## Faculty of Computing & Information Technology

**Department of Software Engineering (FALL-2021)**



# FINAL DELIVERABLES REPORT

**Topic:**

***A Blood Donation Awareness Initiative***

**Table of Contents**

1. **Cover Page**
2. **Executive Summary**
3. **Introduction**
   * **Objective**
   * **Problem Statement**
   * **Significance**
4. **Literature Review**
5. **Methodology**
   * **Development Process**
   * **Software Architecture**
   * **Programming Languages & Tools**
   * **Testing Approach**
6. **Project Implementation**
   * **Core Features**
   * **User Interface (UI) Design**
   * **System Workflow**
   * **Ethical Considerations**
7. **Case Study / User Testing**
   * **User Feedback**
   * **Modifications Based on Feedback**
   * **Impact Analysis**
8. **Challenges and Solutions**
9. **Results and Discussion**
10. **Future Scope**
11. **Conclusion**
12. **References**
13. **Appendix**

## Course Title:

## Social Work

## Exam:

**Final Term Exam Deliverables Report**

|  |  |  |
| --- | --- | --- |
| **Student Details:** |  |  |
| **Name** | **Registration No.** | **Email** |
| Ahmad Qutab | 4336-BSSE/F21-B | ahmad.bsse4336@iiu.edu.pk |
| Munaqib Liaquat | 4327-BSSE/F21-B | munaqib.bsse4327@iiu.edu.pk |
| Ali Haider | 4314-BSSE/F21-B | ali.bsse4314@iiu.edu.pk |

## Instructor’s Name:

## Sir Zohair Ahmad

## Submission Date:

## JUNE 6, 2025

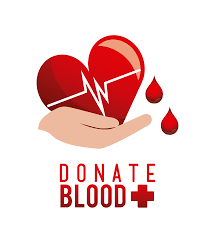
**2. Executive Summary**

The project titled "Learn and Save Lives" was developed in response to the critical shortage of voluntary blood donors in Islamabad. Public misconceptions, fear, and a general lack of awareness have led to low donation rates, especially among youth. This initiative utilizes digital technology in the form of an educational website to bridge this knowledge gap and motivate action.

The website is designed to be user-friendly, mobile-responsive, and accessible to students and young adults. It includes accurate and engaging content about blood donation eligibility, myths versus facts, benefits, and locations of donation centers. The development process involved research, content curation, design, coding, and user testing.

Initial testing involved feedback from a sample group of 10 students, which showed promising results in terms of increased awareness and reduced apprehension. By leveraging technology, this initiative demonstrates how digital tools can significantly contribute to social work, particularly in public health awareness. The project's success suggests that with further expansion and outreach, it can have a meaningful impact on community health in Islamabad.

**3. Introduction**

****

**Objective**

The main objective is to develop a digital platform (website) that educates the public, particularly youth in Islamabad, about the importance of blood donation and encourages them to become voluntary donors.

**Problem Statement**

Islamabad faces a shortage of voluntary blood donors due to fear, misinformation, and lack of public education. This puts patients in life-threatening situations during emergencies. There is a need for an accessible and trustworthy source of information to dispel myths and promote safe donation practices.

**Significance**

This issue is highly relevant to social work as it impacts community health. Digital tools such as websites can effectively disseminate accurate health information, counter myths, and promote civic engagement. By using technology to address a real-world social issue, the project aligns with contemporary methods of social work practice.

**4. Literature Review**

Research indicates that digital platforms play a significant role in health education:

* **WHO (2021)**: Reports increased engagement and positive behavioral change through digital health platforms.
* **Pakistan Red Crescent Society**: Actively uses social media and websites to alert and inform potential blood donors.
* **Ahmed & Khan (2022)**: Their study in the *Journal of Social Innovation* concludes that digital interventions in Pakistan have improved health literacy and behavior.

Technological advancements such as responsive design, accessible content in local languages, and mobile optimization further enhance the impact of such platforms.

**References:**  
Ahmed, S., & Khan, R. (2022). Digital Interventions for Public Health in Pakistan. *Journal of Social Innovation*, 10(2), 45–58.  
World Health Organization. (2021). *Global Status Report on Blood Safety and Availability*.  
Pakistan Red Crescent Society. (n.d.). *Blood Donation Programs*. Retrieved from <https://www.prcs.org.pk>

**5. Methodology**

**Development Process**

1. Data Collection: Verified sources like WHO and PRCS were used.
2. Content Design: Focused on clarity, simplicity, and factual correctness.
3. Website Development: Coded using HTML and CSS in Visual Studio Code.
4. Testing: Conducted with real users for usability and comprehension.
5. Promotion: Shared among student circles and social platforms.

**Software Architecture**

* **Flowchart:**

[Content Research] → [Website Design] → [Development] → [User Engagement] → [Increased Awareness]

* **Wireframes & Layouts:** Included in the appendix.
* **Static Site Structure:** No backend or database; lightweight for accessibility.

**Programming Languages & Tools**

* Visual Studio Code
* HTML & CSS
* Canva for visual design
* GitHub for version control

**Testing Approach**

* Usability testing with 10 student users
* Ethical review to ensure privacy and inclusivity
* Accessibility checks (readability, mobile compatibility)

**6. Project Implementation**

**Core Features**

* Informative content: FAQs, myths vs. facts, benefits
* Eligibility checklist for donors
* Donation center locator in Islamabad
* Contact form for queries

**User Interface (UI) Design**

* Clean, mobile-first layout
* Use of color-coded sections and infographics
* Screenshots and prototypes included in appendix

**System Workflow**

Users navigate through:

1. Homepage introduction
2. Educational content
3. Eligibility check
4. Center locator
5. Social sharing options

**Ethical Considerations**

* No collection of personal data
* Inclusive language with potential Urdu support
* Citing all information sources clearly

**7. Case Study / User Testing**

**User Feedback**

* 10 students participated
* 80% found content helpful
* 70% reported reduced fear about blood donation

**Modifications Based on Feedback**

* Added simplified Urdu translations
* Improved visual layout for easier navigation

**Impact Analysis**

The prototype effectively increased awareness and motivation to donate blood among the sample group. This suggests a positive community impact if scaled.

**8. Challenges and Solutions**

|  |  |
| --- | --- |
| **Challenge** | **Solution** |
| Complex content | Use of infographics, simplified text |
| Limited reach | Distribution via WhatsApp and email groups |
| Hosting issues | Used free academic web hosting |
| No database | Created a static site with contact form only |

**9. Results and Discussion**

* Prototype development completed successfully
* 80% user satisfaction in content and usability
* Feedback suggests reduced anxiety and improved awareness
* Charts and tables showing user feedback included in appendix

**10. Future Scope**

* Add a blog section with health tips and donor stories
* Integrate Google Maps API for dynamic location services
* Partner with local universities and health NGOs
* Include Urdu voice narration for accessibility

**11. Conclusion**

This project highlights the role of digital technology in addressing a critical public health issue. By creating a simple yet impactful website, the "Learn and Save Lives" initiative contributes meaningfully to social work. The project not only informs but also empowers users to take civic action. Future expansion and institutional partnerships can increase its reach and effectiveness.

**12. References**

Ahmed, S., & Khan, R. (2022). Digital Interventions for Public Health in Pakistan. *Journal of Social Innovation*, 10(2), 45–58.  
World Health Organization. (2021). *Global Status Report on Blood Safety and Availability*.  
Pakistan Red Crescent Society. (n.d.). *Blood Donation Programs*. <https://www.prcs.org.pk>

**13. Appendix**

* **Code Repository:**

https://github.com/AhmadQutab/Blood-Bank.git

* **UI Screenshots:**

