# 1.INTRODUCTION

## 1.1 purpose

The GIU Food-truck System is a comprehensive web-based application designed to enable the members of the GIU community to reserve menu items from specific food-trucks on campus for pick-up within a given time window, thus alleviating the problem with long-waiting times for food and beverage items during peak periods in between classes. This system enables seamless menu browsing, order placement, and order management for food-truck customers as well as providing a similarly intuitive, efficient, and scalable solution for food service providers. The intended audience for this software are the GIU community members and food truck staff.

## 1.2 Scope

- Customer web app food browsing menus, placing orders and tracking order progress from a food court within the GIU campus
- Food truck portal for order management
- Admin panel for managing users, and food trucks

## 1.3 Users

- Customers
- Food trucks
- System Administrators

# 2. High level architecture

- Frontend: Modern HTML, JavaScript, and JQuery. Or JavaScript Framework
- Backend: RESTful API using [Node.js](Node.js)
- Database: Relational (PostgreSQL)
- Authentication: currently, none
- Payment Gateway: currently, none
- Hosting: currently, none

# 3.Functional requirements:
## 1.User story:

- As a user, I want to sign up, log in and log out, so that I can securely access the system.

- As a client, I want to be able to add selected items to my cart and specify the quantity so that I can easily prepare my full order for purchase.

- As a client, I want to edit, cancel, or delay my order, so that I can adjust my choices when needed.

- As a client, I want to see items marked as sold out, so that I don't order unavailable food.

- As a client, I want to select one of the available pickup slots, so that I can schedule my order for a convenient time.

• As a client, I want to place my food order at least 30 minutes in advance, so that the food truck has enough time to prepare it.

• As a client, I want to receive updates when my food preparation begins and when it is ready for pickup, so that I can arrive on time.

**2.Food Truck owner story:**
•As a food truck operator, I want to update the menu and mark items as sold out, so that clients always see correct information.

• As a food truck operator, I want to view incoming orders, so that I can manage them effectively.

• As a food truck operator, I want to confirm, reject, or update orders, so that I can control preparation flow.

• As a food truck operator, I want to manage order overflow and apply penalties, so that I can keep operations fair and efficient.

**3.Admin story:**
•  As an admin, I want to manage customers and food truck accounts.

•  As an admin, I want to be able to log in and out of the admin panel.

# 4.Non-functional requirements:
  ● page loads in under 5 seconds 99% of the time.

- Backup & Recovery: Automated daily backups
- Concurrent Users: Support for at least 500 simultaneous users
- Usability: Intuitive UI/UX, multilingual support.
- Scalability: Support scaling for new regions and features.
- Compatibility: Android, iOS, Web.

# 5.Future scope:

-Membership system.
-Light and dark mode
-Reviews
-Wallet system
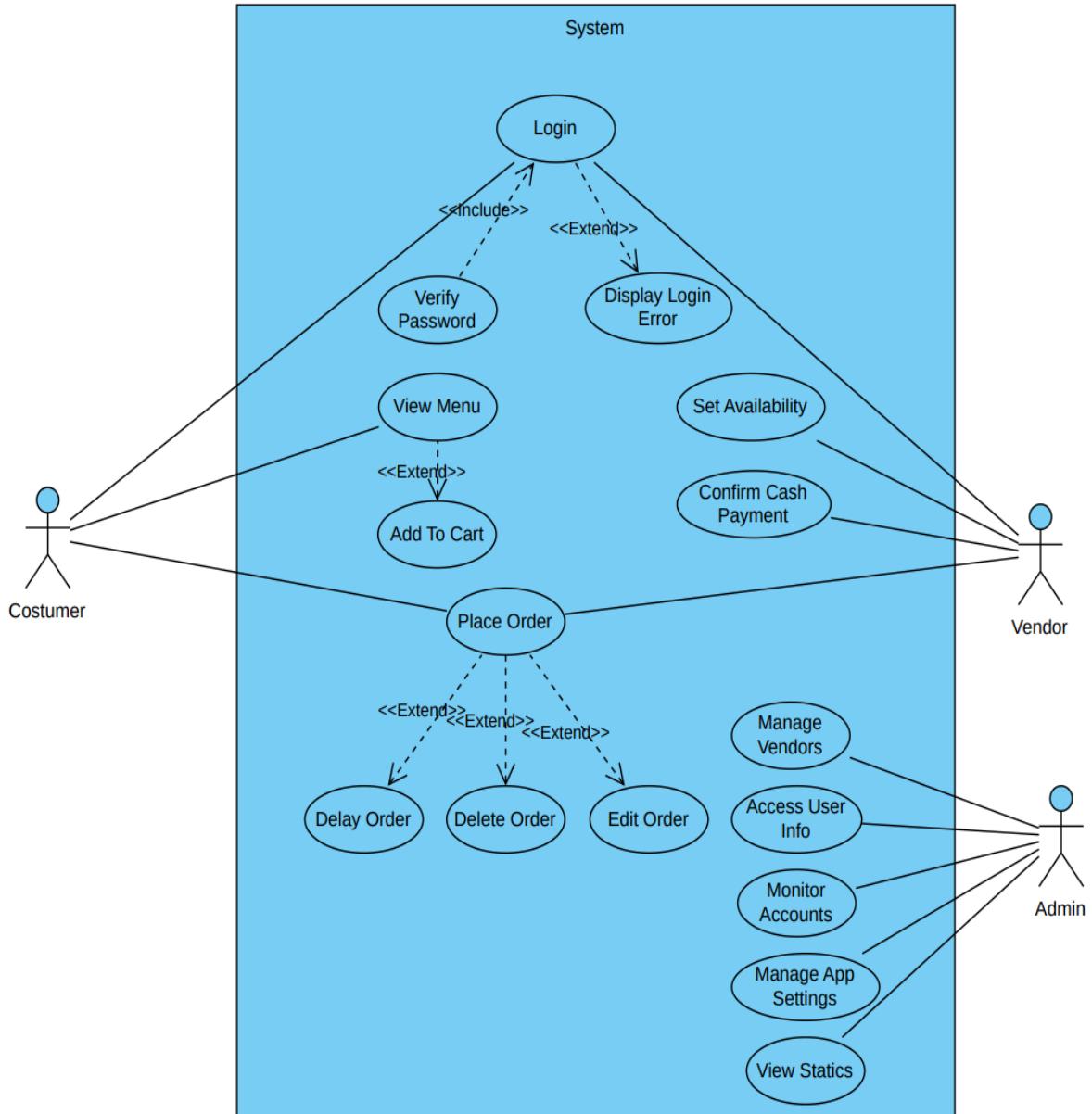
# 6.External Interface Requirements

• University authentication (for GIU community access)
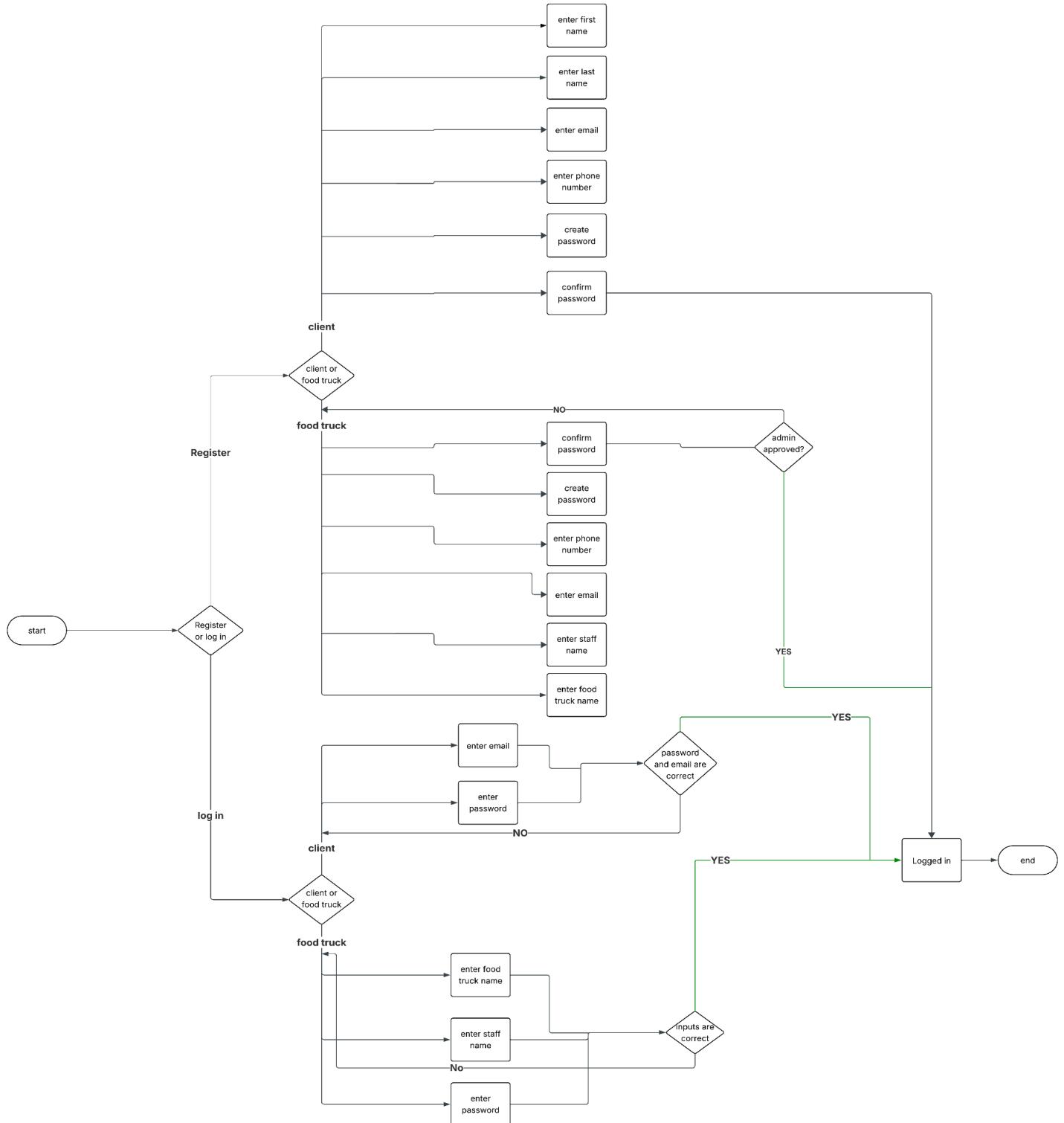
# 7.Constraints

• Limited to internal GIU users
• Must run efficiently on standard web and mobile browsers
• There is no payment gateways for online transactions
• No delivery system
• Must comply with local data privacy regulations (e.g., GDPR)
• System Operating Hours for Food Service Providers:
 8:30 am - 4:30 pm
• System Operating Hours for Food-truck Patrons:
 8:30 am - 4:00 pm

# Use-case Diagram:

# Flow Chart:

```
                                              ┌──────────────┐
                                              │ enter first  │
                                              │    name      │
                                              └──────────────┘

                                              ┌──────────────┐
                                              │ enter last   │
                                              │    name      │
                                              └──────────────┘

                                              ┌──────────────┐
                                              │ enter email  │
                                              └──────────────┘

                                              ┌──────────────┐
                                              │ enter phone  │
                                              │   number     │
                                              └──────────────┘

                                              ┌──────────────┐
                                              │   create     │
                                              │  password    │
                                              └──────────────┘

                                              ┌──────────────┐
                                              │  confirm     │
                                              │  password    │
                                              └──────────────┘

         client
              ◇ client or
                food truck
                                    ── NO ──
         food truck                          ┌──────────────┐          ◇ admin
                                              │  confirm     │            approved?
                                              │  password    │
                                              └──────────────┘
Register                                      ┌──────────────┐
                                              │   create     │
                                              │  password    │
                                              └──────────────┘

                                              ┌──────────────┐
                                              │ enter phone  │
                                              │   number     │
                                              └──────────────┘

                                              ┌──────────────┐
                                              │ enter email  │
                                              └──────────────┘

  ( start )    ◇ Register                     ┌──────────────┐
               or log in                      │ enter staff  │      YES
                                              │    name      │
                                              └──────────────┘
                                              ┌──────────────┐
                                              │ enter food   │
                                              │ truck name   │
                                              └──────────────┘

                          ┌──────────────┐
                          │ enter email  │              ◇ password     ── YES ──
                          └──────────────┘                and email are
                          ┌──────────────┐                 correct
                          │   enter      │
  log in                  │  password    │
                          └──────────────┘
                                              ── NO ──
         client
              ◇ client or                                                        ┌──────────┐   ( end )
                food truck                                              ── YES ──│ Logged in│──
         food truck                                                              └──────────┘
                          ┌──────────────┐
                          │ enter food   │
                          │ truck name   │
                          └──────────────┘
                          ┌──────────────┐
                          │ enter staff  │              ◇ inputs are
                          │    name      │                correct
                          └──────────────┘
                                      ── No ──
                          ┌──────────────┐
                          │   enter      │
                          │  password    │
                          └──────────────┘
```

# ERD

**Vendors** (entity)
- TruckName
- VendorEmail
- Venpassword
- VendorNumber
- VendorName
- VendorID

**Admin** (entity)
- AdminID
- Password
- username

**Customer** (entity)
- CustID
- CustName
- password
- CustNumber
- CustEmail

Vendors —1— Creates —M— MenuItem

Vendors —M— adds —1— Admin

Admin —1— Manages —M— Customer

Customer —1— OrderAuthor —M— Order

**MenuItem** (entity)
- ItemID
- IsAvailable
- Description
- ItemName
- Price

MenuItem —1— Contains —1— OrderItem

OrderItem —M— Contains —1— Order

**OrderItem** (entity)
- OrderItemID
- OrderQuantity
- OrderItemPrice

**Order** (entity)
- OrderID
- OrderDate
- OrderPickingSlot