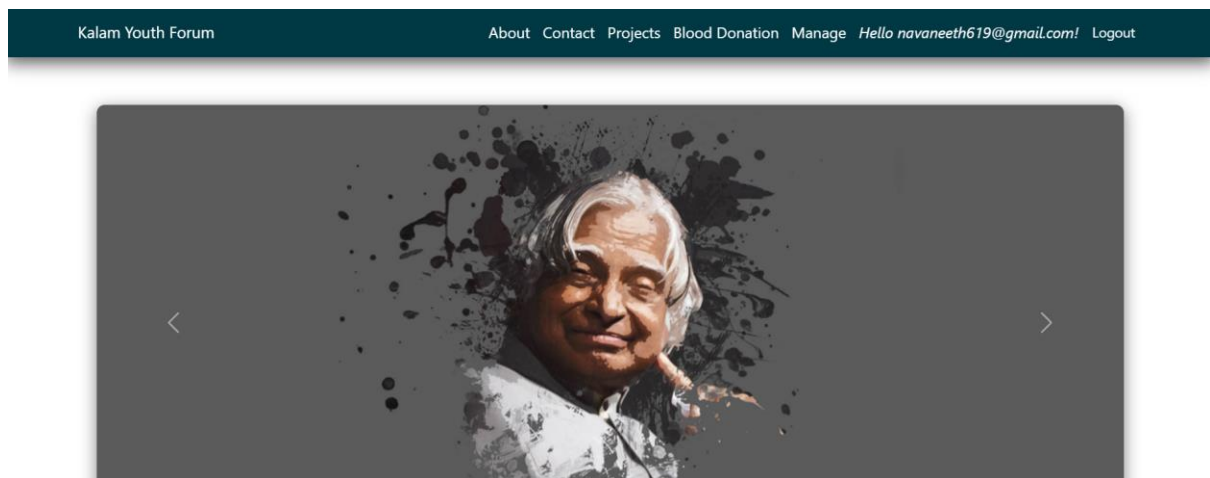


Case Study – Kalam Youth Forum



How a small NGO from India started having an online presence and how they became efficient and transparent at managing their chapters through a web application.

Client

I was tasked with creating a website for a Non-Governmental Organization, Kalam Youth Forum a few months back. The NGO aims in the empowerment of young generation boosting their skills and providing constant support to the aspirants.

Challenges

This organisation is still in its nascent stage, but one thing that they really wanted was an online presence. They wanted to showcase the works and projects they've undertaken, they wanted to have a blood donation app and they wanted to have a way of managing the regional chapters and self-help groups under them.

Solutions

When I took the project, I had a long talk with them to understand their aim from the website, their requirements, and their budget. I suggested the client about using .Net Core as the primary framework for the project since it's easier to secure, has enterprise level support and is easier to scale with high availability and load balancing because of its native Azure integration.

The client was originally planning for a static website that just showcases their projects with few text paragraphs and images. I advocated going with a CMS so that they can manage their own site with minimal to no interaction with a developer in the future. Thus, the project which was originally meant to be a simple static page started becoming a CMS. First part of the journey was visualising the data and their relationship. Database models were created, entity relationship diagrams were created and tweaked. Once the data relations were concrete, I moved forward with creating the website.

The design of the website was sketched, a mock-up was created and the client's feedback was taken.

We decided to have a carousel on the banner, showcasing images from the latest projects, an "About Us" section, a section previewing latest two projects, a signup form to join the community and finally a footer with newsletter sign up.

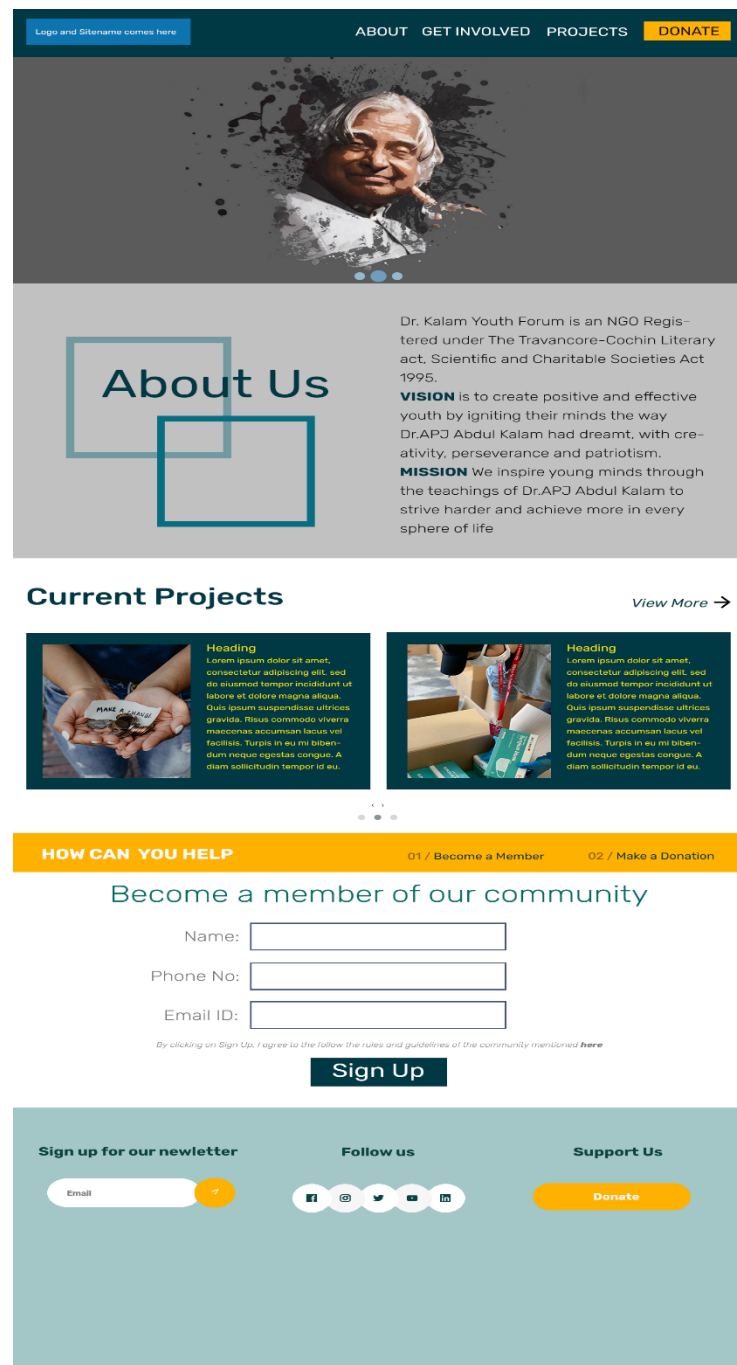
Once the basic design was decided, I started splitting the work into modules so that I can compartmentalise the work and track the progress effectively.

One of the high priority requirements that the client wanted was a blog post like feature, where they can post the updates.

To take care of this feature, I created a page that offers the user to add content into the website using a rich text editor. This enables the regular user to create a really customisable blog post, with images embedded into it, with tables as well as headings and formatting. Everything that you can do in a word processor is essentially achievable in the page now. I have added an option to upload and add images into the post as well. All the contents of this post are encoded and stored in the database safely.

Now coming to the viewer portion of the project, the visitors will be navigating to this [page](#) to see the active posts. All the projects can be previewed here in card format and a search functionality has been provided as well.

The client wanted the web application to be used for managing the chapters and self-help groups under them. A challenge that the client put forward was the permission and access rules. The users belonging to a specific chapter should not be allowed to view/edit/manage other chapters or the groups belonging to other chapters. With the help of server rendered pages, and clever access rules and routes for authentication and authorisation I was able to provide a user role system to the client dividing their registered users into a few categories, each with its own privileges and restrictions. All



the new users signing up with the portal are automatically assigned a Guest privilege which can be re-assigned by the Administrator. Now coming to signup and registration, care has been taken to make sure only legitimate users are accessing the portal. To take care of this, all user registrations require confirmation through email for account activation. Accounts that are not activated can't login to the portal at all. The same module also takes care of resetting the password using a forgot password mail that is sent over the mail.

The blood donation module is also added into the website, taking information from the registered users who has provided consent to show their data in the donor list. This module is assigned as the start page of the installable progressive web-app.

The Results

Client is now able to manage all the chapters and groups operating under them, the groups can upload weekly/monthly account statement as pdf/word/excel files so that the organisers are able to account and audit their groups. This has helped the NGO to work in an effective manner with transparency.

