

FINAL REPORT  
ON  
**Building a website and payment gateway for the Indian Red Cross  
Society, Kolkata**

BY  
**SHASHWATA GHOSH - 2022B5A31036H**

AT  
**Indian Red Cross Society, Kolkata - Tech**  
A Practice School-1 Station of

**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI**

**(JULY, 2024)**

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**Shashwata Ghosh - 2022B5A31036H - B.E. in Electronics and  
Electrical Engineering and M.Sc. in Physics**

Prepared in complete fulfilment of the  
Practice School-I Course Nos.  
BITS C221/BITS C231/BITS C241

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# Acknowledgement

I want to extend my heartfelt gratitude to both the authorities at Indian Red Cross Society, Kolkata and the PS Division for providing me with this incredible internship opportunity. I would also like to thank my faculty-in-charge, Mr. Biswajit Das for his guidance, support, and for creating an environment where I could learn and grow professionally. I am deeply grateful to them for facilitating this experience and for the continuous encouragement. This internship has been invaluable in shaping my career path, and I am excited to apply the skills and knowledge I have gained. Thank you for believing in me and making this journey possible.

# Abstract Sheet

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI  
(RAJASTHAN)  
Practice School Division**

**Station:** Indian Red Cross Society, Kolkata - Tech

**Centre:** On-site                   **Duration:** 28th May, 2024 - 23rd July, 2024

**Date of Start:** 28th May, 2024

**Date of Submission:** 20th July, 2024

**Title of the Project:** Building a website and payment gateway for the Indian Red Cross Society, Kolkata

**ID No./Name(s)/Discipline(s):** 2022B5A31036H - Shashwata Ghosh - B.E. Electronics and Electrical Engineering and M.Sc. Physics (Dual Degree)

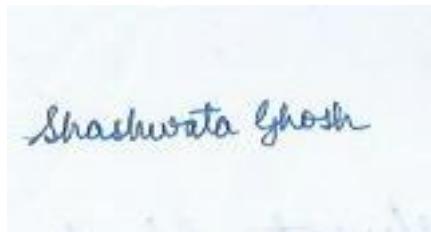
**Name(s) and designation(s) of the expert(s):** Saurabh Ghosh (Finance), Kamrul Alam (Disaster Management)

**Name(s) of the PS Faculty:** Biswajit Das (BITS Goa)

**Key Words:** Website Development, Payment Gateway

**Project Areas:** Web Development using HTML, CSS and JavaScript

**Abstract:** Completed building a working website and payment gateway by myself



Signature(s) of Student(s)  
Date: 20.06.2024

Signature of PS Faculty  
Date:

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# Introduction

This is the final report about my PS-1 experience working as an IT intern at Indian Red Cross Society, Kolkata - Tech. My name is Shashwata Ghosh and I am doing my B.E. in Electronics and Electrical Engineering and M.Sc. in Physics from BITS Hyderabad. I have always enjoyed coding and that is why I opted for a Tech station in the hope of getting an assignment for app building or website development. Initially I was given clerical data entry jobs only but after a few days, the chairman asked me to use my technical skills and design a website for the organisation and also, a payment gateway to accept donations. My goal was to build a user-friendly and accessible website that reflects the society's mission of humanitarian service, ensuring that help and resources are just a click away for those in need, which I think I achieved.



Creating a website for the Indian Red Cross Society Kolkata is a pivotal step in enhancing its outreach and impact and is an opportunity for this organisation to come back to its once elite status with more awareness and more funds due to the working payment gateway I developed. This digital platform aims to serve as a comprehensive resource for volunteers, donors,

and beneficiaries, providing crucial information about the society's activities, services, and events. By leveraging modern web technologies, the website will facilitate seamless communication, promote community engagement, and streamline support efforts.

Incorporating a robust and secure payment gateway into the website of the Indian Red Cross Society Kolkata is essential for facilitating donations and supporting its humanitarian efforts. The payment gateway will serve as a critical component, enabling donors to make contributions seamlessly and securely, thereby ensuring a steady stream of financial support for the society's various initiatives.

# Main Text

The Indian Red Cross Society Kolkata lacks a website which is mainly due to the financial constraints it is going through right now. The non-existence of a website has led to lower awareness among the people and also non-existence of payment gateway or any donation portal has led to no donations from the public even if they want to help. Also the finance head



at IRCS Kolkata said that they cannot accept UPI payments since they need the PAN numbers and other details from donors to give them tax benefits. Since the UPI payment method creates an alias ID while making the payments, we

cannot track who made the payment and thus the government does not allow charitable organisations to accept these payments. Not allowing UPI payments will lead to very less donations since very few people would want to do net banking for a simple donation, usually less than 1000 INR.

To accommodate UPI payments, I have designed a form wherein the donor has to submit a few details including his/her PAN number, mobile number, the amount they want to donate, their state and other details and then they can choose how they want to donate, including UPI. The donor cannot proceed without filling the form completely. We have been asked to use SBI ePay because it is a government bank for the payment process. I have also made a drop down list for selecting the purpose the donor wants his donations to be used for. Multiple options are there including- Staff welfare, disaster relief, healthcare, infrastructure development, financial assistance, others.

I feel this website could play a very important role in the comeback of the

Indian Red Cross Society West Bengal branch. Firstly, this website enhances the user experience. The site is a static one so the loading time will be minimal and I have designed it in such a way that the people who visit this site will be



able to find every information quickly and in an orderly fashion. The site is optimised for all screen sizes. This is now a very engaging website with pictures to show for the information provided. The added donation feature will also help with the finances of the struggling organisation.

I am also going to write about the entire process in which I built a working website and a payment gateway by myself. I started by taking inspiration for multiple websites of the Red Cross across the world. The one which impressed me the most was the one of the Swiss Red Cross. So I started with developing the home page and then created different files for the other pages which have been linked with each other. The files I made were-

- **index.html:** The *Home* page and the page where the user should first visit. I have temporarily hosted this using Github and this is where the link leads to. I have also made a **DONATE** button which is red and can attract attention easily. This is linked to the payment gateway form which further links to the payment service.

Chrome File Edit View History Bookmarks Profiles Tab Window Help

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shxshwata.github.io/IRCSWBsitePS1/index.html



Home About Us Programs Branches Donate

## Indian Red Cross Society West Bengal State Branch

[Donate](#)

The Indian Red Cross Society West Bengal branch (IRCS WB) is a voluntary humanitarian organization to protect human life and health based in West Bengal, as the name suggests. It is part of the International Red Cross and Red Crescent Movement and shares the Fundamental Principles of the International Red Cross and Red Crescent Movement. The society's mission is to provide relief in times of disasters/emergencies and promote health and care of vulnerable people and communities. It has 21 district branches in the state and 12 sub-division branches. The president of IRCS WB is the governor of West Bengal.



Training on First Aid/Disaster Management at IRCS WBSB HQ



Hon'ble Governor of WB & the President of IRCS WBSB visited SHQ



Appointment of the General Secretary Mr.Sandeep Kumar Singh



Appointment of the Honourable Chairman Dr. S.K.Pattanayak, IAS(Retd.)

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<https://shxshwata.github.io/IRCSWBsitePS1/home4.jpg>

- **aboutus.html:** The *About Us* page and the page which provides information about what the organisation does and also their HQ's address and contact details. I have also attached photos with appropriate captions.

Chrome File Edit View History Bookmarks Profiles Tab Window Help

shxshwata/IRCSWBsitePS1 x About IRCS WB x +

shxshwata.github.io/IRCSWBsitePS1/aboutus.html



Home About Us Programs Branches Donate

### About Us

The Indian Red Cross Society West Bengal State Branch is a voluntary humanitarian organization having a network of 21 district and 12 sub-division branches in the state, providing relief in times of disasters/emergencies and promotes health & care of the vulnerable people and communities. It is a leading member of the largest independent humanitarian organization in the world, the International Red Cross & Red Crescent Movement.

The Mission of the Indian Red Cross is to inspire, encourage and initiate at all times all forms of humanitarian activities so that human suffering can be minimized and even prevented and thus contribute to creating more congenial climate for peace.

- Indian Red Cross Society (IRCS) was established in 1920 under the Indian Red Cross Society Act and incorporated under Parliament Act XV of 1920. The act was last amended in 1992 and the rules were formed in 1994.
- Hon'ble Governor of West Bengal, Dr. C.V. Ananda Bose is the current President of IRCS WBSB.
- Mr. Sandeep Kumar Singh is the current General Secretary of IRCS WBSB.
- Dr. S.K. Pattanayak, IAS(Retd.) is the Honourable Chairman of IRCS WBSB.



Hon'ble Governor of WB & the President of IRCS WBSB visited SHQ



Staff Members of IRCS WBSB with H.E. the Governor of West Bengal and the President of IRCS WBSB in one frame



IRCS WBSB State Managing Body Meeting



Dr. C.V.Ananda Bose, Hon'ble Governor of West Bengal and the President of IRCS WBSB presents gifts to the Red Cross Facilitators at Raj Bhavan

### Address and Contact info

[Address](#) [Contact](#)

https://shxshwata.github.io/IRCSWBsitePS1/contact.html

The screenshot shows the 'About IRCS WB' page of the website. At the top, there are two bullet points: 'Mr. Sandeep Kumar Singh is the current General Secretary of IRCS WBSB.' and 'Dr. S.K. Pattanayak, IAS(Retd.) is the Honourable Chairman of IRCS WBSB.' Below these are four photographs:

- A woman in a red dress handing a document to a man in a dark suit.
- A group of people standing together indoors, including the Governor and the President of IRCS WBSB.
- A meeting room with several people seated around a long table.
- Two men in orange vests presenting documents to a man in a dark suit.

Below the photographs, there is contact information for the Indian Red Cross Society, West Bengal State Branch, located at S & 6 Government Place, North Kolkata - 700001. It includes STD Code: 033, phone number (O) 22483636, and email address ircswbstatebranch@gmail.com.

- **programs.html:** The *Programs* page and it states all the programs the organisation is taking/has taken part in with appropriate pictures with captions.

The screenshot shows the 'Programs' page of the website. At the top, there is a red header bar with a white cross icon. Below the header, the page title is 'Programs | IRCS WB'. The main content area is titled 'Our Programs' and features four photographs:

- 'First Aid Training at IRCS WSB HQ'
- 'A blood donation camp in progress'
- 'Blood donors at a blood donation camp'
- 'First Aid Training regarding carrying an injured person'

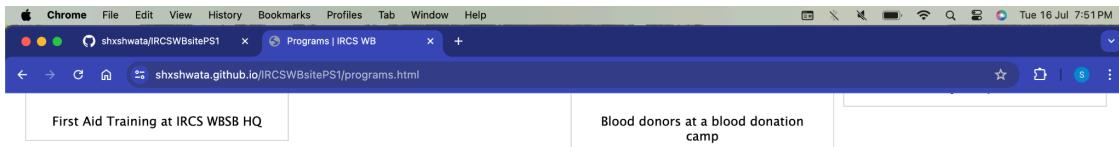
### First Aid Training Program

We organise first-aid training regularly to help citizens of the state to learn the basic first-aid skills. The training is conducted by the staff of the Indian Red Cross West Bengal State Branch.

### Blood Donation Camps

We organise blood donation camps frequently and coordinate with Central Blood Bank Authority. The benefits of donating blood include helping people injured in accidents,





## First Aid Training Program

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## Blood Donation Camps

We organise blood donation camps frequently and coordinate with Central Blood Bank Authority. The benefits of donating blood include helping people injured in accidents, undergoing cancer treatment, and battling blood diseases, among other reasons.

## SMS Campaign during COVID-19

SMS stands for S-Soaps/Sanitizers, M-Mask, S-Social Distancing. This campaign was done to minimise the spread of the COVID-19 virus. Red Cross SHQ staff & volunteers distributed masks, soaps & sanitary napkins to people in multiple district and sub-division branches.

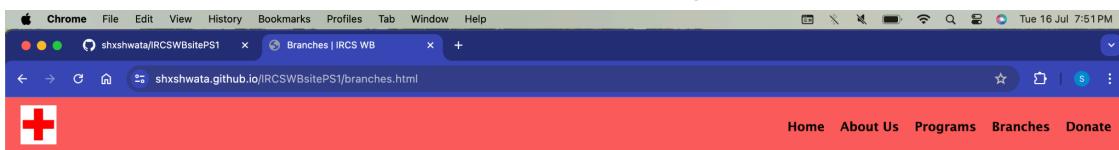
No curable medicines were found for COVID-19 Pandemic. So we stressed on preventive measures. There was an awareness campaign carried out about wearing masks when outside, washing hands with soaps frequently and to maintain physical distance to prevent the spread of corona infections from time to time. More than 1,50,000 masks were distributed during the campaigns in the biggest festival of Bengal to generate interests. The main theme of the programme was "Prevention is better than cure."

## Relief Programmes

The cyclone AMPHAN devastated coastal districts of South Bengal in 2020. The cyclone YAAS affected badly the lives of many people in 2021. Often, large areas of South Bengal and parts of North Bengal are flooded due to incessant rains and release of water from dams. Red Cross like all other occasions of disasters in the past tries its best to reach the needy and affected people with relief materials like tarpaulins, hygiene kits, mosquito nets, clothes, food packets, buckets, etc.



- **branches.html:** The *Branches* page and it states all the branches IRCS WBSB has in the state of West Bengal.



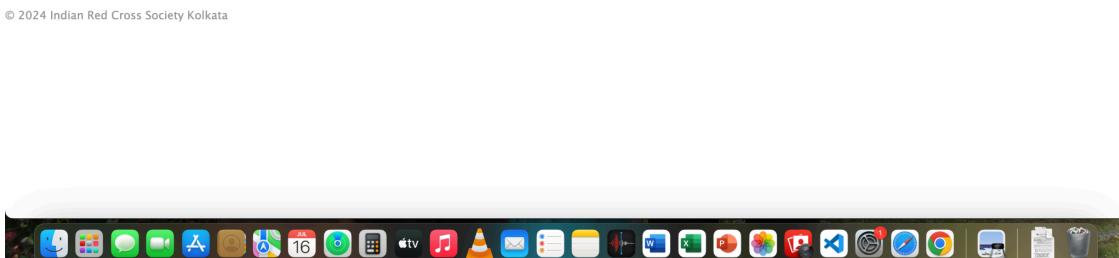
## Our branches

### District Branches of Red Cross:

They comprise of South 24 Pgs., North 24 Pgs., Nadia, Birbhum, Howrah, Hooghly, Purba Bardhaman, Paschim Bardhaman, Purulia, Bankura, Purba Medinipur, Paschim Medinipur, Malda, Dakshin Dinajpur, Uttar Dinajpur, Jalpaiguri, Cooch Behar, Alipurduar, Kalimpong, Darjeeling and Kolkata.

### Sub-division Branches of Red Cross:

They comprise of Bishnupur, Khatra, Garbeta, Ghatal, Chandannagar, Tehatta, Chanchal, Gangarampur, Durgapur, Tufanganj, Baruipur and Alipur.



- **updatedpaymentform.html:** This is the *Donation* form that users will be redirected to once they click the donate button.

I have attached all the files and images in a repository on Github. I then deployed that using Github pages and it hosted and can be accessed by anyone with the link on the internet using any device/browser. The link for the website is: <https://shxshwata.github.io/IRCSWBsitePS1/>

The staff at IRCS WBSB have said they will buy a domain and then I will move the site there. They also need to create a merchant account at SBI and have to go through a number of steps to use SBI ePay.

These are the steps required to host the website independently with the domain bought:-

1. Once the domain is bought, use the domain for a custom email address. For example, instead of [ircsbwhq@gmail.com](mailto:ircsbwhq@gmail.com), use [hq@ircswb.com](mailto:hq@ircswb.com)
2. We need to purchase a hosting service, usually from the same company which is supplying the domain name. The web hosting service will give the SSL certificate, etc. Web hosting servers are the space where the website can live and be stored while being accessible on the larger web. So a web hosting package is fundamental for the website to go live online.

3. Connect the domain to the web host. This is the final step and the website will be live and searchable on a search engine.

These are the steps required to activate SBI ePay which will be used as the payment service for the payment gateway:-

1. PAN details of the form
2. Telephone Landline Bill or Electricity Bill in the firm's name.
3. KYC of authorised signatories (photo/PAN/address proof)
4. Banker's certificate (A/c details and signature verification)
5. Agreement with SBI
6. Blank cancelled cheque
7. Bank account statement (for 1 year)
8. Central/State Tax registration certificate
9. Municipal corporation registration certificate
10. Certified ITR
11. Bye laws
12. Board resolution
13. KYC of signing authority
14. A/c statement
15. Society address proof

Please refer to: <https://www.sbiepay.sbi/secure/home> and scroll down to documents for society/club/association.

# Conclusions/Recommendations

After working at the organisation- Indian Red Cross Society, Kolkata, I felt that it is a very inefficient one whose staff are old-school and not very interested in newer and more efficient ways of working. For example, they told us about how they have these pamphlets where people who are interested in becoming life members can fill them up and send them by post to the headquarters. I suggested that we can simply create a website or at the very least, a Google form with the same fields, but they rejected the idea. They also want to manually write down every piece of data in a book. Using a Google form would simply transfer whatever information the person is typing in the google form to a Google sheet which they can save remotely or in their cloud. This eliminates the clerical work totally.

It was also not until their chairman stepped in that they allowed us to create a website for them. They also organised a visit to one of their OPDs in Baranagar for ideas on how to develop it further. On visiting, I got to know about several problems including delayed payment of wages. Everything points to no funds being made available due to no awareness about this organisation. Everyone has once in their lifetime heard about the Indian Red Cross, but very few people know about their exact programs. We proposed a social media initiative for broader awareness reach. These OPDs also don't get a lot of patients anymore, because they can't offer free medicines which government hospitals do offer. So, parts of the building could be leased to banks or ATMs, so that a monthly rent can be obtained and this will help them with their finances. They have 6 such OPDs in West Bengal.

The website which I made will also help in spreading awareness about the organisation and its programs, and also help in bringing in funds from the payment gateway.

# References

Websites referred to while learning how to make a website:-

- [https://www.w3schools.com/howto/howto\\_website\\_static.asp](https://www.w3schools.com/howto/howto_website_static.asp)
- <https://www.geeksforgeeks.org/design-a-web-page-using-html-and-css/>
- [https://www.w3schools.com/html/html\\_responsive.asp](https://www.w3schools.com/html/html_responsive.asp)
- [https://www.w3schools.com/howto/howto\\_website\\_business.asp](https://www.w3schools.com/howto/howto_website_business.asp)
- <https://blog.devgenius.io/how-i-build-a-payment-gateway-using-javascript-2e4f3e52b7cd>

For the colour schemes and the tabs for the IRCS Kolkata website, I took references from <https://indianredcross.org/ircs/>.

I am also linking my repository on Github which contains the code for the website and the payment gateway.

<https://github.com/shxshwata/IRCSWBsitePS1>