בס"ד

**Exercise 2 – Software Engineering Course – Full Phone System  
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Class: TelephoneBook  
The TelephoneBook class encapsulates the behavior and data related to the telephone book system, making it a natural choice for a class.

* TelephoneNode is chosen as a class because it represents an individual contact, with specific attributes and behavior associated with it.
* Interface: SMS. The SMS interface defines methods for sending text messages.
* Interface: Calendar. Calendar interface define methods for creating, updating, and deleting events in a calendar.

Class: Calendar  
The Calendar class is chosen as a class because it represents the main entity in the calendar system. It encapsulates the functionality and data related to the calendar, such as storing events, managing event operations, and handling user interactions.  
  
Class: Event  
This is an class that can be abstract, but we decided not, because we creating instance of Event in the function "findEvent". It serves as the base class for different types of events. It provides common properties and methods for events, such as date, duration, and string representation.

Class: EventWithContact  
The EventWithContact class is chosen as a class because it represents a specific type of event in the calendar system. It extends the base Event class, inheriting its properties and functionality, and adds an additional property of contact.  
  
Class: EventWithoutContact  
The EventWithoutContact class is chosen as a class because it represents a specific type of event in the calendar system. Like the EventWithContact class, it extends the base Event class, inheriting its properties and functionality, and adds an additional property of description.  
  
Class: MediaApp  
The MediaApp class is defined as a class because it encapsulates the functionality and behavior related to managing and playing media  
  
Class: SMS  
Using a class to represent the SMS application provides a structured and reusable approach to managing SMS chats.

Class: Chat  
The Chat class is implemented as a class because it represents a chat conversation between a user and a specific contact.  
  
Class: PhoneSystem  
The PhoneSystem class is used to represent a phone system that integrates various applications such as a Telephone Book, SMS, Calendar, and Media App. It encapsulates the functionality and data related to these applications and provides methods to interact with them.