System Requirements Statement (SRS) –

**Blood Stock Management System**

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# Introduction

This document explains the system requirements and scope for developing Blood Stock Management System.

Blood Stock Management System could divide the four main parts, Blood Bank part, Donor part, Receivers part and Hospital part.

This document describes the system requirement of the Account part.

# Functional Requirements

The Account part of Blood Stock Management System has three modules which are divided 13 processes described as below.

|  |  |  |
| --- | --- | --- |
| **No** | **BRS requirement ID** | **Description** |
| **2.1** | **Blood Bank Module** | |
| **2.1.1** | **B01** | **Request for Registration** |
| **2.1.2** | **B02** | **Login Process** |
| **2.1.3** | **B03** | **Forgot Password Process** |
| **2.1.4** | **B04** | **Change Password Process** |
| **2.1.5** | **B05** | **Update Account Process** |
| **2.1.6** | **B06** | **Update Blood Stock** |
| **2.1.7** | **B07** | **Publish Info of Blood Donation Camp** |
| **2.1.8** | **B08** | **Verify Donor Eligibility** |
| **2.1.9** | **B09** | **Browse Donor** |
| **2.2** | **Donor Module** | |
| **2.2.1** | **B11** | **Request for Registration** |
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| **2.2.3** | **B13** | **Forgot Password Process** |
| **2.2.4** | **B14** | **Change Password Process** |
| **2.2.5** | **B15** | **Update Account Process** |
| **2.2.6** | **B16** | **Donates Blood** |
| **2.2.7** | **B17** | **Download Certificate** |
| **2.3 Receivers Module** | | |
| **2.3.1** | **B21** | **Account Creation Process** |
| **2.3.2** | **B22** | **Login Process** |
| **2.3.3** | **B23** | **Forgot Password Process** |
| **2.3.4** | **B24** | **Change Password Process** |
| **2.3.5** | **B25** | **Update Account Process** |
| **2.3.6** | **B26** | **Search Nearby Blood Bank** |
| **2.3.7** | **B27** | **Submit Blood Request** |
| **2.3.8** | **B28** | **Messages of Acknowledgement** |
| **2.4 Hospital Module** | | |
| **2.4.1** | **B31** | **Request for Registration** |
| **2.4.2** | **B32** | **Login Process** |
| **2.4.3** | **B33** | **Forgot Password Process** |
| **2.4.4** | **B34** | **Change Password Process** |
| **2.4.5** | **B35** | **Update Account Process** |
| **2.4.6** | **B36** | **Search Nearby Blood Bank** |
| **2.4.7** | **B37** | **Submit Blood Request** |
| **2.4.8** | **B38** | **Messages of Acknowledgement** |
| **2.5 Administration Module** | | |
| **2.5.2** | **B41** | **Login Process** |
| **2.5.3** | **B42** | **Forgot Password Process** |
| **2.5.4** | **B43** | **Change Password Process** |
| **2.5.5** | **B44** | **Approve or Reject Request** |
| **2.5.6** | **B45** | **Report Generation** |
| **2.5.6** | **B46** | **View Request** |

## Blood Bank Module

* Track real-time inventory of blood units.

* Log details of each blood collection (donor ID, date, type of donation, volume collected).

### Request For Registration

* Blood Stock Management System compels to create the account before using it. So, Blood Stock Management System should provide the function which makes blood bank creates new account.
* When blood bank creates new account, the function demands six information described as below.

1. Username
2. Password
3. Name of Blood Bank
4. E-mail address
5. Location

* The Login information

The Login information consists of some items described as below.

1. Username
2. Password
   * All items are compulsory demanded.
   * User-ID

* The User-id should be unique. If the User-id correspond with not case-sensitive to other which is previously registered, the User-id should not be registered as an account.
  + Password
* The Password has constrains which makes the Password consists of more than or equal 8 and less than or equal 16 characteristics including characters described as below.

1. Numeric figure (at least one)
2. Capital alphabet (A-Z)(at least one)
3. Small alphabet (a-z)(at least one)
4. Special character (#, $, %, &, etc.) (at least one)

* The Password is masked by dummy characters. The re-entering Password is demanded.
* The Password must be encrypted in Blood Stock Management System.
  + User Type

The User Type falls into three categories described as below.

1. Blood Bank
2. Donor
3. Receiver
4. Hospital
5. Administrator

* The User Type defines also four types of user; "Blood bank user", "Donor user", "Receiver user” and “Hospital”.
* In an Account Creation Process, the user can select user type.
* No one could select The Administration, because Administration is implemented to Blood Stock Management System in advance.
* Contact Details
* The Contact Detail consists of some items described as below.

1. Permanent Address
2. Contact Phone No
   * All items are compulsory demanded.
   * Permanent Address

* Permanent Address should be filled.
* But only the state should be selected from options.
* The Security Question information

The Security Question information is needed when Blood Bank lost their Password. This information consists of two items described as below.

1. Selected Question
2. Answer
   * All items are compulsory demanded.
   * Some questions which are difficult to answer for anyone else are prepared in advance.

E.g. which color do you like most?

* + A question should be selected from options by the Blood Bank, and the Answer is registered by the Blood Bank.
* Login information should be entered on one screen, and then Blood Bank information and Security Question information should be entered on another screen.

### Login Process

* Blood Stock Management System always compels user authentication before using itself except when a new account is successfully created.
* The user authentication demands User-id and Password. The User-id and the Password should be checked in three ways.
  + First, The User-id and the Password should be existed and correct.
* If The User-id and the Password are not equal to what the user has registered, the user authentication cannot be provided.
  + Second, the User Type linked to the User-id should be "Blood Bank".
* When the User Type is "Blood Bank", then user can be placed on “Blood Bank Home”.
  + Finally, User-id should be available.
* The Receiver can decide whether the User-id is available or suspended – Refer to the SRS of the Admin part.
* If Blood Bank is rejected, user authentication is not provided for system user.
* The Blood Bank account should alive for so long as the duration decided by Admin.
* Only when the three checks are successfully completed, Blood Bank can be placed on respected page.
* The “Blood Bank Home” provides the some items described as below.

1. A trigger to logout
2. A trigger to Update Account
3. A trigger to Change Password
4. A trigger to Verify Donor Eligibility
5. A trigger to Publish Info of Blood Donation Camp
6. A trigger to Update Blood Stock
7. A trigger to Requests

### Forgot Password Process

* When system user lost their Password, the recovery method should be provided by Blood Stock Management System.

The recovery method is described as below.

* + First, system user enters their User-id for Blood Stock Management System.
  + Next, Blood Stock Management System demands the Answer which has been registered since when the Account was created.
  + Only when the Answer is correct, Blood Bank get the new password by E-mail which also has been registered since when the Account was created.
  + The new password is automatically generated by Blood Stock Management System.
* Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
* As a consequence, The Blood Bank could get the Blood Bank authentication using the new password.
  + Then, the Blood Bank had better change the new password manually.
* If the Answer is not correct, otherwise, the correct Answer is demanded for user again.
  + In that case, Of course, Blood Bank couldn’t get the new password.

### Change Password Process

* When Blood Bank wants to change their Password, the measure should be provided by Blood Stock Management System.
* Therefore, Blood Stock Management System should provide the function which is available after getting the Blood Bank authentication.
* The function demands the current password and the new password.
  + Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
  + The current password and the new password are masked by using dummy characters.
  + The new password is demanded to enter twice to avoid a typing error.
* Only when the current password is correct, Blood Bank could change their Password.
* When the current password is changed into new password, Blood Stock Management System compels user authentication again.

### Update Account Process

* Blood Stock Management System should provide the function which makes the account updated for Blood Bank.
* The information Blood Bank could update is described below.

1. Login information
2. User information
3. Security Question Information

* The Login information

The updatable items as described below.

1. First Name
2. Last Name
3. E-mail address
   * All items are compulsory demanded, but updating is optional.

* The User information

The updatable items as described below.

1. User Name
2. User Phone No
3. E-mail address
4. Permanent address
   * All items are compulsory demanded, but updating is optional.

* The Security Question information

The updatable items as described below.

1. Selected Question
2. Answer
   * All items are compulsory demanded, but updating is optional.

### Update Blood Stock

* Stock conditions are described as below.

1. Type of Blood
2. Amount of Blood
3. Price range

### Publish Info of Blood Donation Camp

* Publish information about the camps are described as below.

1. State
2. District
3. Date

### Verify Donor Eligibility

* After receiving request the Blood Bank can only verify following contents.

1. Age
2. Medical History

### Browse Donor

• After Publishing if Blood Bank wants to remove some products then he can delete the product.

#### Donor Module

### Account Creation Process

* Blood Stock Management System compels to create the account before using it. So, Blood Stock Management System should provide the function which makes Donor creates new account.
* When Donor creates new account, the function demands Eight information described as below.

1. Username
2. Password
3. First Name
4. Last Name
5. E-mail address
6. Date Of Birth
7. Blood Group
8. Address

* The Login information

The Login information consists of some items described as below.

1. Username
2. Password
   * All items are compulsory demanded.
   * User-id

* The User-id should be unique. If the User-id correspond with not case-sensitive to other which is previously registered, the User-id should not be registered as an account.
  + Password
* The Password has constrains which makes the Password consists of more than or equal 8 and less than or equal 16 characteristics including characters described as below.

1.Numeric figure (at least one)

2.Capital alphabet (A-Z)(at least one)

3.Small alphabet (a-z)(at least one)

4.Special character (#, $, %, &, etc.) (at least one)

* The Password is masked by dummy characters. The re-entering Password is demanded.
* The Password must be encrypted in Blood Stock Management System.
  + User Type

The User Type falls into three categories described as below.

1. Blood Bank
2. Donor
3. Receiver
4. Hospital
5. Administrator

* The User Type defines also three types of user; " Donor user", "Donor user", and "Receiver user”.
* In an Account Creation Process, the user can select Donor.
* No one could select The Administration, because Administration is implemented to Blood Stock Management System in advance.
* Contact Details
* The Contact Detail consists of some items described as below.

1.Permanent Address

2.Contact Phone No

* + All items are compulsory demanded.
  + Permanent Address
* Permanent Address should be filled.
* But only the state should be selected from options.
* The Security Question information

The Security Question information is needed when Donor lost their Password. This information consists of two items described as below.

1. Selected Question
2. Answer
   * All items are compulsory demanded.
   * Some questions which are difficult to answer for anyone else are prepared in advance.

E.g. which color do you like most?

* + A question should be selected from options by the Donor, and the Answer is registered by the Donor.
* Login information should be entered on one screen, and then Donor information and Security Question information should be entered on another screen.

### Login Process

* Blood Stock Management System always compels Donor authentication before using itself except when a new account is successfully created.
* The user authentication demands User-id and Password. The User-id and the Password should be checked in three ways.
  + First, The User-id and the Password should be existed and correct.
* If The User-id and the Password are not equal to what the user has registered, the user authentication cannot be provided.
  + Second, the User Type linked to the User-id should be "user".
* When the User Type is " Donor ", user can be placed on “Donor Home”.
  + Finally, User-id should be available.
* The Receiver can decide whether the User-id is available or suspended – Refer to the SRS of the Admin part.
* If user is rejected, user authentication is not provided for Donor.
* The Donor account should alive for so long as the duration decided by Admin.
* Only when the three checks are successfully completed, Donor can be placed on respected page.
* The “Donor Home” provides the some items described as below.

1. A trigger to logout
2. A trigger to update Account
3. A trigger to Change Password
4. A trigger to Browse Blood Bank
5. A trigger to Download Certificate

### Forgot Password Process

* When Donor lost their Password, the recovery method should be provided by Blood Stock Management System.

The recovery method is described as below.

* + First, Donor enters their User-id for Blood Stock Management System.
  + Next, Blood Stock Management System demands the Answer which has been registered since when the Account was created.
  + Only when the Answer is correct, Donor get the new password by E-mail which also has been registered since when the Account was created.
  + The new password is automatically generated by Blood Stock Management System.
* Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
* As a consequence, The Donor could get the user authentication using the new password.
  + Then, the Donor had better change the new password manually.
* If the Answer is not correct, otherwise, the correct Answer is demanded for Donor again.
  + In that case, Of course, Donor couldn’t get the new password.

### Change Password Process

* When Donor wants to change their Password, the measure should be provided by Blood Stock Management System.
* Therefore, Blood Stock Management System should provide the function which is available after getting the Donor authentication.
* The function demands the current password and the new password.
  + Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
  + The current password and the new password are masked by using dummy characters.
  + The new password is demanded to enter twice to avoid a typing error.
* Only when the current password is correct, Donor could change their Password.
* When the current password is changed into new password, Blood Stock Management System compels Donor authentication again.

### Update Account Process

* Blood Stock Management System should provide the function which makes the account updated for Donor.
* The information Donor could update is described below.

1. Login information

2. User information

3. Security Question Information

* The Login information

The updatable items as described below.

1. Username
2. Password
   * All items are compulsory demanded, but updating is optional.

* The User information

The updatable items as described below.

1. Username
2. Password
3. First Name
4. Last Name
5. E-mail address
6. Address

* + All items are compulsory demanded, but updating is optional.
* The Security Question information

The updatable items as described below.

1. Selected Question
2. Answer
   * All items are compulsory demanded, but updating is optional.

#### Donates Blood

* Search nearby Blood Banks.
* Type of Blood Group.
* Make a request.

#### Download Certificate

• Download the donation certificate.

#### Admin Module

**•** Receivershould be responsible for following activities**,**

### Login Process

* Blood Stock Management System always compels user authentication before using itself except when a new account is successfully created.
* The user authentication demands User-id and Password. The User-id and the Password should be checked in three ways.
  + First, The User-id and the Password should be existed and correct.
* If The User-id and the Password are not equal to what the admin has registered, the Admin authentication cannot be provided.
  + Second, the User Type linked to the User-id should be "Admin".
* When the User Type is "Admin", user can be placed on “Admin Home”.
  + Finally, User-id should be available.
* The Receiver can decide whether the User-id is available or suspended – Refer to t
* .0he SRS of the Admin part.
* If user is rejected, user authentication is not provided for system user.
* The Admin account should alive for so long as the duration decided by Admin.
* Only when the three checks are successfully completed, Admin can be placed on respected page.
* The “Admin Home” provides the some items described as below.

1. A trigger to logout
2. A trigger to update Account
3. A trigger to Change Password
4. A trigger to Search Product
5. A trigger to Publish Product for sale
6. A trigger to Update Product Information
7. A trigger to Delete Product
8. A trigger to Browse existing Market price

### Forgot Password Process

* When Admin lost their Password, the recovery method should be provided by Blood Stock Management System.

The recovery method is described as below.

* + First, Admin enters their User-id for Blood Stock Management System.
  + He will enter the E-mail id since when the Account was created.
  + Only when the E-mail Id is correct, Admin get the new password by E-mail which also has been registered since when the Account was created.
  + The new password is automatically generated by Blood Stock Management System.
* Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
* As a consequence, The Admin could get the Admin authentication using the new password.
  + Then, the Admin had better change the new password manually.

### Change Password Process

* When Admin wants to change his Password, the measure should be provided by Blood Stock Management System.
* Therefore, Blood Stock Management System should provide the function which is available after getting the Admin authentication.
* The function demands the current password and the new password.
  + Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
  + The current password and the new password are masked by using dummy characters.
  + The new password is demanded to enter twice to avoid a typing error.
* Only when the current password is correct, Admin could change his Password.
* When the current password is changed into new password, Blood Stock Management System compels user authentication again.

### Update Account Process

* Blood Stock Management System should provide the function which makes the account updated for Admin.
* The information Admin could update is described below.

1. Login information
2. User information
3. Security Question Information

* The Login information

The updatable items as described below.

1. First Name
2. Last Name
3. E-mail address
   * All items are compulsory demanded, but updating is optional.

* The User information

The updatable items as described below.

1. User Name
2. User Phone No
3. E-mail address
4. Permanent address
   * All items are compulsory demanded, but updating is optional.

* The Security Question information

The updatable items as described below.

1. Selected Question
2. Answer
   * All items are compulsory demanded, but updating is optional.

#### Record Generation

• Admin should able to see all the records from any users.

• Daily report of enrolment to admin.

• Monthly report of enrolment as per the states to admin.

#### Accounts Management

• Admin should able to manage all the accounts with following activities,

1. Enable accounts

2. Disable accounts

#### Message Acknowledgement Module

• In following conditions acknowledgement to be send

1. After completion of successful registration.
2. After every successful transaction (buy, sale).
3. Now the messages are being sent by using email but in future we can have mobile sms.

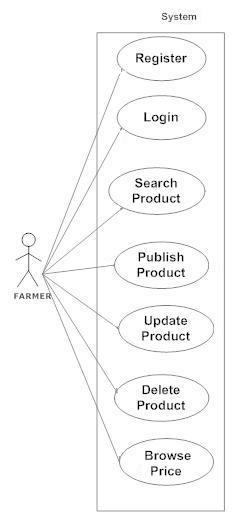
#### 2.5 Use Case Diagram

**Admin:**

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*Fig. Use case diagram for admin*

1. In Admin use case diagram Admin is the Actor.
2. Admin can handle following use cases:
3. Login
4. Report Generation
5. Controls account

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*Fig. Use case diagram for Blood Bank*

**Blood Bank:**

1. In Blood Bank use case diagram Blood Bank is the Actor.
2. Blood Bank can handle following use cases:
3. Register
4. Login
5. Search Product
6. Publish Product
7. Update Product
8. Delete Product
9. Browse Product Price

**Donor:**

****

*Fig. Use case diagram for Donor*

1. In Donor use case diagram Donor is the Actor**.**
2. Donor can handle following use cases:
3. Register
4. Login
5. Search Product
6. Buy Product
7. Payback
8. Cancel Order
9. Browse Product Price