**System Requirements**

Registration Form

1. Need form to crate an account. Form should contain following data field

* First Name
* First letter must be Capital Letter
* Last Name
* First letter must be Capital Letter
* Gender
* Three option on a dropdown 1. Male 2. Female 3. Others
* Birth Date
* Can’t be today’s date and shouldn’t take entry for less than 18yrs old
* User should be able to enter manually their birthdate or choose from the calendar
* Date field should follow YYYY-MM-DD format
* If user put wrong info on the wrong field eg: date on the month field system should show the user an error and suggestion to input right data on the right field
* Username
* Has to be unique for every user. Same username can’t be used by two people (user)
* Password
* Passwords must have a minimum length of 8 characters maximum length of 64 characters
* At least 1 lower case letter
* At least 1 upper case letter
* At least 1 number
* At least 1 special character.
* Phone Number
* Must be 11 digit. System will show +8801 by default
* Email
* Add email validation condition
* Use Advanced Validation Options
* Domain verification: Check if the domain exists and has valid MX records
* Disposable email detection: Compare against a list of known temporary email domains
* Role-based email detection: Flag emails like info@, admin@, etc.
* Email verification services: Consider third-party APIs like SendGrid, Mailgun, or Email Validator
* Street Address,
* City
* Dropdown of Upozilla, user should be able to search upozilla from the dropdown menu
* District
* Dropdown of zilla, user should be able to search zilla from the dropdown menu
* Zip Code
* People should be able to enter 4 digit zip code. Add validation condition
* Blood Group
* Add dropdown for user to choose from
* Weight
* Donors Weight has to be >45 to donate blood

Ref: <https://www.bdspecializedhospital.com/department/bshl-blood-bank#:~:text=Eligible%20healthy%20donors%20(age%2018,Ticlid%20for%20last%2014%20days>.

<https://www.who.int/campaigns/world-blood-donor-day/2018/who-can-give-blood#:~:text=You%20weigh%20at%20least%2050,at%20the%20time%20you%20donate>.

* Hemoglobin
* To be eligible for blood donate having Hb >15 (+- 2) gm/dl is required
* Last Blood Donation Date
* Can’t be future date. For an example user creating account today and his/her last blood donation date can’t be future date (tomorrow or future)
* User should be able to enter manually their last donation date or choose from the calendar
* Date field should follow DD-MM-YYYY format
* If user put wrong info on the wrong field eg: date on the month field system should show the user an error and suggestion to input right data on the right field
* How many times have you donated blood so far?
* User shall enter data manually
* Shouldn’t take entry more than 150 times

***Note: The system will allow all users to register for blood donation regardless of their donation history or hemoglobin levels. If a user doesn't meet the required hemoglobin threshold or hasn't waited the mandatory three-month interval between donations, they will still be registered but automatically marked as "Not Eligible to Donate." In such cases, the system will immediately send both a notification and email to the user explaining their ineligibility status and clearly stating the specific reason - whether it's due to insufficient hemoglobin levels or not meeting the required waiting period since their last donation. This approach ensures that all potential donors can register in the system while maintaining proper eligibility tracking that aligns with blood donation safety standards.***

***Apart from last three data field all data field of the form will be mandatory field***

2. After filling up the required field on the registration form user shall submit the form by taping “Submit” button

* If the all user input is in order then after hitting submit button system shall show a pop up with a confirmation message that will say “Your account has been created successfully” Your registration ID: BDMS XXXXXX – this number should be uniquely generated by the system.
* On the pop up there will be an option to login. Login option will allow user first to verify their phone number then access their dashboard/profile.
* If the user input is wrong on any data field form will show error and it will give suggestions to the user to fix the error.

Apart from the mentioned requirements system shall stisfy following requirements as well:

* Add form auto-save, completion indicators, and progress bar
* Add real-time field validation with suggestions for corrections
* Data validation guidance or suggestions on every appropriate data field
* Auto-generate unique Donor ID (e.g., BDMS-2025-XXXX)

**System Requirements**

Login Form

* Username field - System shall let the user to login user by using their username/email/phone number [inserted on registration form] – System will accept these three valid inputs
* Password field – User should be able to put their password which they have inserted into registration form.
* Login Button – this form must contain a login button to allow user to login
* User should be able to login by using the same username/email/phone number and password they have entered during the registration.

**System Requirements**

Verification Page

* After clicking login button new user will be redirected to this verification page for first and last time. Once user verify their phone number then every time the hit login button on login page they will be redirected to their profile/dashboard
* Verification page will contain one data field OTP and a verify button
* System will automatically send a OTP to user phone number when the submit registration button.
* To verify user account user must insert that six-digit OTP which have been sent to their phone number on the verification page OTP data field
* OTP will be valid for 15 Minutes
* After entering the OTP user will be able to click the verify button to verify their account.
* Once user enter valid OTP a pop will appear with a successful message which will say “Your account verification is successful now you will be automatically redirected to your profile. Welcome to the donor club”
* If user enter an invalid OTP system will show invalid OTP warning and a resend OTP button will appear automatically
* User should receive a new OTP on their phone when they hit resend OTP
* User can select the option get resend OTP via email incase they have connectivity issue
* Once the user submit the OTP and it’s verified a pop will appear with a successful message which will say “Your account verification is successful now you will be automatically redirected to your profile. Welcome to the donor club”
* And system shall redirect user to their profile automatically.

**System Requirements**

User profile/User dashboard

1. User profile should contain field for uploading profile picture (180 x 180) and profile picture should be displayed on computer as 180 x 180 and on smartphone 128 x 128 need another filed on top to add cover photo. Cover photos should be displayed at 820px by 312px on desktop and at 640px by 360px on a smartphone. User shall remove, update or add cover and profile picture anytime. Multiple picture on profile picture and on cover is not allowed. Cover photo will cover the whole cover area and profile picture will be on the left side of the screen so that profile doesn’t block the cover area. Users profile and cover area should be visible to other users, system administrators and to the System Manager

2. Below to the profile picture there should be an area for user to write bio. Bio limit is 250 Character

3. Below to the bio section there will be Modular layout for sections: Work, Education, Testimonials, Blood donation History. User profile should have display area for following (like Facebook)

* Users Education Details
* Current town/city
* Hometown

//inspired from Facebook

* Blood Donation History

//inspired from LinkedIn

* Testimonial
* Social Link

4. Underneath the display area their will be a edit details button. This button will allow users to update their information.

* When user click on edit details a pop up shall appear with the information edit and update functionality.
* On that pop up following section or option should be included
* Work
* This section should let user enter their 3 most recent work history
* On the work section there will be an option “Add Workspace”
* When user click that option they will have to enter following information

1. Company

2. Position

3. City/ Town

4. Description [Character limit 1000]

5. Time Period

i. From [Date field]

ii. I currently work here checkbox

iii. To [Date field]

* Users Education Details
* User shall be able to enter their University/College and High School information
* On the pop up their will be an Education section where user shall be able to enter their education information. Information include

1. School/ College/ University Name

2. Time period [From – To (Facebook format)]

3. Checkbox for Graduated

4. Description [Limit 1000 characters]

5. Course

6. Attended for checkbox (circle box)

- High School

- College

- University

Note: There shall be an option like add education by clicking that user will be able to add two more field to insert two more educational information.

* Current town/city
* User input should be validated from the saved city list on backend
* Hometown
* User input should be validated from the saved city list on backend
* Blood Donation History
* Follow LinkedIn work history chain
* User should be able to insert hospital name where they have given blood [system should suggest hospital name as user start typing hospital name – eg: example Ibn Sina Hospital]
* User shall input Hospital location [Uttara, Dhaka]
* User should be able to insert Date when they have given blood
* User should be able to choose from circle shape check box that what they donated. Blood, Platelet or other things [list all]
* User shall have option to upload their blood donation picture
* Testimonial
* There will be a testimonial section in that section other user will be able to give testimonials/feedback/comment about this particular user. Character limit 5000 and media file upload is allowed [jpeg, PNG, MP4] file size limit 500 MB before publishing other users testimonial about this particular user the review giver must have rate this donor out of 5 star
* An user won’t be able to delete testimonials/feedback/comment he/she received from other user. User can only report about the testimonial or comment he/she received from other user. But a System Administrator and Manager can remove the testimonials/feedback/comment once they have reviewed and investigated the testimonials.
* Social Link
* User shall put their social link and when another person click on social links it will redirect that user to the that person social profile. Facebook, Instagram, Twitter, Github LinkedIn and portfolio link are acceptable

5. With the edit details button there will be another button as “Verify” when user click on it he/she will be redirected to another page which will say the benefit of getting verified what user will receive if he/she get verified and other information. And there will be another button which will say get verified. Once user click that button they will be redirected to share id site to verify their identity. Once share ID approves their identity, they will receive red badge next to their name on the profile

6. On the User profile there will be an option for Emergency Blood Request and Looking For Donor

* Emergency Blood Request: When user clicks on emergency blood request a questionnaire will pop up. Questionnaire will contains following data filed to verify whether the emergency blood request is authentic or not:

1. Hospital info – Hospital Name, Street address, City/Upozilla, Zilla, Zip Code

2. Patient Info – Patient Name, Your Relationship Patient, patient condition: Patient Health Issue and why blood is needed, Patient hemoglobin point, Platelet

3. Required blood type, quantity,

4. Duty Doctor's Name and Number

5. Patients guardian or responsible persons info: Name, Number

6. When the blood is needed? – Date and Time field

7. Filed to upload medical documents like prescription, test report. This field will accept JPEG, PNG and PDF file. This will be a mandatory field.

- if the blood is needed within three days or less emergency request will launch automatically upon filling up the form properly. If the blood is needed within more than three days period then this request will moved to general request section for admin attention.

Note: 1: All data is required. To launch emergency blood request. user have to fill out all data field in order to launch emergency request

2. Once the emergency blood request form is submitted Emergency blood request should be listed on all admin dashboard emergency request section for admin attention.

* Looking For Donor

1. On the user profile there will be an option named “Search for donor” by clicking this option user will be able to do general search for donor.

2. On the search form there will be a search button like Airbnb style. On this search button there will be a search filter option by Blood Group, District, Donor Type [Eligible/All]

And Date of blood donation [when the blood seeker needed the blood]

3. In response to user search query system shall respond instantly and retrieve search results from the database

4. Registered User will be able to send messages to another registered user. To monitor their conversation/ limit/ prevent unnecessary communication there will be premade message templates like FAQ’s

Before sending to message or to get cell number of a donor blood seeker must provide the following information:

1. Patient Name

2. Patient Problem

3. Why does patient need the blood

4. Which Hospital Patient Admitted

5. Hospital Location [Street Address, Upazilla, Zilla, Zip Code]

6. When the blood needed

7. Blood group

8. Quantity

9. Blood seeker relation with the patient

10. Contact Number

After submitting this form by blood seeker he/she will be able to send message or get contact details of blood donor and the summary of this form will be automatically sent to that particular donor by system.

User should have a logout option to logout from his/her profile.

There should be a session management backend function to prevent unauthorized access. Also user should have a setting option to control privacy, change privacy add 2FA, Mark himself available/not available for blood donation etc.

**🔧 STRUCTURE OF PRE-MADE MESSAGE SYSTEM**

Each message template should be grouped by **intention category** (e.g., request, confirmation, follow-up). Each message sent will be tagged in the backend with a **message type code**, allowing you to automate tracking.

**CATEGORIES & MESSAGE TEMPLATES**

**1. Initial Blood Request**

*Message Code*: REQ\_INIT

* **Templates**:
  + "Dear donor, this is a request for [Blood Group] blood at [Location] on [Date] at [time] [AM/PM]. Please respond if you’re available."

- Note: We have to structure the message template in such a way that the blood seeker will insert blood group, location, date and time and donor [message receiver] will received the message in above mentioned format. Same goes for all all respective templates.

**2. Donor Response – Available**

* 🧾 *Message Code*: DON\_AVAIL
* **Templates**:
  + "Yes, I am available to donate at [Time] on [Date]."

**3. Donor Response – Unavailable**

* 🧾 *Message Code*: DON\_UNAVAIL
* **Templates**:
  + "Sorry, I’m unable to donate at this time."
  + "I’ve recently donated blood and can’t donate right now." – If donor response is this then system shall sent him/her a notification to update his donation history if it’s not updated already
  + "Apologies, I’m not in town right now."

**4. Blood Seeker Confirmation**

* 🧾 *Message Code*: SEEK\_CONF
* **Templates**:
  + "Thanks! Please reach [Hospital Name] by [Time, Date]."

**5. Follow-Up Before Appointment**

* 🧾 *Message Code*: FOLLOW\_UP
* **Templates**:
  + "Are we still on for the donation today?"

**6. Donor No-show Report**

* 🧾 *Message Code*: DON\_NO\_SHOW
* **Templates**:
  + "Donor didn’t show up at the promised time."
  + "Donor promised to donate but didn’t arrive."
  + "Unfortunately, the donor didn’t respond or come."
  + Others – in this field will allow blood seeker to insert manual notes. Character Limit 2000

**7. Successful Donation Confirmation**

* 🧾 *Message Code*: DON\_SUCCESS
* **Templates**:
  + "Blood was donated as planned. "
* After submitting above responses, system shall pop up testimonial dialog box. Where blood seeker can share feedback about the donor Alternatively the blood seeker can write review by going to the designated section of donors profile.

**8. Cancel Request**

* 🧾 *Message Code*: REQ\_CANCEL
* **Templates**:
  + "No longer need a donor, thank you."
  + "Situation resolved. No blood needed anymore."
  + "Request cancelled. Found donor from another source."

**Search Form**

1. the search form registered user will use to find blood donor. The same search form will be accessible for general visitors of the website.

2. By hitting search button after inserting users required filter general user will be able to see all registered blood donor (matched with their search filter) profile as a search result but limited to Donor Name, Age, Times blood donated, Rating [these information will show up as a contact card and on the bottom of the contact card there will be a call / get donor detail/ contact for blood donation button. When general user clicked that button a pop up will appear and a message will appear like “to get donor contact details you have to register/ create an account’ the pop will contains a create account button. When general visitor clicked on the create an account button they will be redirected to the create an account form. And the pop up will be still form 60 seconds and then general visitor will be redirected to the create an account form.

3. Pagination:

* The system shall implement pagination to handle a large number of search result.
* The system shall display the current page number and the total number of pages (e.g., "1-10 of 1248").
* The system shall provide navigation controls to move between pages (e.g., previous, next, first, last).
* The system shall allow the user to specify the number of donors to display per page.

**Admin Dashboard Overview**

**Accessing the Admin Dashboard:**

* **Requirement 1.1 (Custom Login):** The system shall provide a dedicated and secure login interface accessible via a custom URL (e.g., /admin, /dashboard/login).
* **Requirement 1.2 (Admin Authentication):** The login interface shall require administrators to enter valid credentials (username/email and password) to gain access to the admin dashboard.
* **Requirement 1.3 (Credential Management):** Administrator credentials shall be securely stored and managed within the system database. The system shall support the manual creation, modification, and deactivation of administrator accounts by authorized personnel (e.g., a super admin).
* **Requirement 1.4 (Session Management):** The system shall implement secure session management to maintain the logged-in state of administrators and prevent unauthorized access.
* **Requirement 1.5 (Logout Functionality):** A clear and easily accessible logout option shall be available on the admin dashboard to allow administrators to securely terminate their session.

Note: The admin dashboard shall contains following option with complete functionality

1. Dashboard

2. Donor Management

3. Inventory

4. Scheduled Blood Drive

5. Emergency Blood Request

6. Analytics

7.Setting

8. Logout

**1. Admin Dashboard Overview:**

* **Requirement 1.1 (Brief Analytics Widgets):** Upon successful login, the admin dashboard shall present a clear and concise overview of key system metrics through interactive widgets. These widgets should be prominently displayed and provide at-a-glance information. The following widgets shall be included:
  + **Requirement 1.1.1 (Total Donors):**
    - **Display:** A numerical count of the total registered donors in the system (lifetime).
    - Display a trend indicator (e.g., percentage change) compared to a previous period (last month).
    - **Click Action:** Clicking this widget shall navigate the administrator to a detailed view of all registered donors, potentially with filtering and sorting options.
  + **Requirement 1.1.2 (Total Blood Donations):**
    - **Display:** A numerical count of the total number of blood donations recorded in the system (lifetime).
    - Display a trend indicator (e.g., percentage change) compared to a previous period (last month).
    - **Click Action:** Clicking this widget shall navigate the administrator to a detailed view of donation records, potentially with filtering options (e.g., by date, blood type).
  + **Requirement 1.1.3 (Critical Levels):**
    - **Display:** An indicator of the blood groups that are below a defined critical threshold of eligible donors.
    - **Threshold Logic:** The system shall define a minimum threshold of at least 50 active and eligible donors for each blood group. If the number of eligible donors for a specific blood group falls below this threshold, it shall be considered a critical level.
    - **Visual Representation:** This widget shall visually highlight each blood groups with critical levels, potentially using color-coding (e.g., red for critical, yellow for approaching critical, Green for okay). It should also display the current number of eligible donors for each blood group and the percentage below the target.
    - **Click Action:** Clicking this widget shall navigate the administrator to a detailed view of donor statistics by blood group, highlighting those below the critical threshold and potentially suggesting actions (e.g., targeted recruitment campaigns).
  + **Requirement 1.1.4 (Total Pending Emergency Requests):**
    - **Display:** A numerical count of the emergency blood requests currently in the system that have not yet been fulfilled or assigned a donor.
    - **Click Action:** Clicking this widget shall navigate the administrator to a dedicated section for managing and addressing pending emergency blood requests, allowing them to view details and initiate the donor matching process.
  + **Requirement 1.1.5 (Scheduled Blood Donation):**
    - **Display:** A numerical count of the emergency blood requests currently in the system that are yet to donate.
    - **Click Action:** Clicking this widget shall navigate the administrator to a dedicated section for managing and addressing or follow up with scheduled blood donation.
* **Requirement 1.1.6 (Duplicate Data)**
* Admin dashboard shall include a clickable widget for duplicate donors.
* Though registration form prevent user to entry same email and username to create an account on the system. But system must have the functionality to flag duplicate entry or fake profile or same person multiple donor account.
* System will flag duplicate if an user using same name, same DOB, same blood group, same number, same hemoglobin point, same address, same last donation date
* System will flag as duplicate data if any above two criteria matched
* System shall has feature for admin to review those duplicate data and approve them they’re unique or mark them as duplicate data and delete them from the original database donor list (so that these profile doesn’t appear on the search results of blood seeker requests) but these data will be saved on the system for future reference like to identify fake profile, fraud or investigate crime.
* The system shall allow admin to manage these data from the donor management option. Hence, after clicking the duplicate data widget system should redirect admin to the designated section of donor management to view and take action about these data.
* **Requirement 1.2:** The admin dashboard should also include the following sections or widgets to provide further insights:
  + **Requirement 1.2.1 (Blood Type Distribution):** A visual representation (e.g., pie chart) showing the distribution of registered donors across different blood types. Allow filtering the data by a specific time period (e.g., last 30 days, current year, Lifetime, Custom).
  + **Requirement 1.2.2 (Monthly Donations):** A visual representation (e.g., bar graph) showing the trend of blood donations over a selected period (e.g., monthly for the current year, Yearly, Lifetime, Custom). Allow selecting different timeframes.
  + **Requirement 1.2.3 (Recent Donations):** A list displaying the most recent blood donations recorded in the system, including donor information, blood type, date, and volume. Provide an option to view all recent donations.
  + **Requirement 1.2.4 (Upcoming Blood Drives):** A summary of upcoming scheduled blood donation, including date, location, and potentially the number of registered donors and donation goals. Provide an option to view all the upcoming drives and add new ones.
  + **Requirement 1.2.5 (Blood Inventory Overview):** A summary of the current blood stock levels for different blood types, indicating the quantity and status (e.g., adequate, low, critical) for each blood group. Provide an option to view and manage the full inventory.
  + **Requirement 1.2.6 (Critical Shortages Overview):** A dedicated section highlighting blood types with critically low stock levels and potentially suggesting actions like requesting more donations.
* **Requirement 1.3 (Customization):** The system may allow administrators to customize the layout and the widgets displayed on their dashboard to prioritize the information most relevant to their roles.

**2. Donors Management:**

* **Requirement 2.1 (Donor Registration):**
  + **Requirement 2.1.1 (Data Collection):** The system shall allow admin to add new donors information manually, but admin have to entered mandatory information as registration form to save new donor information. Admin can add new donor information individually, Bulk or by uploading spreadsheet. Spreadsheets and bulk action have to contains all column field as registration form. For the manual donor entry Donor ID shall generated by System automatically.
  + **Requirement 2.1.2 (Data Validation):** The system shall validate all manually entered donor information to ensure accuracy and completeness. This includes:
    - Checking for valid email format.
    - Verifying date formats.
    - Ensuring required fields are not empty.
    - Checking for duplicate entries (e.g., email or phone number).
    - Validating blood group and other required information.
  + **Requirement 2.1.3 (Eligibility Check):** The system shall use the collected medical history to determine the donor's eligibility based on predefined criteria. The system should flag ineligible donors and provide reasons.
  + **Requirement 2.1.4 (Donor ID Generation):** The system shall automatically generate a unique Donor ID for each registered donor.
  + **Requirement 2.1.5 (Data Storage):** The system shall securely store all donor information in the database, complying with relevant data privacy regulations.
  + **Requirement 2.1.6 (Acknowledgement):** The system shall provide a confirmation message upon successful donor registration.
* **2.2 Donor Listing and Overview:**
  + **2.2.1 Display of Donor Information:** The system shall display a list of registered donors with the following information presented in a tabular format:
    - Donor ID (e.g., "DON-1001")
    - Name
    - Blood Type
    - Contact (Email and Phone Number)
    - Last Donation Date
    - Status (e.g., "ACTIVE," "DEFERRED," "INACTIVE")
    - Send Message
    - Send Email
  + **2.2.2** **Pagination:**
    - The system shall implement pagination to handle a large number of donors.
    - The system shall display the current page number and the total number of pages (e.g., "1-10 of 1248").
    - The system shall provide navigation controls to move between pages (e.g., previous, next, first, last).
    - The system shall allow the administrator to specify the number of donors to display per page.
  + **2.2.3 Selection:** The system shall allow administrators to select one or more donors from the list using checkboxes. This is likely for bulk actions.
* **2.3 Actions:** The system shall provide the following actions for each donor, accessible via icons or buttons in an "Actions" column:
  + **2.3.1 View/Edit Donor Details:** The system shall allow administrators to view and edit detailed donor information.
  + **2.3.2 Contact Donor:** The system shall provide a way for administrators to contact donors (e.g., send an email, initiate a phone call, send message).
  + **2.3.3 Delete/Deactivate Donor:** The system shall allow administrators to delete or deactivate donor records. (Note: Best practice is usually to *deactivate* rather than delete, for data integrity).
* **2.3 Export Functionality:**
  + **2.3.1 Export Data:** The system shall allow administrators to export the list of donors (or a subset of donors) to a file (spreadsheet and pdf).
  + **2.3.2 Export Format:** The system shall support exporting data in a common format (e.g., CSV, Excel, PDF).
* **2.4 Sorting:** The system shall allow administrators to sort the donor list by clicking on the column headers, including:
  + Donor ID
  + Name
  + Blood Type
  + Last Donation
  + Status
* **2.5 Filtering:** The system shall allow administrators to filter the donor list based on criteria
  + Blood Type
  + Status
  + Last Donation Date
  + Name
* **2.6 Bulk Actions:**
  + The system shall allow administrators to perform bulk actions on selected donors, such as:
    - Sending a mass email
    - Changing the status of multiple donors
    - Exporting selected donors
    - Deactivate multiple donor profile
  + Upon deactivation of user profile system shall send an email to the user informing why his/her profile is being deactivated. And reactivate their profile they should be able to contact with the administrator and explain their reason why he/she/they’re unactive and why we should reactive their profile.

**3. Inventory**

The inventory section of the admin dashboard should contains following:

* **Blood Donation Recording:**
  + Recording details of each donation (date, time, donor ID, location,
* **Blood Unit Tracking:**
  + Tracking the availability of each blood unit. How many blood donor are available on every blood group
* **Blood Issuance:**
  + Recording details of blood issued (to whom, when, for when etc.)
* **Blood Requests:**
  + Tracking request status.

**4. Scheduled Blood Drive**

* 4.1 Blood Drive
  + 4.1.1 The system shall have a scheduled blood drive where the system admin will be able to see all upcoming and previously scheduled blood donations.
  + If Blood seeker already booked one more multiple donor for a particular date or for a certain period of time
* System shall display the data in a group listing format when a blood seeker booked multiple donors for a particular period of time (in one month). If user booked for just an individual system shall display it normal listing format
* System shall have feature/functionality to track down the blood request history of every user to investigate fraud and to track the history of how many user have managed how many units of blood from the system for how many people.
  + 4.1.2 While creating the group listing the system shall capture/display the following information for each blood drive:
    - Title/Name of the drive
    - Date and Time
    - Venue/Location (with address and map integration if possible)
    - Contact Person/Organization
    - Targeted Blood Group(s) (if any)
    - Description/Details
    - Registration Deadline (optional)
    - Donation Goal (number of donors or units of blood)
    - An option which will allow admin to see the patient details
  + 4.1.3 The system shall validate the entered information (e.g., ensure date/time is valid).
* 4.2 Blood Drive Management
  + 4.2.1 The system shall allow admin to view list of upcoming and past blood drives.
  + 4.2.2 The system shall allow admin to edit blood drive information but not delete.
  + 4.2.3 The system shall allow admin to cancel or postpone scheduled a blood group (multiple donor), with notifications to registered donors.

**5. Emergency Blood Request**

* 5.2 Emergency Request Processing
  + 5.2.1 The system shall notify relevant users (administrators) of new emergency requests.
  + 5.2.2 The system should prioritize emergency requests based on urgency level.
  + 5.2.3 The system shall facilitate the matching of suitable donors to emergency requests, considering:
    - Donor blood group compatibility
    - Donor location
    - Donor availability (last donation date)
  + 5.2.4 The system shall provide tools for administrators to manage and track emergency requests, including:
    - Viewing request details
    - Assigning donors to requests
    - Communicating with requesters and donors
    - Updating request status (e.g., pending, assigned, fulfilled, cancelled)
  + 5.2.5 The system shall generate alerts for unfulfilled emergency requests.
* 5.3 Emergency Request Verification
  + 5.3.1 The system shall have a process to verify emergency blood requests.
* The system shall show all emergency blood requests in tabular format with the filtering/sorting option. The following filtering option:
* Search option – Where admin will be able to search by user name or id to filtered all emergency request from a particular user.
* Filter result – filter result will be displayed in two section

1. Recent Request – On this section all emergency request placed within last 7

days will be displayed.

2. Past Request – On this section all emergency requests placed within later than

7 days will be displayed.

Note:

1. Once the recent emergency request has approved/completed/rejected system shall move recent request to the past request section for history tracking or future reference.

* + 5.4 **Pagination:**
    - The system shall implement pagination to handle a large number of emergency request.
    - The system shall display the current page number and the total number of pages (e.g., "1-10 of 1248").
    - The system shall provide navigation controls to move between pages (e.g., previous, next, first, last).
    - The system shall allow the administrator to specify the number of donors to display per page.

6. Analytics

* 6.1 Donor Analytics
  + 6.1.1 The system shall provide analytics on donor demographics, including:
    - Donor distribution by age, gender, and location
  + 6.1.2 The system shall provide analytics on donor behavior, including:
    - Frequency of donations per donor
    - Trends in donor registration
    - Donor retention rates
* 6.2 Donation Analytics
  + 6.2.1 The system shall provide analytics on blood donations, including:
    - Donation volume over time
    - Donation distribution by blood group and location
    - Trends in blood donation
* 6.3 Blood Inventory Analytics
  + 6.3.1 The system shall provide analytics on blood inventory, including:
    - Inventory levels over time
* 6.4 Key Metrics Dashboard

\* The system shall display key metrics, including:

\* Total Donors with percentage change and link to donor list.

\* Total Blood Donations with percentage change, filterable by time.

\* Critical Levels Alert: Visual indicator for low blood stocks, color-coded.

* 6.5 Blood Inventory Status

\* The system shall display:

\* Blood Type Distribution: Visual chart, filterable by time.

\* Per-type indicators: Available units, status (Critical/Low/Good), and flags for rare types.

\* Inventory Details: Unit count with status for each blood type, with alerts for critical levels.

**7. Settings**

Here are the system requirements for the Admin Dashboard Settings, written in a simplified format:

**7. Admin Dashboard Settings**

* **Requirement 7.1 (Profile Viewing and Editing):**
  + The system shall allow administrators to see and change their profile information (name, email, phone, profile picture).
* **Requirement 7.2 (Password Change):**
  + The system shall allow administrators to change their password. It must ensure the current password is correct and that new passwords meet security rules.
  + The system shall provide an option for administrators to enable two-factor authentication (2FA) for added security.
* **Requirement 7.3 (Notification Preferences):**
  + The system shall allow administrators to choose what notifications they receive (email, push) for things like emergency requests and blood drive reminders.
* **Requirement 7.4 (Dashboard Layout Customization):**
  + The system shall allow administrators to change how their dashboard looks by arranging widgets and choosing which ones to show or hide.
* **Requirement 7.5 (Default Start Page Selection):**
  + The system shall allow administrators to choose which page is shown when they log in.
* **Requirement 7.6 (Login History):**
  + The system shall show administrators a history of their recent login activity, including date, time, location, and device information.

**8. Logout:**

* **Requirement 7.1 (Secure Logout):** The system shall provide a clear and easily accessible logout option for all users (administrators and donors).
* **Requirement 7.2 (Session Termination):** Upon logout, the system shall securely terminate the user's session, preventing unauthorized access. Same user or admin account shouldn’t be able to access their account from two device at the same time. Two session/Multiple session is not allowed.
* **Requirement 7.3 (Logout Confirmation):** The system may display a confirmation message upon successful logout.
* **Requirement 7.4 (Redirect):** After logout, the system shall redirect the user to the login page.