

SE/CS/CE 3354

Software Engineering

Group Final Project Topic Ideas

- Each group will decide on the topic they want to work on by themselves.
- We will not assign topics to groups.
- You may base your project idea on a fictitious institution, or an existing one.
- If it is an existing institution, please make sure that you comply with company privacy rules and get ALL necessary permissions from company members while obtaining and processing data.
- The following is a list of some suggested topics.
- **Some of these topics are described in more detail and others by title only.**
- Feel free to come up with your own project topic ideas, if you want.

This is not a comprehensive list. We encourage students to brainstorm and come up with original ideas other than what is listed below. We want everyone to enjoy this semester long project and contribute the most. Therefore, think broadly and choose a topic you will enjoy working on.

1. **A Calendar Software**

1.1 Views

- 1.1.1 Monthly view: show all days in a month, and event snippet for each day
- 1.1.2 Weekly view: show all days in a week, and event snippet for each day
- 1.1.3 Daily view: show all events in a day, sorted by their starting time
- 1.1.4 Agenda view (optional): show all events in future as a list

1.2 Events

- 1.2.1 Add an event with starting and ending time
- 1.2.2 Check time conflicts when adding events
- 1.2.3 Add weekly periodical events
- 1.2.4 Edit & delete events
- 1.2.5 Event alert (optional)
- 1.2.6 Add/delete event categories
- 1.2.7 Color marking for different category of events

1.3 Share (optional)

- 1.3.1 Send event to other calendar users (requiring their permission) through internet

1.4 Other

- 1.4.1 Holidays & weekends should be in special colors
- 1.4.2 Zoom in/out, and scroll support when necessary

2 **SMS Messenger Software**

2.1 Messages

- 2.1.1 View, edit, and delete messages, save a message under edition as draft
- 2.1.2 Send & receive messages
- 2.1.3 Reply & forward messages
- 2.1.4 Search messages by text query
- 2.1.5 Send to multiple receivers (optional)
- 2.1.6 Scheduled message (optional)
- 2.1.7 Auto reply (optional)

2.2 Message organization

- 2.2.1 Categorize messages by phone number (contact name)

2.3 Conversation view: view all messages between you and a certain contact, sorted by sending/receiving time

2.4 Other

- 2.4.1 Zoom in/out and scroll whenever necessary

3 **Contact Manager Software**

3.1 Contacts

- 3.1.1 Add, view, edit, delete contacts
- 3.1.2 Support multiple phone numbers
- 3.1.3 Support adding a photo label for a contact
- 3.1.4 Search contacts by contact name
- 3.1.5 Blacklist (block SMS and Phones)
- 3.1.6 Directly make phone calls and send SMS from a contact view

3.2 Contacts Organization

- 3.2.1 Add contact groups
- 3.2.2 Manage contact groups (add/remove contacts)
- 3.2.3 Sort contacts by name / group name

3.3 Contacts Storage (optional)

- 3.3.1 Export contacts to file
- 3.3.2 Load contacts from file

3.4 Other

- 3.4.1 Zoom in/out and scroll whenever necessary

4 **Bookshelf Software**

4.1 Book management

- 4.1.1 Load books from Download folder, provide support to .txt and .pdf
- 4.1.2 Delete books
- 4.1.3 Add category of books
- 4.1.4 Manage categories (add/remove books)
- 4.1.5 Search books by text query

4.2 Book reading

- 4.2.1 Swipe to go to the next/previous page
- 4.2.2 Bookmark a page and go to the bookmark page (optional for .pdf)
- 4.2.3 Day & night mode (optional for .pdf)
- 4.2.4 Search for word and go to the word (optional for .pdf)
- 4.2.5 Change font and size of the text in the book (optional)
- 4.2.6 Extract chapters and directly go to certain chapters (optional)

4.3 Book notations (optional)

- 4.3.1 Add notation to certain page
- 4.3.2 View notations on page with notations
- 4.3.3 Edit notations
- 4.3.4 View all notations for a book
- 4.3.5 Delete notations

4.4 Other

- 4.4.1 Zoom in/out and scroll whenever necessary

5 A shipping software

6 A match making software (matching people to books/hobbies they like)

7 A comprehensive smart phone application

8 A scheduling software (an airline flight scheduler, course scheduler, task scheduler, etc.)

9 Ticketing software such as in transportation (airline, train, cruise, etc.) domain or in social domain (culture center, athletic complex, hotel, etc.)

10 E-commerce software

- 11 Online banking software
- 12 Not-for-profit organization automation (e.g. library) software
- 13 University Information System software (student registration, faculty, course schedules, ...)
- 14 A rental facility software involving one or more of the following: vehicles, video, audio, books, games, and others)
- 15 A mobile application for suggesting a good match (for a restaurant, bookstore, healthcare provider, etc.) based on user preferences