AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

Assignment Cover Page

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Semester:	Fall	2022-23	Course Teacher:	**ABHIJIT BHOWMIK**

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PROBLEM DOMAIN

"FOSTERAGE"

1.1 Background to the Problem

Children who are homeless are especially prone to abuse and exploitation. Additionally, the hazards to these kids' safety and wellbeing have escalated. Many of them work to support themselves and their families, frequently in dangerous and low-paying occupations. Many families rely on the wages of their children to make ends meet because of poor family income and parental unemployment. Children who are homeless are also more susceptible to other types of exploitation and commonly become the targets of trafficking, physical and sexual abuse, and slavery. Numerous criminal organizations use youngsters for commercial sex work, smuggling, theft, and the trafficking of drugs and firearms in order to generate substantial profits.

- There are guardians who wants to adopt children. But for having lack of information, they cannot adopt.
- Communication between two individuals is not correctly happening.
- A proper source is needed for adopting foster children and make an impact reducing child crime.
- Although the street children and foster children both are becoming victim of vulnerable conditions.

1.2 Solution to the Problem

- An online base platform can be introduced to solve this problem.
- The platform will introduce information to the guardian or an orphanage of foster children.
- The platform will be verify by the government.
- The solution will reduce the problem and increase the chance of the street children and foster children to lead a better life.
- **Case story: 1**

Suppose a new born child lost her mother and she was his/her only guardian to look after. The child deserves a better life, proper education. The hospital management can visit the platform and check if there any guardian or orphanage is available to take responsibility. They can create an account and get the service according to terms and policy.

- **Case Story: 2**

Suppose there are some street children who are affected by drugs and criminal activities. We can give them proper education and ethical moralities by giving a new life. We can send them under a proper care by giving them a guardian or an organization who can take care of them. It can be changing their life.

2.1 System Features: There will be 4 types of users in our software:
I. Admin; II. NGO; III. People; IV. Volunteer
Fosterage is an online based adoption system. Many people in our country wants to adopt child. But for not having enough resources the cant goes to next step. So, we want to introduce this system where user can view details of child and if interested, he can request to related person/organization for adoption. There are NGOs who will provide the data of child. Also, an NGO can add their volunteer who can save the details of a street child, an orphan and the NGO will see the details and approve or add after taking the responsibility. NGO can also create post which will be showed in people's dashboard. And they can create campaign by giving details and people can invest on the campaign by giving necessary information. And to make people interested in the system we will try to show the campaign details like: image, budget, output etc. Also, if anyone wants to provide information about a child, they can submit the data. And these data will be sent to NGOs.

So, in this system to make people interested and to involve more users we want to develop the campaign details view option and child information giving option. This system will be developed not only for people who wants to adopt child. It will be developed to involve more people in social help.

Roles & Responsibilities:

User 1: NGO

1. Can post
2. Can view the adoption request
3. Can view data posted by volunteer or people
4. Can add and update children's data

User 2: Public/Normal User

1. Can view post of NGO
2. Can view the child details
3. Can request for adoption
4. Can provide children data
5. Can view campaign details

User 3: Volunteer

1. Can add children's data
2. Can add campaign details
3. Can view children's data

Common Feature:

1. Sign UP
2. Log in
3. Registration

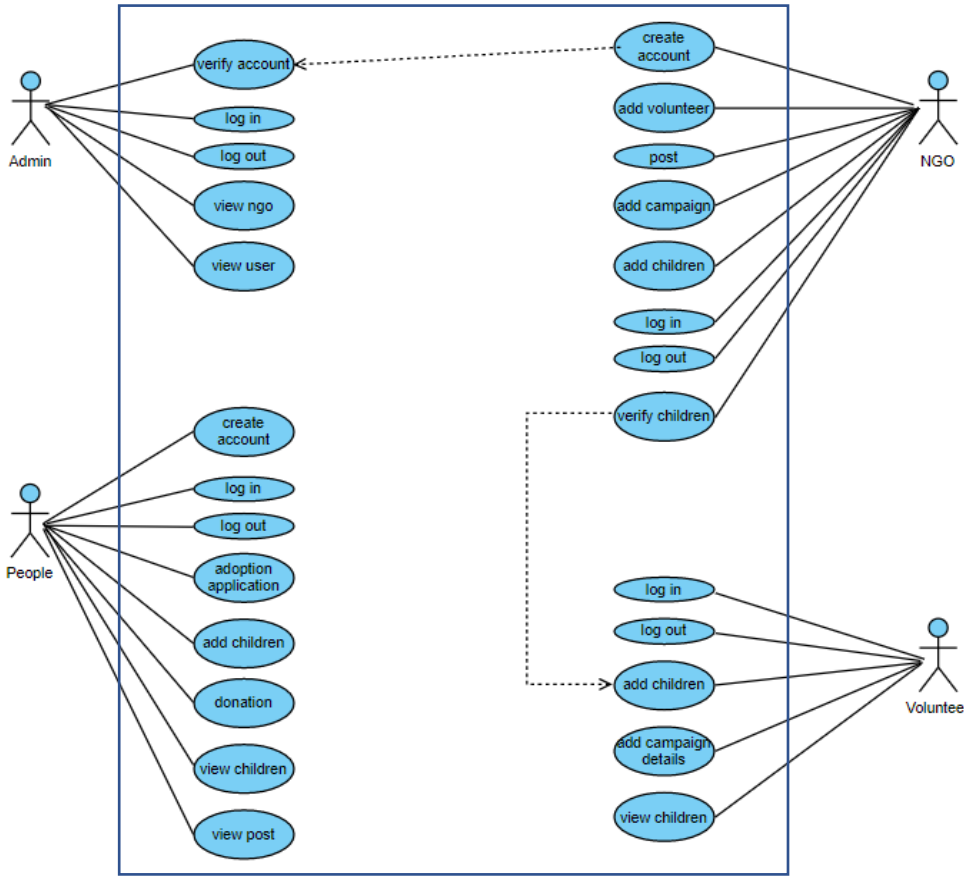


Figure 2.2.1: Use case diagram of the system

The system has 4 users. NGO, Admin, People, Volunteer. The functionalities of the users are given in the use case diagram.

The ER diagram shows

Users table NGO, Child, Volunteer, People. Every table has primary key and foreign key. Which shows the relationship between the tables.

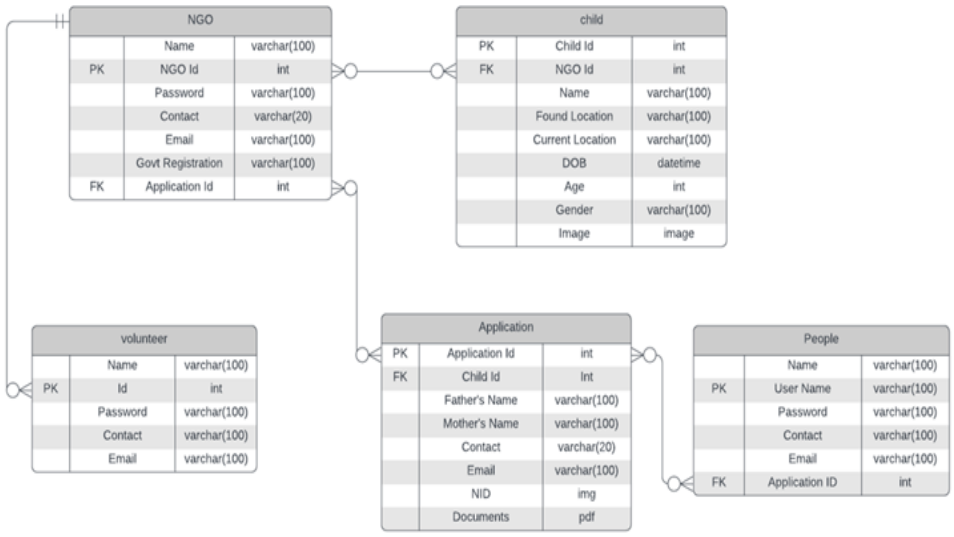


Fig.2.2.1: ER diagram of the system

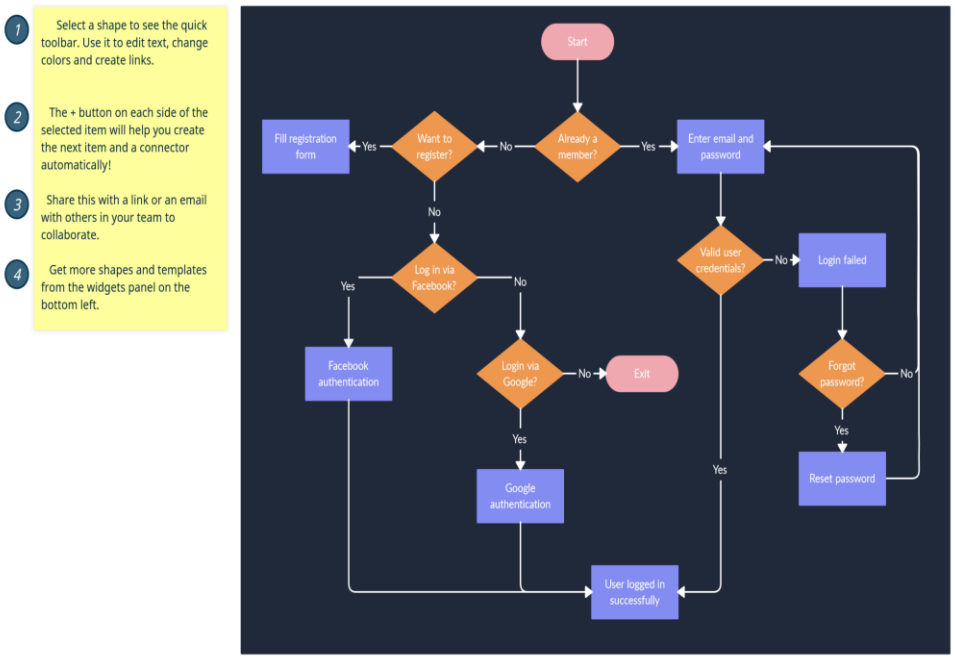
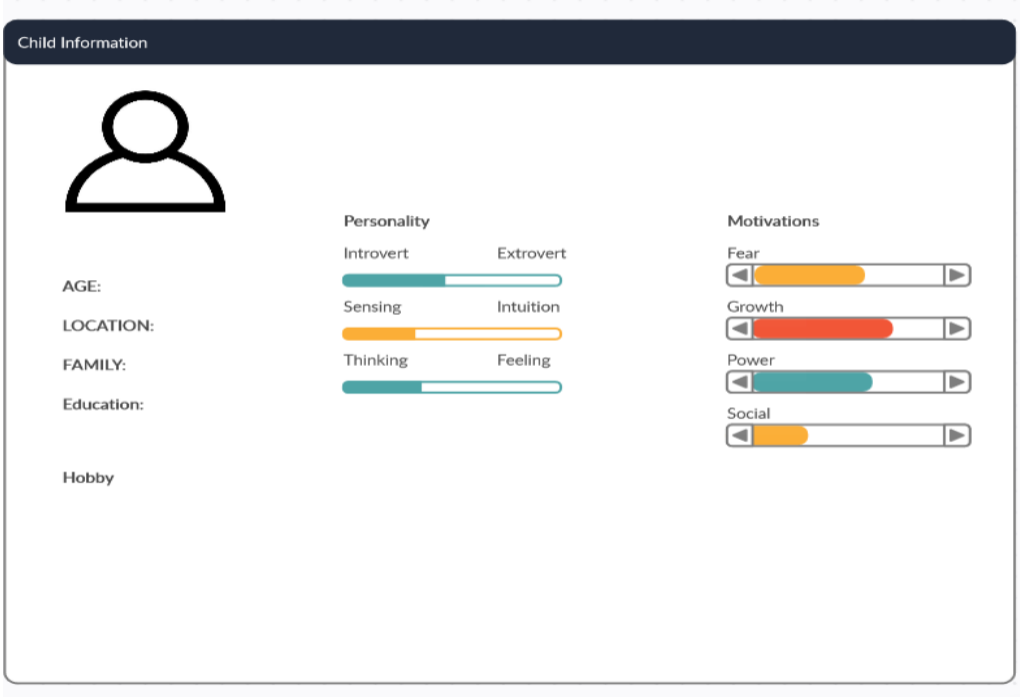


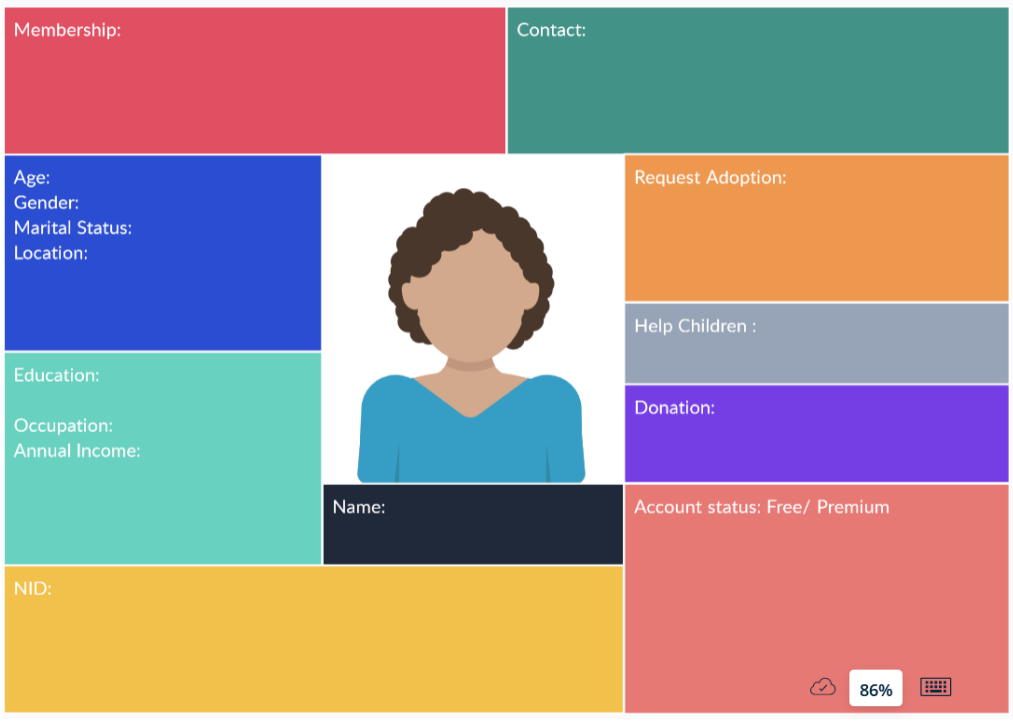
Figure 2.2.3: Different signup options

A person can login if he/she is register to the system. If not then the person have to create a account, through system requirements then, it must have approved from the admin. Then a user can login. If a register person forgot password then he/she can click on forgot password and through email and phone number the password can be recovered.



A child information will be provided to the user through the volunteer. Where they can see the information.

Figure 2.2.4: Child information form



Requirements to sign up, when a user have to create an account. NID, salary, premium membership. Help children is optional. He/she can delete her/his account.

Figure 2.2.5: User Requirements

3. SOCIAL IMPACT:

We often talk about the impact adoption has on a child. Unfortunately, this means jumping to the negatives. How adoption supposedly damages a child's identity and self-esteem. Or how it can cause him or her grief, loss and physical and emotional trauma. But there is so much more to adoption. Countless good things. Positives. These include, but are not limited to: a stable home environment, better mental and behavioral health and success in personal and educational endeavors. adoption has many outcomes on a child; however, the positives far outweigh the negatives. Having a stable home environment, strong behavioral and mental health, and educational and personal successes are only the tip of the iceberg. Many more exist. We encourage you to explore and learn all you can. Share with us any other ways you have seen adoption's positive impacts on an adoptee in the comments below! We'd love to hear from you. For, the truth is, adoption's positive impacts on your child will last a lifetime, allowing your son or daughter to thrive and grow into a healthy, well-rounded and independent adult.

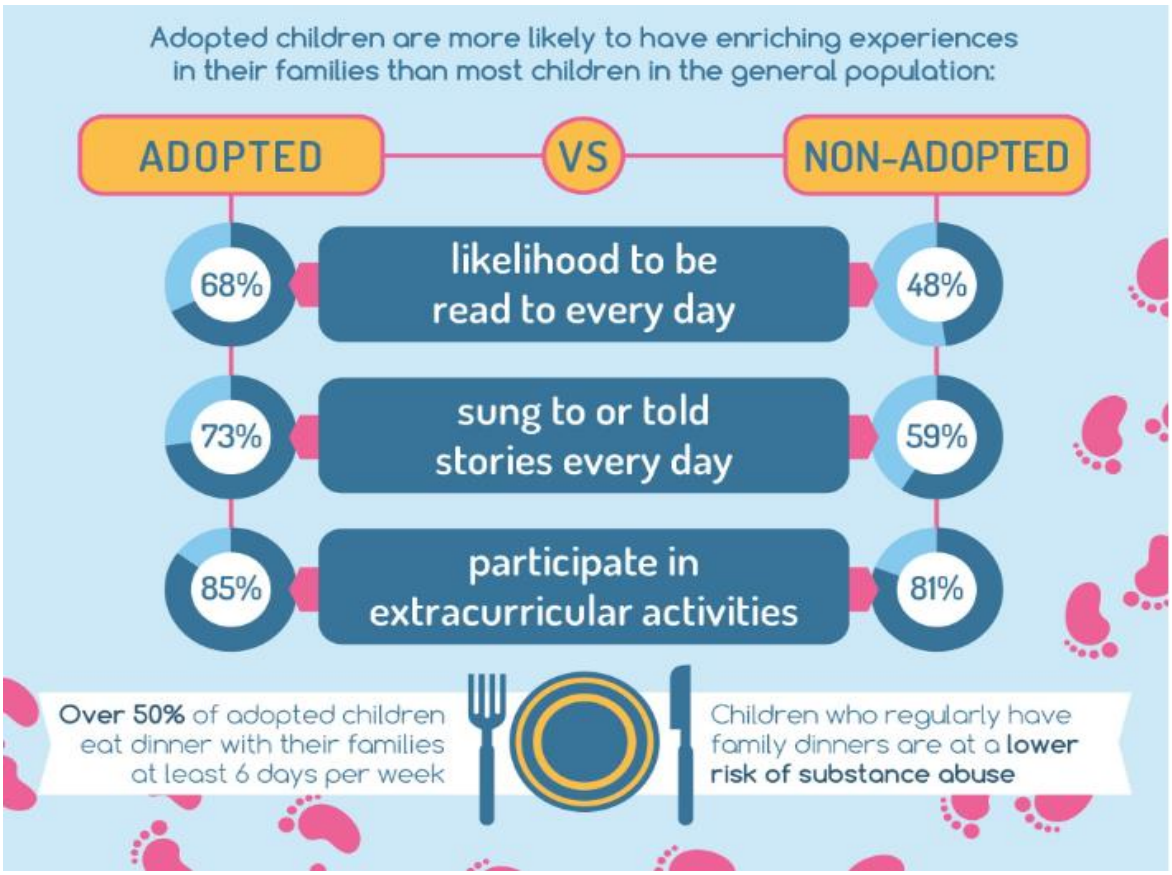


Fig.3.1: Percentage of impact on different scenario between adopted and non-adopted child

4. Development plan:

As our application is mainly focusing on customer needs, we will use an agile model for our project development. Because this model is designed to put customer needs first. It makes any application or software highly responsive to customer feedback. Agile seeks to release software cycles quickly, to respond to a changing market. This requires a strong team with excellent communication. Software Development Life Cycle is the application of standard business practices to building software applications.

It’s typically divided into six to eight steps:

Planning, Requirements and feasibility analysis, Design, Development, Testing, Deploy, Maintain.

1. Planning: In the Planning phase, our developers will evaluate the terms of the project. During the meeting, we'll talk about our concept. We'll brainstorm and come up with a plan for what we'll do next during our meeting. As a result, we'll need at least one week to meet and brainstorm, which will take almost two weeks. This includes calculating labor and material costs, creating a timetable with target goals, and creating the project’s teams. It can also include feedback from stakeholders. Stakeholders are anyone who stands to benefit from our application. Planning should clearly define the scope and purpose of our application. It plots the course and provisions the team to effectively create the application. This process can take 1 week.

2. Requirements and feasibility analysis: Requirements and feasibility analysis makes detailed estimation and planning complete. We will also collect requirements from people, lawyers, and clients in this section because they will be the system's users. So, by gathering certain requirements through the use of questionnaires, we can obtain a sense of how our system will work. We'll need at least one week to get those prerequisites. Also, we must decide whether a demand is necessary or not, which feature will be developed, and conduct brainstorming to come up with the best solution. It looks at whether the application we want to build is viable for our requirements or calls for changes before design and development are in full swing. These can help us to get a more viable and cost-efficient product in the long run. we'll need at least one week to meet and brainstorm, or maybe two weeks.

3. **Design:** The Design phase models the way a software application will work. Some aspects of the design include:

Architecture – Specifies programming language, industry practices, overall design, and use of any templates or boilerplate.

User Interface – Defines the ways customers interact with the software, and how the software responds to input.

Platforms – Defines the platforms on which the software will run, such as Apple, Android, Windows version, Linux, or even gaming consoles

Programming – Not just the programming language, but including methods of solving problems and performing tasks in the application

Communications – Defines the methods that the application can communicate with other assets, such as a central server or other instances of the application

Security – Defines the measures taken to secure the application, and may include SSL traffic encryption, password protection, and secure storage of user credentials Prototyping can be a part of the Design phase. A prototype is like one of the early versions of software in the Iterative software development model. It demonstrates a basic idea of how the application looks and works. This "hands-on" design can be shown to stakeholders. We can use feedback to improve the application. It's less expensive to change the prototype phase than to rewrite code to make a change in the development phase. Create throwaway prototypes as quickly and cheaply as possible. Invest the minimum amount of effort that will answer questions or resolve requirements uncertainties. We should not prototype requirements that you already understand, except to explore design alternatives. Prototyping is for a basic visualization of the software not replacement of written requirements. Designing can take up to 3 weeks.

4. **Development**: This is the actual writing of the program. A small project might be written by a single developer, while a large project might be broken up and worked by several teams. We will use an Access Control or Source Code Management application in this phase. These systems help developers track changes to the code. They also help ensure compatibility between different team projects and to make sure target goals are being met. As a result, we'll attempt to complete our coding portion in five weeks.

5. Testing: We'll run a series of tests to see if our system is up to par. The testing procedure will include both white box and black box testing. Testing for regression and acceptance is also a part of the procedure. We will properly test the system. This exemplifies how well our system works. After we've finished coding, we can start testing. We can begin testing after the coding portion of the project has been completed for two weeks. We are going to perform **Unit testing** and **Integration testing** alongside with the system testing. Unit testing will be performed by the developers. We must ensure that the system functions correctly during the testing phase. As a result, a significant quantity of testing is required. If we find an error, we must correct it. As a result, we'll need at least 2 to 3 weeks to complete the testing phase.

6. Implementation and deployment: In the deployment phase, we will make our application available to users. It can also be called a pre-launch testing so that we can decide our application is ready to move into production. It will define how our application should go before live operation, this stage we may need less than 7 days.

7. **Operations and maintenance:** In this phase, the development cycle is almost finished. Our application will be rolled out for live operation and will be used by our customer. They may discover bugs that weren't found during testing. That is why we will maintain the development cycle by assigning some resources or we can sign a software maintenance agreement with our development

team or a third party. Under this agreement, we will set forth what parts of our application should be maintained, upkeep activities, liabilities, and more. For maintenance we may need 1 to 2 weeks.

Project Schedule

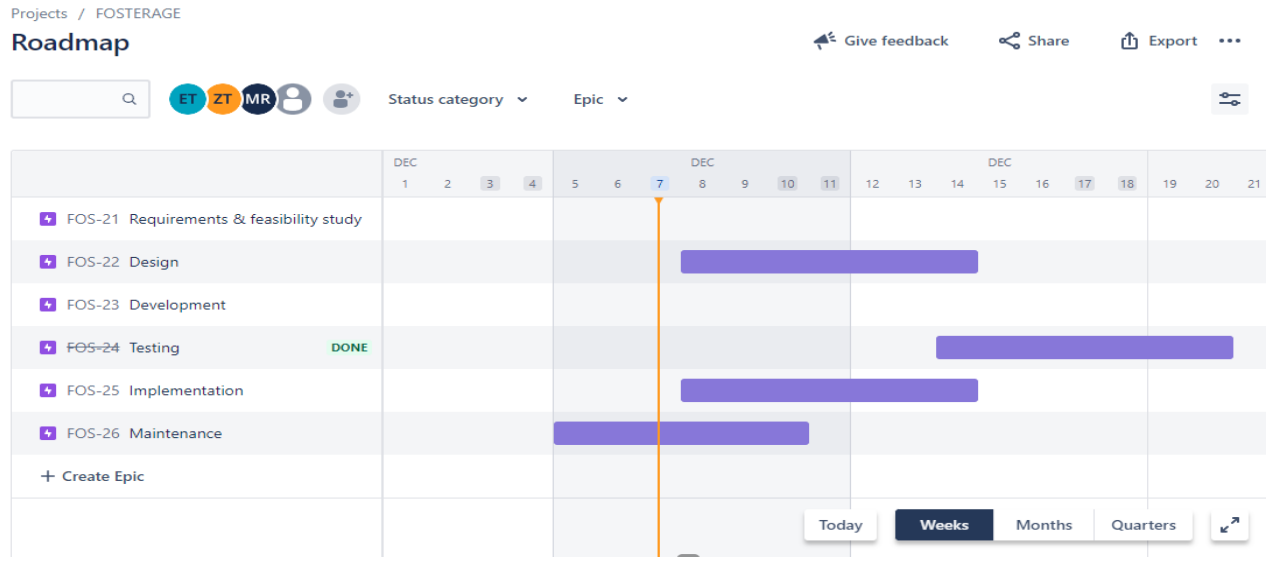


Figure 4.1: Roadmap of the project

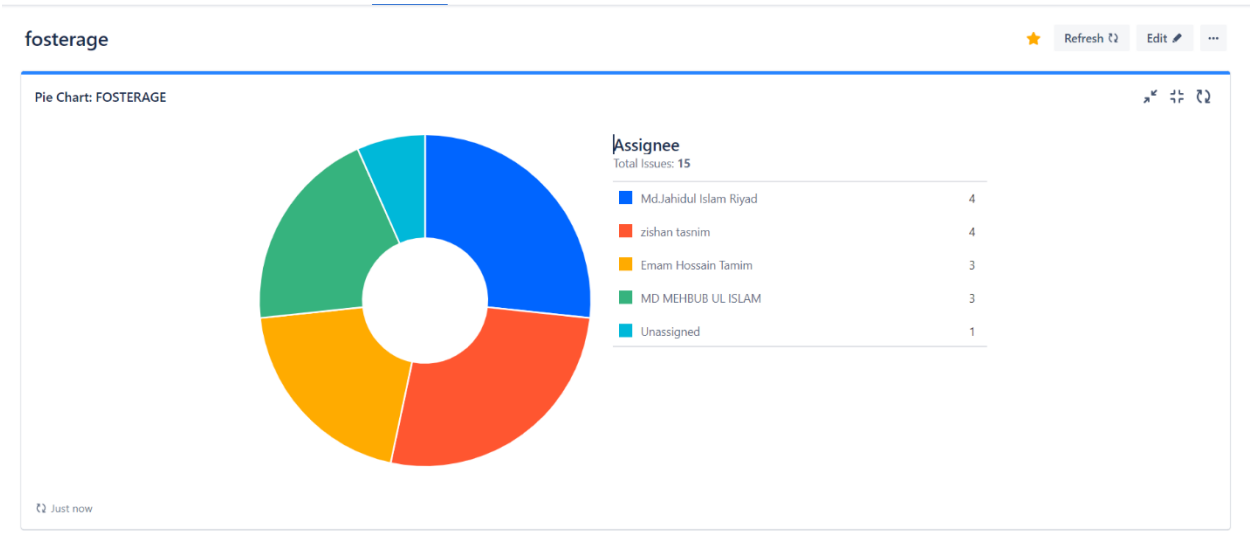


Figure 4.2: Percentage of assigned task to the group members

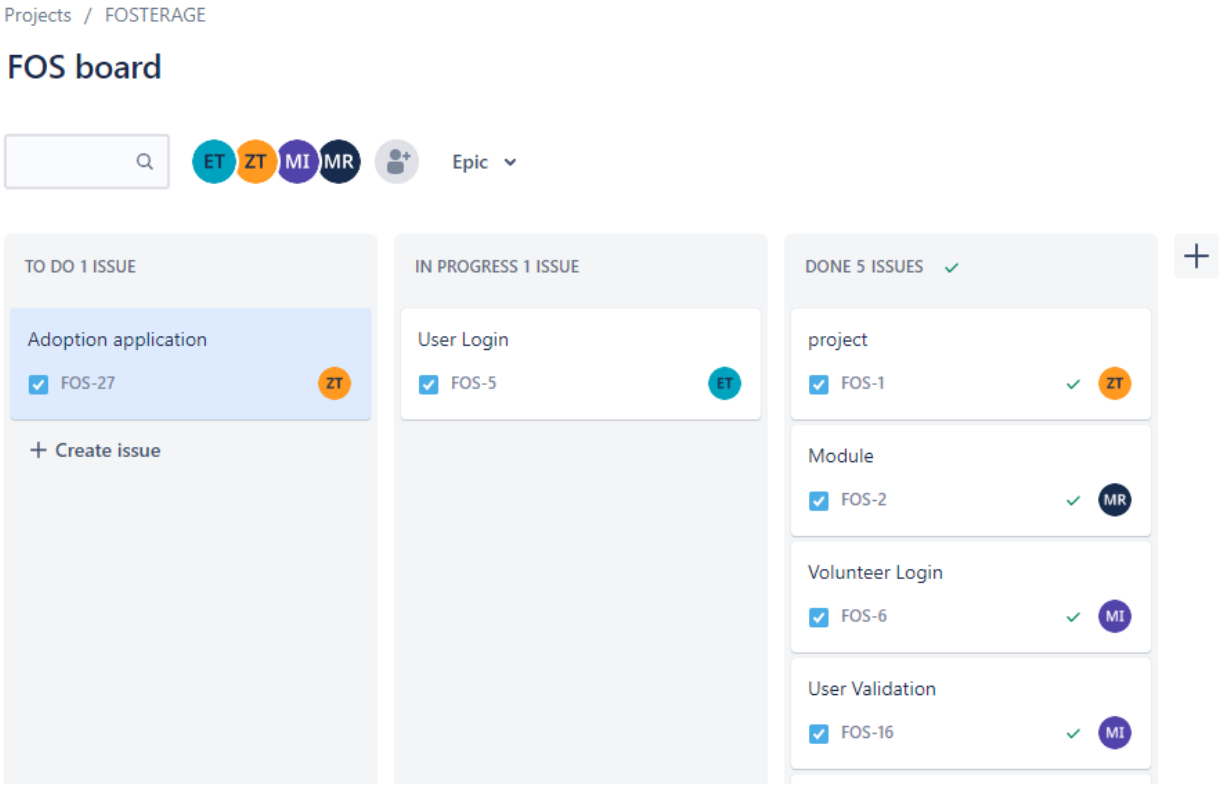


Figure 4.3: Status of assigned task

5.Marketing Plan

After building the software or system, We have to make a proper marketing plan to familiarize the software with the people. Marketing plans play a great role to boost in sales. There are many marketing approaches available which we can follow. Traditional and Digital Marketing is one of the popular branches of Marketing. Nowadays Digital Marketing is getting more popular than the traditional approaches of marketing. Marketing plans can be Short-term, long-term and Continuous plan. Describe these plans below:

Go social:

Social media platforms such as Facebook, Instagram, and Twitter are terrific channels for you to engage in childcare marketing, depending on your desired client base. Build a Facebook page for your business, ensuring you're searchable to the public.

Yelp and NextDoor are other great places to have a listing. The key is to post your business in as many online places and groups as possible to increase your search visibility.

Get networking:

Engage with your local community for networking purposes. Get to know other small business owners, regardless of whether they specifically serve families with children. Offer to share your childcare expertise with a new parenting support group. One great tip we recently heard from a childcare owner is to make friends with local real estate agents, who can then send families new to the area your way if they're seeking child care. If you want families to trust you with their children, building trust in your community is a great first step.

Be creative:

Offer evening/night care on a rotating basis. Bring in a variety of enrichment offerings regularly, such as art, music, and dance. Host local community events at your facility. With many childcare options to choose from, you'll need to grab the attention of prospective clients by differentiating yourself from other childcare centers in the area.

Use technology:

Embracing technology to keep your communities engaged is another surefire way to attract new business. Brightwheel is an easy-to-use software platform that will help you manage your center and stay in touch with families. You can use brightwheel to record daily events and activities, and parents get real-time updates delivered to their mobile device throughout the day. It also offers secure, digital check-in/check-out, messaging, and a paperless billing system. The peace of mind this technology will provide your families will be a program differentiator, making you stand out from the crowd.

Cost and Profit analysis:

Items	Unit	Month	Cost	Total Cost
Developers	4	10	48400	1936000
UX Designer	1	10	30000	300000
Premium Software	2	10	10000	200000
Maintenance	4	2*6[per week 2h, 6months]	2500	120000
Office Rent	1	10	20000	200000
Utilities		10	3500	35000
Training/Hardware		10	3000	30000

Total cost	2821000

Profit Margene	15%	423150

Payable Cost	3244150	