



PROBLEM STATEMENTS

(*Additional features need not be compulsorily implemented. Integrating the said additional features will fetch you extra points and will give your hack an edge over the other teams.)

1. Byculla Fire Station (Web/App)

In 6 months, the city of Mumbai has suffered 12 major fires with 22 related deaths. To mitigate this unfortunate loss of property and life, Byculla Fire Station has come up with the idea for a website or an app where they can display important information pertaining to the security and safety of the general public. The portal shall take information about volunteers and have the full registration procedure displayed, digitalised to the maximum extent. It shall also track areas where a fire hazard occurs based on emergency calls, social media updates and any other such reliable sources of information. This should be displayed on a map along with the closest fire stations, volunteers and other necessary emergency services (ambulance etc), with the shortest routes for each.

Additional Features:

1. Send texts/calls etc to the fire station and volunteers to mobilise them effectively.
2. Live tracking of fire engines and ambulances.
3. Chatbot for public communications.
4. Notifications to public about anything important



2. Young Innovators Foundation + Vivekananda Youth Foundation (Web/App)

NGOs tend to be huge organisations with multiple rotating stakeholders. The members, volunteers, donors etc constantly change and tracking all this information has historically been done using pen and paper. Our aim is to digitalise these records and make the processes of adding and maintaining this data much more straightforward and simple.

The primary stakeholders involved are **Members**, **Volunteers** and **Donors**.

The members and donors shall receive email notifications about donations (amount, date, mode of payment, contact, email). New volunteers can register on the portal and notifications should be sent to all stakeholders.

Many NGOs tend to have links with schools and orphanages where they have volunteers teaching students. This data is also very valuable, so database/inventory of the following should also be maintained:

- Student
- Teacher/Staff, Parents
- Attendance and Leave with leave notes

Additional Features:

1. Use ML (OCR) techniques to perform handwriting recognition in order to digitalise existing handwritten records to be then stored as digital data on the website/app itself.



3. Indian Development Foundation (Web/App)

Indian Development Foundation is at the forefront of literacy activities in the country. They run Bal-gurukuls for the underprivileged and have educated countless children. To help with this, create a portal to provide information about scholarships for students that need and deserve them. It is very difficult for students who need scholarships to look them all up and see which they qualify for. The scholarships can be via examinations, based on scores and merit, related to reserved seats and so on. They can be provided by various colleges, organisations and via private company scholarship exams.

The scholarship information can be sourced from any reliable source, like official websites of companies and colleges. It should include selection criteria, official links to register and get further information etc.

Additional Features:

1. Allow students to upload their resumes and personal information that may be relevant. You could also create a forum for discussions regarding scholarships.
2. Auto-suggest scholarships that students qualify for.
3. Chatbot to solve user queries and suggest scholarships based on user questions.



4. Young Innovators Foundation (App only)

YIF has a lot of events across the year and also have constant incoming and outgoing educational supplies, resources etc. They need a management system for their events, stocks and supplies. There should be inventory tracking of supplies for teaching, resources for children, school repairs and maintenance materials. There must be a separation between the perspectives of organizers and participants. The organizers can create new events, publish details about the events, etc. The participants can view the events, sign up as volunteers, etc.

The Event Management section should have A-Z information about events being organised. It MUST contain the following data, tracking and features:

- Event Description
- Invites to Target audience
- Receiving RSVPs
- Sending Pictures/reports to donors, contributors etc

Additional Features:

1. Preferably create both android and IOS apps for this
2. The app should be able to work offline as well to maximum extent possible as the volunteers might not have good connection everywhere they go.
3. Have the following set of features as well:
 - Budgeting
 - Fundraising
 - Maintaining various expenses
 - Issuance of receipts to donors



5. Indian Development Foundation - CROPC (Web/App)

Natural calamities greatly and adversely affect human life and property. To mitigate the effects of such calamities and other events, participants must come up with a portal to warn and guide the common public. Commuters shall be shown maps with safe routes to desired destinations, free from floods, riots etc. The map shall display the location and information along with the route to the nearest hospital/medical centre. They should use data analysis on data from news, social media and other such sources and also previous historical data on similar events to mark routes and safe or problematic due to floods, riots etc and also identify the type of natural disaster that took place.

Additional Features:

1. Safe locations officially declared by the government should also be shown along with capacity and how occupied they are.
2. A forum for discussions where users can post about missing people, safe zones, important news, etc.
3. Spam filtering to detect which reports/social media news are not reliable or fake.