the most from the automated solution, it was determined during the requirements gathering process to develop an information system solution to address the issues faced by The Store regarding its current manual ordering process. As a result, information from the following groups—The Store owners/managers, The Store donors, and The Store students—was gathered through interviews and surveys.

Owners/Managers of The Store

The Store owners and management group consists of four individuals, each of whom serves as an owner/manager and works on various days and hours throughout the week. When necessary, each of these individuals also serves as The Store non-management staff. It is crucial to get system needs from this group because they are the ones responsible for managing and leading the success of operations at The Store. This group has the overarching strategy for enhancing The Store student service and operational effectiveness (which will impact sales and earnings).

It was unnecessary to choose a sample from the owner/management population because The Store is a relatively tiny community in order to conduct the interview. To obtain system needs, the complete owner/management population was surveyed.

Non-Management Staff at The Store

Ten people make up the 'The Store' non-management staff group, who work a mixture of full- and part-time hours to handle The Store operations seven days a week (hours vary by day). The primary responsibility of the non-management employee is to deliver exceptional student service in order to encourage repeat business. When taking and filling student orders, the employee must be courteous, accommodating, and effective.

Interviewing the 'The Store' personnel is crucial since they are at the center of the ordering process, and because they utilize the current method frequently throughout the workday, they have the greatest expertise with it. Due to their proximity to the present process, these people are aware of its flaws.

To address and correct the issues with the current process with the new system, a thorough grasp of the issues involved is required.

It was not necessary to choose a sample from the non-management staff population, similar to the owner/manager group. For the purpose of gathering system requirements, interviews were conducted with every The Store non-management employee.

The Store Students

The Store has a sizable student base despite problems with the manual ordering process, thanks to its excellent food, friendly staff, and variety of convenience products. According to estimates, up to 100 students may be served daily by The Store.

Interviewing The Store students is crucial because they hold the key to understanding The Store student experience. Their viewpoint is at the other extreme from that of a The Store employee, and it is necessary to understand the "full picture" of the process in order to reap the benefits of the automated system. Indeed, without its students, The Store would not exist (nor would the associated revenue).

Given that many students are "anonymous" walk-ins, it was not practical or even possible to interview or poll the entire The Store student base. Instead, a non-scientific sampling of the student group was employed. In order to improve service at The Store, bright, eye-catching posters outlining the need for students' input were put in the store window and on the store walls. At strategic locations like the checkout counter and exit/entrance doors at The Store, copies of the questionnaire were stashed inside bright containers. Students were instructed to inquire about participating in the study when placing orders.

1.3 Interview, Document Analysis and Questionnaire Techniques

Interview Questions: Business/Employee

1. What is the major problem with the current GW Pantry System that the students are now dealing with?
2. What effects does this problem have?
3. What aspects of the company would you like to strengthen?
4. What is the goal? What sort of IT answer are you seeking?
5. How much wastage occurs daily on average?
6. How long does a student typically have to wait in line?
7. How many students receive food items that they desire?

Survey: Students

1. Which aspect of the GW Pantry operations, cuisine, or experience do you enjoy the most?
2. How long do you typically have to wait before having your food item taken?
3. Do you have any issues when wanting food items from the GW Pantry? If so, what kind of things?
4. Do you believe your student experience could be enhanced by an online ordering system?
5. Compared to placing an order, getting the food item from the pantry over the phone or having it manually taken, would you prefer to use a mobile app or website?
6. Do you think the pantry satisfies your needs?
7. Do you feel there should be more quantity available for a specific product?

Questionnaire: Donators

1. How frequently have you donated to the university?
2. How long do you typically wait to learn that a broken item has to be replaced?
3. Do you believe your experience could be enhanced by an online reporting system?
4. In your opinion, did the incident resolution attempts move along at the necessary pace?
5. Do you feel there is a lack of precise information regarding the quantity of supplies needed for the project?

1.4 Requirements Analysis

1.4.1 Use Case Diagram

The procedures illustrated by ovals in the Use Case diagram in Figure 1 are among the system's primary functions. Below is a description of each procedure.

1. **Registration:** Students must register their accounts in the application.
2. **Login:** Students must login to the application with details like their email ID and password.
3. **Navigate Menu:** Students can view the whole menu, where all the details of the food will be provided.
4. **Add Food:** Students will add the food after navigating from the menu.
5. **Review Order:** Students can review the order.
6. **Replace order:** After reviewing the order, the customer will place the order.
7. **Payment:** The system will generate the bill, and customers can pay the bill through any mode.
8. **Receive Order:** The system will provide the order to the restaurant employee.
9. **Receive confirmation:** The system will generate a confirmation of your order.
10. **Log out:** The system will logout.

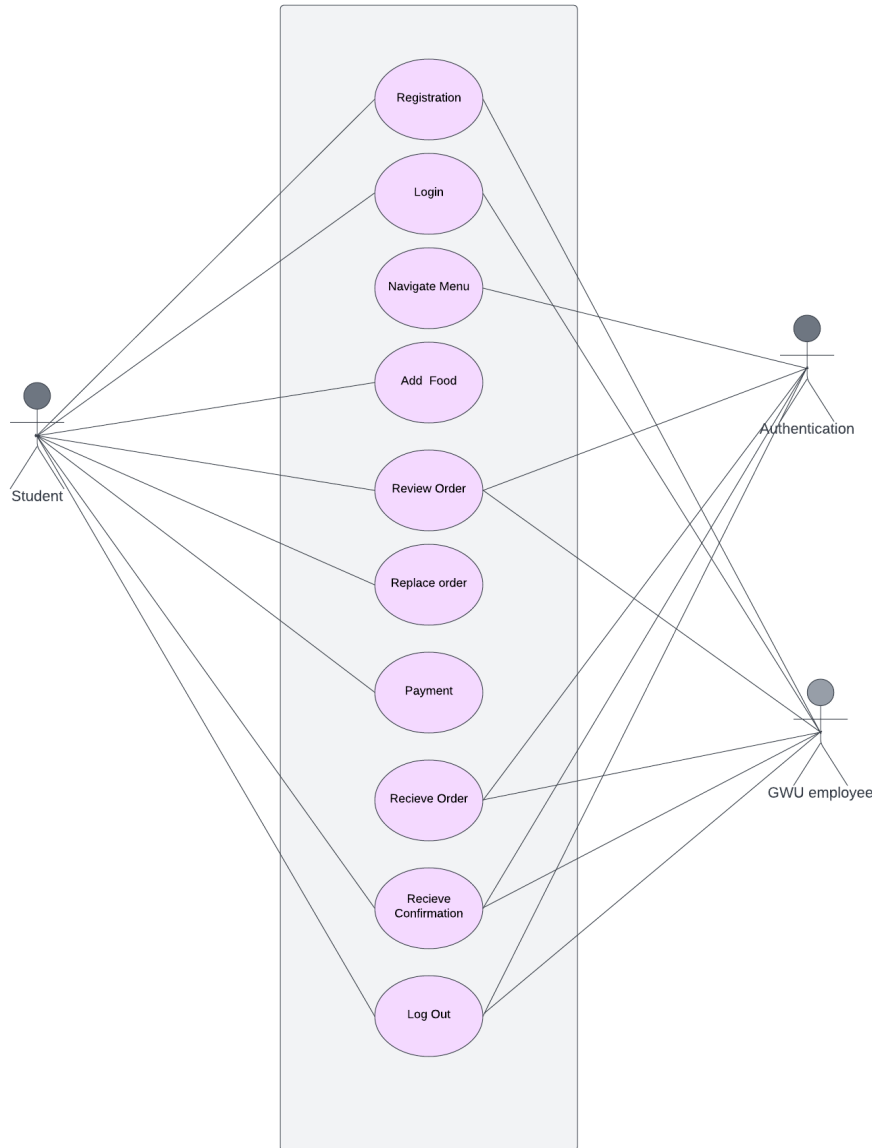


Figure: Use case Diagram for Ordering Meal Packages

1.4.2 Activity Diagram

State diagrams show how the system behaves. The state chart illustration that follows shows how a consumer will behave when placing an order. The diagram shows a sequence of states. The first step is to add the items to the cart and choose a preferred pick-up time for the student. If the student has not already registered, they need to register using their NetID.

After that, the student places the order and makes payment. The store employee places the order, starts to prepare it, and places it in the pickup location, which is GW Pantry in this case, if the payment information is confirmed. for the order to be picked up by the student. In the event that this occurs, the student must resubmit the order, and the payment will be rejected.

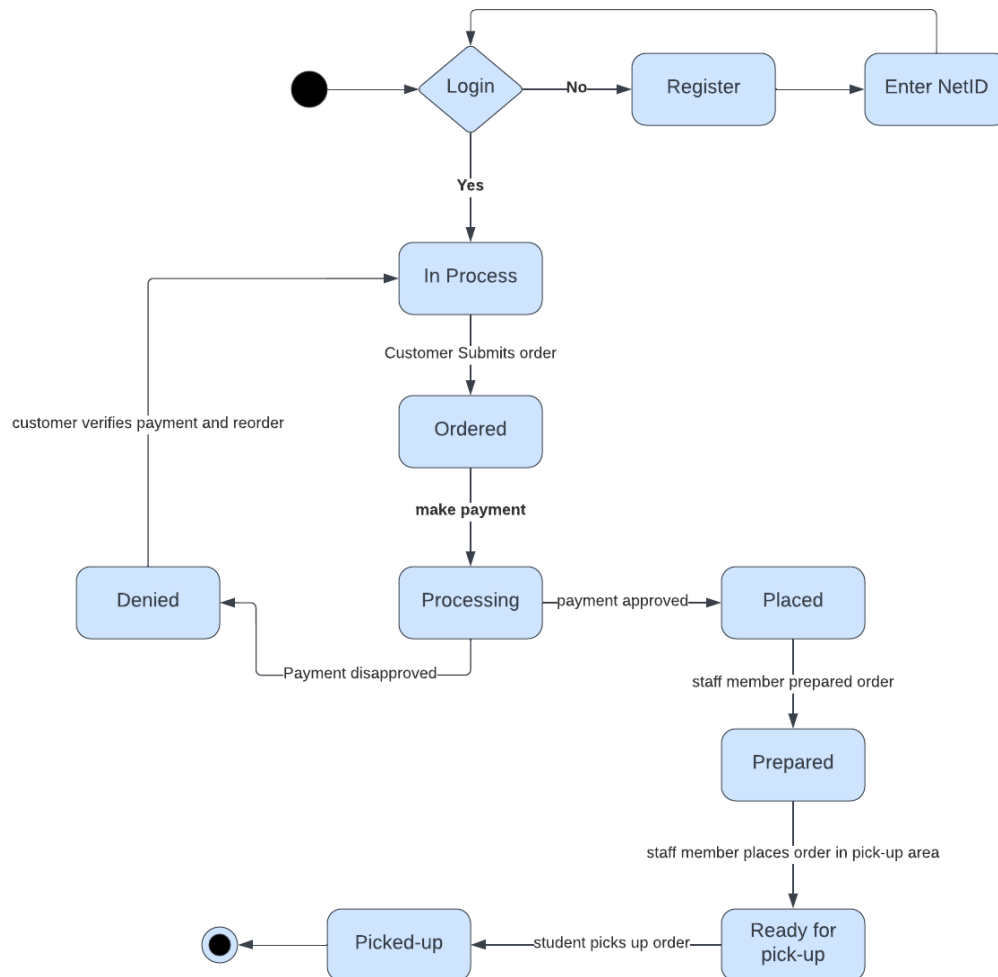


Figure: Activity Diagram for Placing Order of Meals at GW Pantry