

Introduction and Summary of project

Sydney Tech University (UTS) is full of events for students, teachers, and the community. There are academic talks, workshops, cultural events, sports, and more. Volunteers, who work hard behind the scenes, are key to these events. As events grow each year, managing volunteers becomes important. So, we're launching a Volunteer Management System (VMS). This system makes it easy and efficient for volunteers to join and organize activities. Whether you're a volunteer or organizer, this system helps you manage and participate. For volunteers, you can see and join activities, check your signed-up events, talk with others, post feedback, and see event times. For organizers, the system lets you post and manage event details, chat with volunteers in real-time, and use volunteer resources well. You can also collect user info, confirm events, and send important messages.

The following is a description of our project functionality:

1. User Functions

- 1.1 Sign up for an event: Users can browse and sign up for various volunteer events.
- 1.2 View all events: Users can view all the volunteer events that have been published.
- 1.3 View registered events: Users can check the volunteer events they have already signed up for.
- 1.4 Post Feedback: Users can provide feedback and suggestions to the organizers regarding the events.
- 1.5 View personal information: Users can access and view their personal information, such as contact details, skills, and interests.
- 1.6 Modify personal information: Users can update and edit their data.
- 1.7 View Activity Duration: Users can check the duration of the volunteer activities they've participated in, along with their historical records.
- 1.8 Favorite Events: Users can add events of interest to their favorites list for easy tracking.
- 1.9 Add to waiting list: When volunteer events are at total capacity, users can join a waiting list, and the system will automatically notify them when slots become available.
- 1.10 Cancel activities: Users can cancel their subscriptions

2. Management Functions

- 2.1 Publish/modify activity information: Administrators can publish new volunteer events and make real-time modifications to event details.
- 2.2 View/modify/add users: Administrators can view, modify, and add information for volunteer users.
- 2.3 Confirm activity completion: Administrators can confirm the completion status of volunteer activities and mark activities as concluded.

3. System Functions

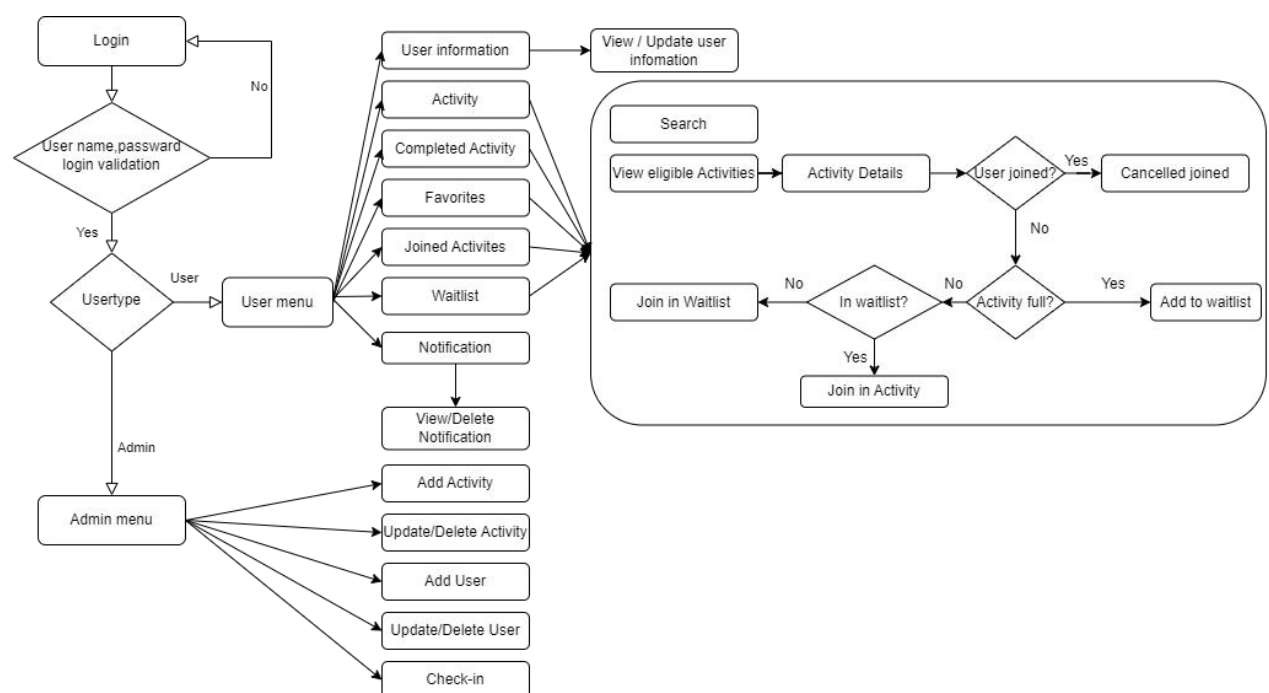
3.1 Email reminder message: The system will send email reminders two hours before the start of an event and will also provide notifications when users subscribe to or cancel events.

3.2 System notification: The system will automatically send messages to ensure users receive timely information, including event updates and changes in waiting lists.

Development approach

Throughout the project, we utilized the WinForms application as our development template. We employed two plugins for development, namely Microsoft.EntityFrameworkCore.SqlServer and Microsoft.EntityFrameworkCore.Tools. In addition, we referenced many built-in libraries from .NET, such as Linq, Timer, Thread, Collection, Net.Mail, and so on. Among them, our primary interaction with the database was through the EF (Entity Framework) framework, which is the core of the entire project.

Flowchart



Role of team members

Function	Description	Name
----------	-------------	------

Publish/modify/delete activity information	Administrators can publish new volunteer events and make real-time modifications to event details.	Yuxing Ren
View/modify/add users	Administrators can view, modify, and add information for volunteer users.	Yuxing Ren
Confirm activity completion	Administrators can browse and check in participants for each event.	Yuxing Ren
Email reminder message	The system will send email reminders two hours before the start of an event and will also provide notifications when users subscribe to or cancel events.	Yuxing Ren
Login	Allows identification of different users logging into the system.	Beilei Gu
Display/modify user information	Display user information and provide the ability to modify it.	Beilei Gu
Total hours	Calculate and display the total hours of user participation in volunteer activities.	Beilei Gu
Favorite Activities board	Display a list of users' favorite activities.	Beilei Gu
Show/Participate/Cancel/Favorite Activities	Allow users to view, participate in, cancel, or mark activities as favorites. Send notifications when a user engages and cancels.	Dengmeng Liu
Display Completed Activities	Display a list of volunteer activities that have been completed.	Dengmeng Liu
Display Participated Events	Display a list of volunteer events in which the user has participated.	Dengmeng Liu

Display Waiting List	Display a list of users on the waiting list for specific events.	Dengmeng Liu
----------------------	--	-----------------