# Project Design Phase-I

## Proposed Solution

| Date | 25 September 2022 |
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| Team ID | PNT2022MID37833 |
| Project Name | Plasma Donor Application |
| Maximum Marks | |

### 1.Problem Statement (Problem to be solved)

Plasma is the clear, straw-colored liquid portion of blood that remains after red blood cells, white blood cells, platelets and other cellular components are removed. Source plasma and recovered plasma are used to treat people with rare, chronic diseases and disorders such as primary immunodeficiency, hemophilia and a genetic lung disease, as well as in the treatment of trauma, burns and shock. One of the best methods which was adopted to cure people during the recent global pandemic, COVID-19 was this plasma donation. So, we need to build a plasma donation application that stores donor details, tracks and informs them upon request from a patient. So, lives can be saved.

### 2.Solution description

1. Donor will be notified about plasma requests so that he can save someone's life.

2. Donor will know about the hospitals and blood banks information in his vicinity.

3. Plasma recipients need to pass the request through the hospital to as many people as possible so that, there is a greater chance that their life can be saved.

4. Users getting email alerts will also get updates upon successful response, so that others don't waste time on trying to donate to the same patient and sharing expired requests.

5. Only hospitals will be able make requests so that credibility of the information is maintained.

6. Request emails will be sent based on location and blood group so others won't get disturbed.

### 3.Uniqueness

1.The current solutions mainly focus on blood donation, which is widely known compared to plasma donation.

2.There is no substitute for the therapeutic proteins that come from plasma. This life-saving medication can only be created through plasma donations.

3.The main goal of our project is to design a user-friendly web application that helps reduce mortality.

4.A donor who wants to donate plasma can simply upload their recovery certificate from certain disease and can donate the plasma to a blood bank.

5. The solution is unique because it connects millions of donors to receivers.

6. The app will also be integrated with map-based navigation which will help the donor to connect to the receivers in their own vicinity.

### 4.Social Impact

1. Recently when the world was suffering from the COVID-19 crisis and no vaccine had been found, scientific way which helped people affected by COVID-19 was by donating plasma from recovered patients.

2. Plasma therapy is an experimental approach to treat COVID-19 positive patients and help them recover fast.

3. Source plasma is used to treat more than 80 different diseases.

4. In recent days, it is noticed that increase in blood request posts on social media such as Facebook, Twitter, and Instagram. Having a dedicated app helps a lot It lets you know where to go in need of Plasma.

### 5.Business Model (Revenue Model)

1. Although, plasma donation is a selfless virtue, one can get financially compensated for donating plasma. They can make between $30 and $50 per plasma donation.

2. Human serum albumin is the most abundant protein found in blood. It is a multifunctional no glycosylated, negatively charged plasma protein that is synthesized primarily in the liver.

3. Pharmaceutical companies make various lifesaving medicines from plasma which is a billion-dollar medicine industry.

4. Plasma donors are often paid and can donate much more frequently than whole-blood donors. they can donate plasma up to two times within a seven-day period.

### 6.Scalability of the Solution

1. The App uses IBM cloud as its server so it can be implemented around the globe without any issues.

2. Any device can connect to the app via mobile or web application from anywhere in the world.

3. Geo location integration lets the app work in each and every specific area of the world

4. Our databases can store and infinite number of records so apps scalability level is global.