**Use Cases (Iteration 2)**

1. **User Registration (Donor & Patient):**
   1. **Goal:** Users want to register as users in the system.
   2. **User inputs:** Personal information, contact details, username, password.
   3. **System actions:** Validates input, stores user information in the database.
   4. **Expected output**: Confirmation of successful registration.
2. **User Authentication (Donor & Patient):**
   1. **Goal:** Users want to log in to their accounts.
   2. **User inputs:** Username and password.
   3. **System actions:** Validates credentials, grants access to the account.
   4. **Expected output:** Access to the donor's dashboard.
3. **Password Recovery (Donor & Patient):**
   1. **Goal:** Users want to recover their passwords if forgotten.
   2. **User inputs:** Email address or username.
   3. **System actions:** Verifies the provided information, sends a password reset link.
   4. **Expected output:** Password reset instructions.
4. **Profile Management (Donor & Patient):**
   1. **Goal:** Users want to manage their user profiles.
   2. **User inputs:** Editable personal information, contact details.
   3. **System actions:** Updates user profile in the database.
   4. **Expected output:** Confirmation of profile update.
5. **Blood Donation Request Management (Donor):**
   1. **Goal:** Donors want to create, edit, or delete their blood donation requests.
   2. **User inputs:** Blood donation request details.
   3. **System actions:** Creates, updates, or deletes the donation request.
   4. **Expected output:** Confirmation of request actions.
6. **Blood Donor Search (Patient):**
   1. **Goal:** Patients want to search for blood donors by blood type and location.
   2. **User inputs**: Blood type and location.
   3. **System actions:** Retrieves and displays matching donors.
   4. **Expected output:** List of matching donors.
7. **Blood Donation Request (Patient):**
   1. **Goal:** Patients want to request blood donations from donors.
   2. **User inputs:** Donation request details and preferred date.
   3. **System actions:** Sends the request to selected donors, updates request status.
   4. **Expected output:** Confirmation of request sent.
8. **Donor Response Management (Patient):**
   1. **Goal:** Patients want to accept or deny donor responses to their requests.
   2. **User inputs:** Accept or deny response from donors.
   3. **System actions:** Updates the request status, notifies the donor.
   4. **Expected output:** Confirmation of response.
9. **Notification (Patient):**
   1. **Goal:** Patients want to receive notifications about the status of their blood donation request.
   2. **System actions:** Sends real-time notifications on request status changes.
   3. **Expected output:** Notification messages.
10. **Appointment Scheduling (Patient):**
    1. **Goal:** Patients want to schedule a blood donation appointment.
    2. **User inputs:** Preferred date and time for donation.
    3. **System actions:** Schedules the appointment, updates the donor's calendar.
    4. **Expected output:** Confirmation of the scheduled appointment.
11. **User Authentication (Admin):**
    1. **Goal:** Admins want to log in to their admin accounts.
    2. **User inputs:** Admin username and password.
    3. **System actions:** Validates credentials, grants access to the admin dashboard.
    4. **Expected output:** Access to the admin dashboard.
12. **User Profile Administration (Admin):**
    1. **Goal:** Admins want to administrate user profiles.
    2. **User inputs:** User details, account management actions.
    3. **System actions:** Administers user profiles (e.g., edit, suspend, or delete accounts).
    4. **Expected output:** Confirmation of admin actions.
13. **Donation Relationship Administration (Admin):**
    1. **Goal:** Admins want to manage the donation relationships.
    2. **User inputs:** Donation-related information, actions.
    3. **System actions:** Administers donation relationships (e.g., approve or reject donations).
    4. **Expected output:** Confirmation of admin actions.
14. **Customer Support (Admin):**
    1. **Goal:** Admins want to provide customer support through chat functionality.
    2. **User inputs:** Chat messages with users seeking assistance.
    3. **System actions:** Facilitates real-time chat with users.
    4. **Expected output:** Support provided, issues resolved.
15. **Admin Homepage (Admin):**
    1. **Goal:** Admins want to access the admin homepage for system management.
    2. **System actions:** Displays the admin dashboard with relevant system statistics.
    3. **Expected output:** Admin dashboard with system information.