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**E-Aid**

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# Chapter 1: Introduction

E-Aid system is a web-based application platform that aims to leverage MERN stack technology along with other technologies to design a trusted framework which would enable charity donations to be as accountable, trustworthy, and transparent. In this fast-developing world of modernization, some people are becoming too competitive to earn money while others have no clue about getting even a penny. But at the same time, there exist people who wish to contribute to the society out of altruism. There exist many online donation platforms in the world and yet issues concerning extra fees, accountability and processing delay still exist as well as these existing centralized systems for charities are so corrupt that people lose belief in this trust less systems and hence the charities become futile. This documentation explores how the transparency can be leveraged in the philanthropic sector, through charitable donation services via a web- based donor platform.

# Brief

# Donation is a critical part of a popular society. It is known that there are multitudinous incidents taking place in this world which cause woeful loss, whether it can be related to wealth or life and beget extensive damage every time. To recover from various types of losses, multitudinous tortures bear help from aid agencies, which can be financial aid to introductory requirements. As in Pakistan people are now getting voracious to contribute to society. So, charity is a largely growing sector in the moment’s Pakistan and it has evolved from its traditional organizational generalities to a web-based secure donating system The traditional system in Pakistan suffers from various problems, analogous as lack of translucence, lack of trust between donors and corruption. Therefore, we aimed to develop E-Aid. E-Aid is web-based registration software where both benefactors and beneficiaries are directly connected to each other. It could also be a remarkably transparent and a way of maintaining varied donation deals. E-Aid system is such a system which acts as a platform to contribute capitalists for donors to other stoners who have requested the donation and this is happening under maximum security and fulfilled trust. Tools that are used to develop the system are Visual Studio code, Hyper terminal, Postman, and Studio 3T. MERN stack methodology is used for the front-end React and back-end was handled by Node.js.

# Relevance to Course Modules

# Courses that were helpful during the development of the system were web development, database, data structure, networking, and software engineering. To develop the attractive GUI interface and to make the interface dynamic web development techniques could be helpful plus how website works on internet is important to know which can be learned by this course. The data of users were stored in database either locally in the system or by cloud. So, database administration course could be a blessing in this scenario. Hackers are spread on the internet to make secure from the web attacks like (DoS, XSS, etc.) developers must have basic knowledge of networking to cope up if such situation occur. Hashing algos were used in the system that are learnt from the data structure course.

# Project Background

# In recent times, Pakistan had faced an extremely gigantic flood emergency in the area of Sindh and Swat, and this makes us think that there must be a platform for Pakistanis to deal with any kind of natural disaster or any trending tragedies when required. E-Aid could be helpful in this scenario where Pakistanis need emergency help with transparency of the donation in corrupted environment. It is web-based application where donor can donate to whom they wanted to donate. They can view the trending tragedies through map and view if any NGO is connected to that area and how many people are already the donor of that place. Filtration of places is easy in this way. Recipient who needs help send their legal data to E-Aid and after the authentication process get completed, they have access to the system.

# Literature Review

# There are many charities fund raising system proposed till date to provide platform for secure and transparent transactions in charity sector. Here, we investigate the existing system of the charity fund raising in different fields and identify the research gaps in Pakistan.

Global Empowerment [1] is a system whose job is to highlight the trending tragedies of the world and anyone can donate to the organization. They are focusing on problems at the international level. This platform is not defined only for Pakistan moreover, recipients are not in-touch with the platform.

Similarly, Transparent hand [2] is an online platform in Pakistan where givers help patients who cannot manage the cost of medicines. They used the concept of the key fundaments of building a society is common interest or intention of the group members for various social and charity projects in different hospitals. The main concern is to improve the efficiency and effectiveness by building a social network donation by joining the hospitals of Pakistan. The study presents a review of cash collection sites, various models of donation and money collection process and the ways how the charity projects results are reported to their founders. They are just focusing on clinical-related individuals.

Al-Mustafa Welfare Society [3] is yet another online platform providing basic food, shelter, and other essentials to Pakistani but this platform is zakat related. They provide zakat to the people who have rights to zakat. They make network of zakat fund raising organization and provide them the zakat to them through the platform.

# Analysis from Literature Review

# After investigating the already existing system, we can make an analysis that there are some points in common between the existing system and the proposed system but no loop hole is provided in E-Aid in order to provide transparency, trust, authenticity, and security to the users.

In comparison to the Global Empowerment [1] E-Aid is providing the transparency to the donor about the donation is in safe hands. Global Empowerment [1] is targeting only the donor. They do not have recipient side in their framework. Whereas E-Aid provides recipient side who want to seek help from the platform. Proper profile of donor and recipients are maintained in the system where they can login and can provide the necessary documentation.

Transparent hand [2] had targeted the hospital patients in order to provide the basic facility for medication. They do not have any trending tragedies and no review of the donation which make E-Aid far better from them. E-Aid not only provide feedback but through news feed and newsletter other facilities were provided to the donor to gain their trust.

Al-Mustafa welfare [3] is zakat-based charity system. They are not transparent about the rights of the zakat needed people. They are not authenticating their user and NGO’s. whereas E-Aid first authenticate their users. The user submits their registration form and request will go to the admin panel. User will be notified by email that their request is under review. After the verification is done by the admin user can logged into the system.

# Methodology and Software Lifecycle for This Project

# The software methodology selected for this project was SCRUM. The purpose behind utilizing scrum was that systems could be easily divided into little chunks so developers could have more control over the project. Furthermore, every scrum meeting increased the efficiency of the developers. Scrum’s sprint was helpful for feedback and reflection. It was a very flexible methodology during the project development process; any amendments to tasks were easily handled.

* + 1. Rationale behind Selected Methodology

SCRUM methodology was selected because it uses the principle of “divide and conquer.” Moreover, in traditional methodologies one phase should be completed before the next phase. But my using SCRUM, modules were divided into parts so that parallelism in task and productivity of developers could be enhanced.