SOEN343
SOFTWARE ARCHITECTURE AND DESIGN

Community Service App
(Phase I)

Instructor:
Dr. Joumana Dargham

Team: ArchiTECH

1. Imran Ahmed (40172931) ~ Leader
2. Daniel Soldera (40168674)
3. Joe El-Khoury (40173108)
4. Titouan Sablé (40179062)
5. Ali Alp Erdinc (40172910)
6. Julien Fadel (40002473)
7. Kunal Shah (40153500)
8. Rohan Das (40177213)
9. Arsany Fahmy (40157267)

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1. Problem Definition

1.1 What is the problem?

The problem is that people within a specific area, such as a neighbourhood in a city, do not have many opportunities to improve their lifestyles and meet new people so that they could get to know more about their communities, especially teenagers and young adults. In other words, the problem is that people do not have many accesses to services which will improve their quality of life and do not have many opportunities to open themselves up to more social events to build a relationship with their community and or have job opportunities.

1.2 Who benefits from your system?

The people who will benefit from our system will be teenagers and young adults. More precisely, people aged from 13 to 25 years old.

1.3 How did the problem emerge?

The problem emerged because of a lack of accessibility and advertising of these services for this group of people. Many of the web applications in today's society such as LinkedIn and Indeed [1] [2] do not show as much of social events or lifestyle improvements as they should. This is something crucial for teenagers and young adults, especially for the people who are new to a city. Also, some people live in unfortunate living conditions and lifestyles which hinders their access to these types of services such as social networking, food assistance, job experience etc. An application curated to this issue can benefit these people a lot.

1.4 What is your solution?

The solution to this problem is to make a functional user-friendly application using an Object-Oriented Programming language that will allow users to sign up for different types of services such as signing up for activities, signing up for social events, applying for jobs etc. This application would be used by any person who has access to the computer and the internet.

1.5 What are the advantages and features of your solution in comparison with the existing solutions?

The advantages of this solution compared to existing solutions are

- This application will target a younger demographic with little to no work experience. It will allow them to get some work experience by applying to many of the jobs that the application will offer and give a head start to their career.
- This application also targets the young adults that our new to the city and allow them to network with their community

- The application improves the quality of services provided to people because of higher donations. It will encourage users to donate to charity.
- The application targets different linguistic groups to join and participate in activities. In other words, it will encourage people from different background and cultures to get to know each other.

The features of this solution compared to existing solutions are

- An automated reminder that will notify you of all the events that the user booked.
- Under jobs and volunteering, the user could filter the jobs through ages and other criteria, allowing them to get a job that they are interested in.
- Users who donate to the community service automatically enter a lottery allowing them to win up to 100 000 $
- 4 core features such as a request centre section, volunteering and jobs section, activities section and social network section

1.6 In which context will your system be used?

A non-profit NGO has decided to build a website aimed at helping teenagers and young adults in their early work prospects. This website would help them find volunteering work or jobs that require little to no experience in the fields they are looking into. It would also help them network and socialise with peers looking to do the activities and improve their lifestyle.

2. Breakdown structure of the system layout
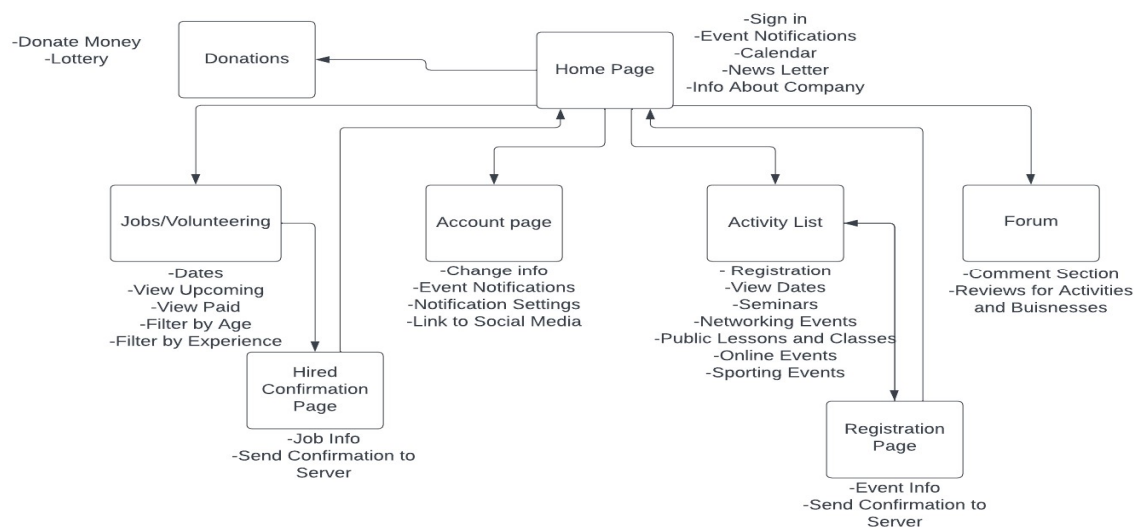
Breakdown structure of our system

Figure 1. Breakdown structure

3. Context diagram

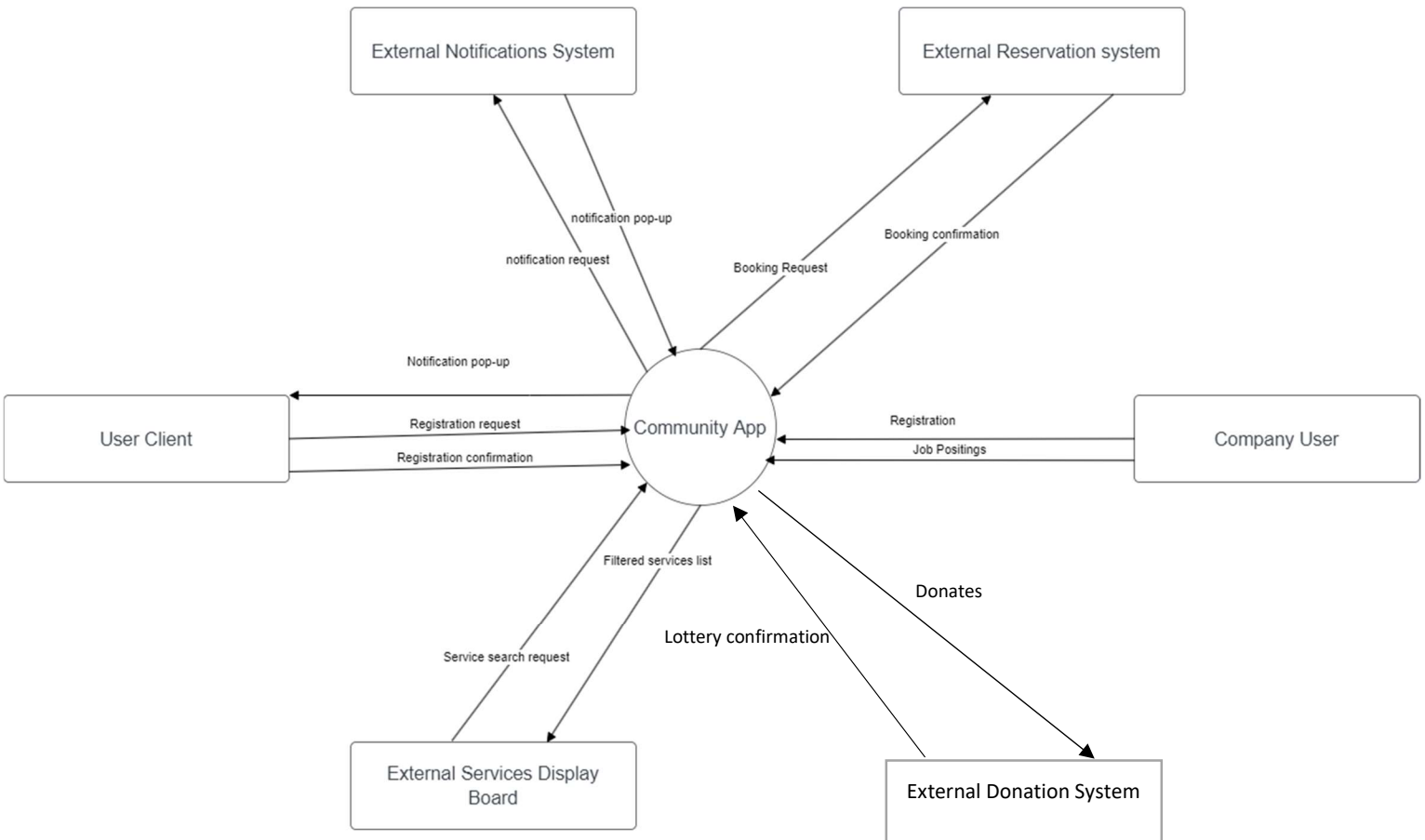The context diagram [3] of our system.

Figure 2. Context Diagram of the community application

4. Domain models
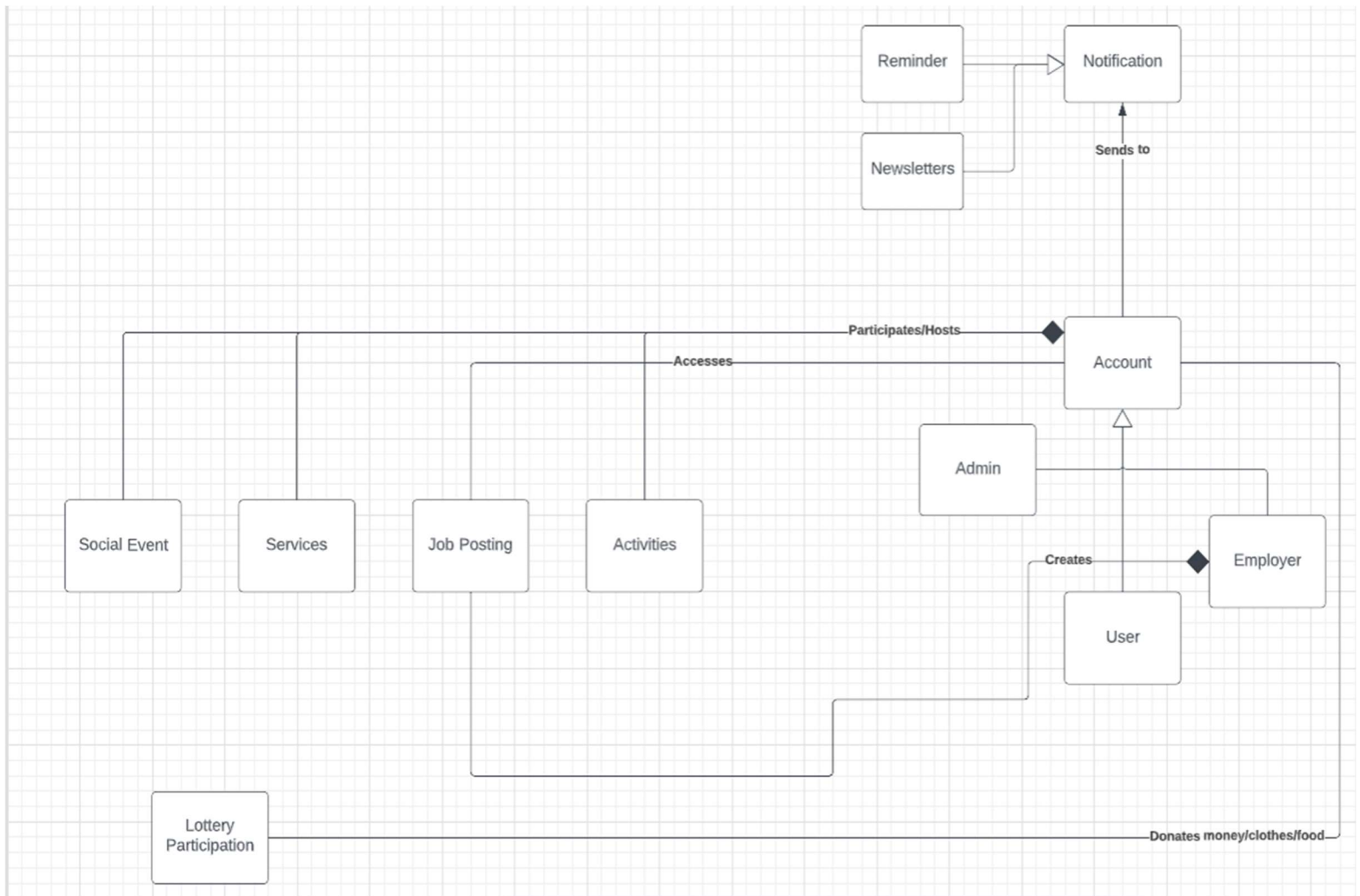
The domain model [4] [5] of our system.

Figure 3. Domain model of the system

5. References

[1] https://ca.linkedin.com/

[2] https://ca.indeed.com/

[3] https://www.modernanalyst.com/Careers/InterviewQuestions/tabid/128/ID/1433/What-is-a-Context-Diagram-and-what-are-the-benefits-of-creating-one.aspx

[4] https://www.researchgate.net/figure/Example-of-domain-data-model_fig2_287230638

[5] https://delatbabel.medium.com/domain-models-63a33b8d66e6