Introduction

Purpose/Project Proposal

The purpose of the project is to create a phone directory application named "MyPhoneDict." This application allows users to manage their contacts by storing information such as name, surname, phone number, phone type, gender, email, birthday, and address. The project includes features for setting and verifying passwords to ensure secure access to the application.

Software Language/Project Environment

The project is implemented in Java. The application uses a console-based interface for user interaction. It includes functionalities for creating, updating, and deleting contact entries in the phone directory.

Data Structures

The project utilizes the following data structures

- AdressList: This class represents the main data structure for storing contact information. It is implemented as a linked list of ListNode objects. The choice of a linked list allows for efficient insertion and deletion of contacts.
- ListNode: Each node in the linked list represents an individual contact entry. It contains fields for storing the contact's name, surname, phone number, phone type, gender, email, birthday, and address. Additionally, it includes a reference to the next node in the list.

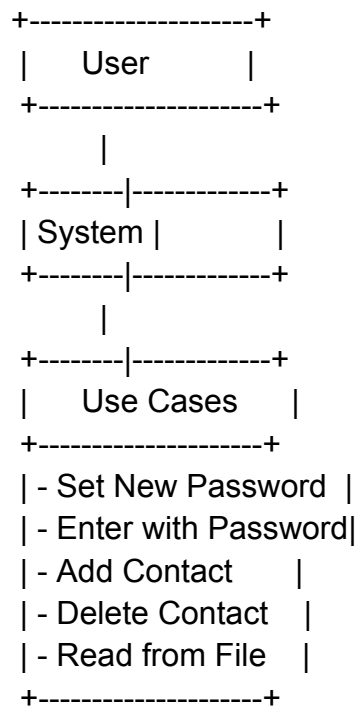
Why these structures?

The linked list data structure is chosen for the AdressList because it provides dynamic memory allocation and efficient insertion and deletion operations, which are essential for managing a contact list where entries can be added or removed frequently.

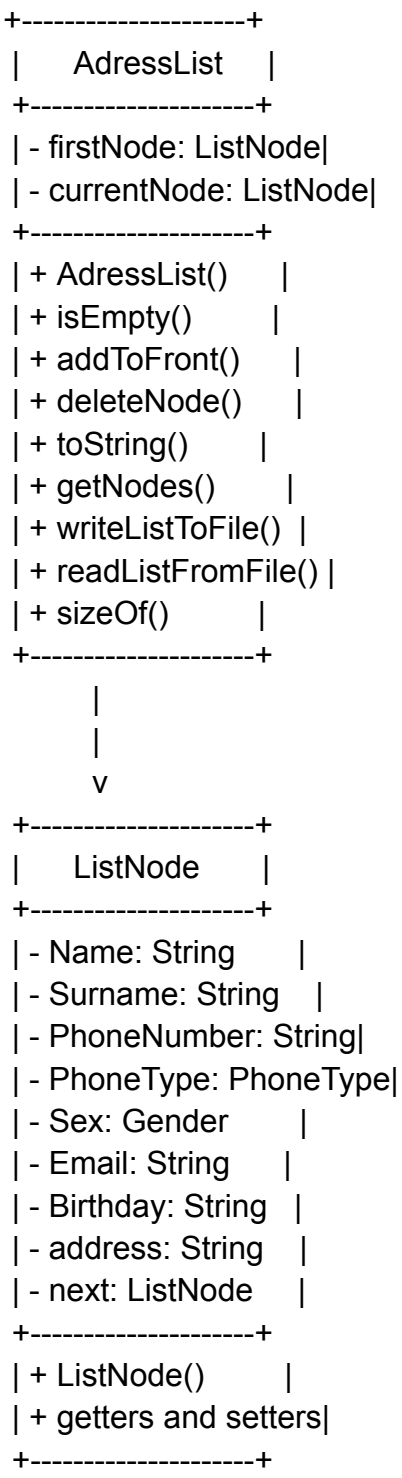
Work Partitioning

- User Interface and Screens: This part, not provided in the code snippet, is responsible for handling user interactions, password management, and navigation between different screens, such as the password screen and the new password screen.
- Data Management: This part, represented in the code snippet, manages the underlying data structures (AdressList and ListNode). It includes functionalities for adding, deleting, and reading contacts from a file.

Use Case Diagram



Class Diagram



Conclusion / Summary

The "MyPhoneDict" project is a Java-based phone directory application that employs a linked list data structure to efficiently manage contact information. The system includes features for password management and various functionalities for interacting with the contact list. The Use Case Diagram and Class Diagram provide a visual representation of the system's architecture, showcasing the main interactions and relationships between components. The chosen data structures and architectural decisions aim to create a flexible and user-friendly application for managing personal contacts.