

## Blood Bank Application

- Java Server Faces [JSF] -

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### \* Objective

This Blood Bank web application is programmed in order to help the humans or patients who are seeking blood. It is designed in such a way that it keeps detailed information where the blood is available and what kind of blood is available and in how much quantity.

The system does not store blood but it stores the information about the blood or more precisely we can say it stores the information or database of the blood available.

This application is built using JSF 2.0 and has functions to **login, register, blood donation and receiving** blood for the specified blood group.

### \* Technologies used

- Apache NetBeans IDE
- XAMPP server
- MySQL Database
- JSF 2.3

### \* Classes used in this web app

- BloodBean.java – This is a managed Bean; this has code to run the application including setter, getter, listener and accessor methods for the component.

## \* The complete web app's JSF page has

- A Blood Group list implemented using **h:selectOneRadio** html tag.
- The data for the list is populated using the **f:selectItem** core tag.
- The User name and blood unit fields implemented using **h:inputText** tag.
- The functions Login, Register, Donate, Receive and Exit are implemented with **h:commandButton** tags.
- A display message implemented using an **h:outputText** tag

## \* JDBC Connectivity

- Database name : blood
- Tables : donors and avail
- Donors table has username, blood group and number of units.
- Avail table has blood group and available number of units.

```
MariaDB [blood]> desc donors;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| username | varchar(256) | YES |   | NULL    |       |
| bgroup   | varchar(256) | YES |   | NULL    |       |
| unit     | int(11)      | YES |   | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.258 sec)

MariaDB [blood]> desc avail;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| bgroup | varchar(256) | YES |   | NULL    |       |
| unit   | int(11)      | YES |   | NULL    |       |
+-----+-----+-----+-----+-----+
2 rows in set (1.447 sec)

MariaDB [blood]> insert into avail values('A+ve' ,0);
Query OK, 1 row affected (0.112 sec)
```

## Code

### index.xhtml

```
<?xml version='1.0' encoding='UTF-8'?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://xmlns.jcp.org/jsf/html"
      xmlns:f="http://java.sun.com/jsf/core">
<h:head>
    <title>Blood Bank</title>
</h:head>
<h:body>
    <h1>ABC Blood Bank</h1>
    <h:form>
        <h:outputLabel for="txtName" >
            <h:outputText value="Enter Username:"/>
        </h:outputLabel>
        <h:inputText id="txtName" value="#{blood.name}" required = "true"
requiredMessage="Username field is required"/>
        <br><br><br><br>
        <h:commandButton id="cmdLogin" value="Login" action="#{blood.opt}" />
        <h:outputLabel for="warningmsg">
            <h:outputText value="#{blood.wmsg}" />
        </h:outputLabel>
    </h:form>
    <h:form>
        <br><br><br><br>
        <h:commandButton id="cmdRegister" value="Register" action="#{blood.reg}" />
    </h:form>
</h:body>
</html>
```

```

<?xml version='1.0' encoding='UTF-8'?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://xmlns.jcp.org/jsf/html"
      xmlns:f="http://java.sun.com/jsf/core">
    <h:head>
        <title>Blood Bank</title>
    </h:head>
    <h:body>
        <h1>ABC Blood Bank</h1>
        <h:form>
            <h:outputLabel for="txtName" >
                <h:outputText value="Enter Username:"/>
            </h:outputLabel>
            <h:inputText id="txtName" value="#{blood.name}" required = "true" requiredMessage="Username field is required"/>
            <br/><br/>
            <h:commandButton id="cmdLogin" value="Login" action="#{blood.opt}" />
            <h:outputLabel for="warningmsg" >
                <h:outputText value="#{blood.wmsg}"/>
            </h:outputLabel>
        </h:form>
        <h:form>
            <br/><br/>
            <h:commandButton id="cmdRegister" value="Register" action="#{blood.reg}" />
        </h:form>
    </h:body>
</html>

```

## register.xhtml

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
Clicknbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt  to
change this license
Click nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/XHtml.xhtml  to
edit this template
-->
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://xmlns.jcp.org/jsf/html"
      xmlns:f="http://java.sun.com/jsf/core">
    <h:head>
        <title>User not found. Register First</title>
        <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
    </h:head>
    <h:body>
        <h1>
            Register
        </h1>

```

```

<h:form>
    <h:outputLabel for="txtNewname">
        <h:outputText value="Enter UserName:"/>
    </h:outputLabel>
    <h:inputText id="txtNewname" value="#{blood.newuser}" />
    <br></br>
    <h:outputLabel for="txtBloodGrp">
        <h:outputText value="Enter BloodGroup:"/>
    </h:outputLabel>
    <h:selectOneRadio id="grp" required="true" requiredMessage="please
choose your blood group to proceed" value="#{blood.bloodgrp}">
        <f:selectItem itemValue="#{blood.grpAp}" itemLabel="A+ve"/>
        <f:selectItem itemValue="#{blood.grpAn}" itemLabel="A-ve"/>
        <f:selectItem itemValue="#{blood.grpBp}" itemLabel="B+ve"/>
        <f:selectItem itemValue="#{blood.grpBn}" itemLabel="B-ve"/>
        <f:selectItem itemValue="#{blood.grpABp}" itemLabel="AB+ve"/>
        <f:selectItem itemValue="#{blood.grpABn}" itemLabel="AB-ve"/>
        <f:selectItem itemValue="#{blood.grpOp}" itemLabel="O+ve"/>
        <f:selectItem itemValue="#{blood.grpOn}" itemLabel="O-ve"/>
    </h:selectOneRadio>
    <br></br>
    <h:commandButton id="cmdNewUser" value="Register"
action="#{blood.addUser}" />
    <br></br>
    <br></br>
</h:form>
<h:form>
    <h:commandButton id="cmdBLogin" value="Back to Login"
action="#{blood.ind}" />
    <br></br>
    <br></br>
    <h:outputLabel for="txtmsg">
        <h:outputText value="#{blood.msg1}" />
    </h:outputLabel>
</h:form>
</h:body>
</html>

```

BloodDonation - Apache NetBeans IDE 12.6

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
Click nbfs://nphost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
Click nbfs://nphost/SystemFileSystem/Templates/JSP_Servlet/XHtml.xhtml to edit this template
-->
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://xmlns.jcp.org/jsf/html"
      xmlns:f="http://java.sun.com/jsf/core">
    <head>
        <title>User not found. Register First</title>
        <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
    </head>
    <h:body>
        <h1>
            Register
        </h1>
        <h:form>
            <h:outputLabel for="txtNewname">
                <h:outputText value="Enter UserName:"/>
            </h:outputLabel>
            <h:inputText id="txtNewname" value="#{blood.newuser}" />
            <br/><br/>
            <h:outputLabel for="txtBloodGrp">
                <h:outputText value="Enter BloodGroup:"/>
            </h:outputLabel>
            <h:selectOneRadio id="grp" required="true" requiredMessage="please choose your blood group to proceed" value="#{blood.bloodgrp}">
                <f:selectItem itemValue="#{blood.grpAp}" itemLabel="A+ve"/>
                <f:selectItem itemValue="#{blood.grpAn}" itemLabel="A-ve"/>
```

BloodDonation - Apache NetBeans IDE 12.6

```
<h:outputText value="Enter bloodgroup: />
            </h:outputLabel>
            <h:selectOneRadio id="grp" required="true" requiredMessage="please choose your blood group to proceed" value="#{blood.bloodgrp}">
                <f:selectItem itemValue="#{blood.grpAp}" itemLabel="A+ve"/>
                <f:selectItem itemValue="#{blood.grpAn}" itemLabel="A-ve"/>
                <f:selectItem itemValue="#{blood.grpBp}" itemLabel="B+ve"/>
                <f:selectItem itemValue="#{blood.grpBn}" itemLabel="B-ve"/>
                <f:selectItem itemValue="#{blood.grpAbp}" itemLabel="AB+ve"/>
                <f:selectItem itemValue="#{blood.grpAbn}" itemLabel="AB-ve"/>
                <f:selectItem itemValue="#{blood.grpOp}" itemLabel="O+ve"/>
                <f:selectItem itemValue="#{blood.grpOn}" itemLabel="O-ve"/>
            </h:selectOneRadio>
            <br/><br/>
            <h:commandButton id="cmdNewUser" value="Register" action="#{blood.addUser}" />
            <br/><br/>
            <br/><br/>
        </h:form>
        <h:form>
            <h:commandButton id="cmdBLogin" value="Back to Login" action="#{blood.ind}" />
            <br/><br/>
            <br/><br/>
            <h:outputLabel for="txtmsg">
                <h:outputText value="#{blood.msg1}" />
            </h:outputLabel>
        </h:form>
    </h:body>
</html>
```

## options.xhtml

```
<?xml version='1.0' encoding='UTF-8' ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://xmlns.jcp.org/jsf/html"
      xmlns:f="http://java.sun.com/jsf/core">
<h:head>
    <title>Options</title>
</h:head>
<h:body>

    <h1>
        Welcome
        <h:outputLabel for="txtName">
            <h:outputText id="name" value="#{blood.name}" />
        </h:outputLabel>
    </h1>

    <h:form>
        <h2>
            Choose any one option
        </h2>
        <br><br>
        <h:commandButton id="cmdDonate" value="DONATE"
                        action="#{blood.donate}" />
        <br><br><br><br>
        <h:commandButton id="cmdRecv" value="RECEIVE"
                        action="#{blood.recv}" />
        <br><br><br><br>
        <h:commandButton id="cmdMain" value="LOGOUT"
                        action="#{blood.ind}" />
    </h:form>
</h:body>
</html>
```

```
<?xml version='1.0' encoding='UTF-8'?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://xmlns.jcp.org/jsf/html"
      xmlns:f="http://java.sun.com/jsf/core">
<h:head>
    <title>Options</title>
</h:head>
<h:body>
    <h1>
        Welcome
        <h:outputLabel for="txtName">
            <h:outputText id="name" value="#{blood.name}" />
        </h:outputLabel>
    </h1>
    <h:form>
        <h2>
            Choose any one option
        </h2>
        <br><br>
        <h:commandButton id="cmdDonate" value="DONATE" action="#{blood.donate}" />
        <br><br><br>
        <h:commandButton id="cmdRecv" value="RECEIVE" action="#{blood.recv}" />
        <br><br><br><br>
        <h:commandButton id="cmdMain" value="LOGOUT" action="#{blood.ind}" />
    </h:form>
</h:body>
</html>
```

## donateBlood.xhtml

```
<?xml version='1.0' encoding='UTF-8'?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://xmlns.jcp.org/jsf/html"
      xmlns:f="http://java.sun.com/jsf/core">
<h:head>
    <title>Blood Bank</title>
</h:head>
<h:body>

    <h1>ABC Blood Bank</h1>

    <h:form>
        <h:outputLabel for="txtName" >
            <h:outputText value="Enter Number of Units:"/>
        </h:outputLabel>
        <h:inputText id="txtUnits" value="#{blood.units}" required="true"
 requiredMessage="No of units is required"/>
        <br><br><br><br><br>
```

```

        <h:commandButton id="cmdUnits" value="Enter"
action="#{blood.addUnits}" />
        <br></br>
        <br></br>
        <h:commandButton id="cmdBOpt" value="Back to Options"
action="#{blood.opt}" />
        <br></br>
        <br></br>
        <br></br>
        <h:outputLabel for="txtmsg">
            <h:outputText value="#{blood.msg2}" />
        </h:outputLabel>
    </h:form>
</h:body>
</html>

```

The screenshot shows the Apache NetBeans IDE interface with the title bar "BloodDonation - Apache NetBeans IDE 12.6". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for file operations like Open, Save, and Run. The status bar shows "226.7/1188MB" and two circular progress indicators. The code editor window displays the XML code for recvBlood.xhtml, which is identical to the code provided in the previous block.

## recvBlood.xhtml

```

<?xml version='1.0' encoding='UTF-8' ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

```

```

<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://xmlns.jcp.org/jsf/html"
      xmlns:f="http://java.sun.com/jsf/core">
<h:head>
    <title>Blood Bank</title>
</h:head>
<h:body>
    <h1>ABC Blood Bank</h1>
    <h:form>
        <h:outputLabel for="txtGrp" >
            <h:outputText value="Enter Blood Group you need:"/>
        </h:outputLabel>
        <h:selectOneRadio id="grp" required="true" requiredMessage="please
choose your blood group to proceed" value="#{blood.newbloodgrp}">
            <f:selectItem itemValue="#{blood.grpAp}" itemLabel="A+ve"/>
            <f:selectItem itemValue="#{blood.grpAn}" itemLabel="A-ve"/>
            <f:selectItem itemValue="#{blood.grpBp}" itemLabel="B+ve"/>
            <f:selectItem itemValue="#{blood.grpBn}" itemLabel="B-ve"/>
            <f:selectItem itemValue="#{blood.grpABp}" itemLabel="AB+ve"/>
            <f:selectItem itemValue="#{blood.grpABn}" itemLabel="AB-ve"/>
            <f:selectItem itemValue="#{blood.grpOp}" itemLabel="O+ve"/>
            <f:selectItem itemValue="#{blood.grpOn}" itemLabel="O-ve"/>
        </h:selectOneRadio>
        <br></br>
        <br></br>
        <h:outputLabel for="txtUnits" >
            <h:outputText value="Enter Number of Units you need:"/>
        </h:outputLabel>
        <h:inputText id="txtUnits" value="#{blood.newunits}" />
        <br></br>
        <br></br>
        <h:commandButton id="cmdrecvUnits" value="Get"
action="#{blood.bloodRecv}" />
        <h:outputLabel for="txtmsg">
            <h:outputText value="#{blood.msg3}" />
        </h:outputLabel>
        <br></br><br></br>
    </h:form>

```

```

<h:form>
    <h:commandButton id="cmdBOption" value="Back to options"
action="#{blood.opt}" />
    <br></br>
    <br></br>
    <br></br>
    <h:commandButton id="cmdUnits" value="Display Availability"
action="#{blood.bloodAvail}" />
    <br></br>
    <br></br>
    <br></br>
    <h:outputLabel for="txtmsg1">
        <h:outputText value="#{blood.grp1}" />
    </h:outputLabel>
    <br></br>
    <h:outputLabel for="txtmsg2">
        <h:outputText value="#{blood.grp2}" />
    </h:outputLabel>
    <br></br>
    <h:outputLabel for="txtmsg3">
        <h:outputText value="#{blood.grp3}" />
    </h:outputLabel>
    <br></br>
    <h:outputLabel for="txtmsg4">
        <h:outputText value="#{blood.grp4}" />
    </h:outputLabel>
    <br></br>
    <h:outputLabel for="txtmsg5">
        <h:outputText value="#{blood.grp5}" />
    </h:outputLabel>
    <br></br>
    <h:outputLabel for="txtmsg6">
        <h:outputText value="#{blood.grp6}" />
    </h:outputLabel>
    <br></br>
    <h:outputLabel for="txtmsg7">
        <h:outputText value="#{blood.grp7}" />
    </h:outputLabel>

```

```

<br><br>
    <h:outputLabel for="txtmsg8">
        <h:outputText value="#{blood.grp8}" />
    </h:outputLabel>

</h:form>
</h:body>
</html>

```

```

<?xml version='1.0' encoding='UTF-8' ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://xmlns.jcp.org/jsf/html"
      xmlns:f="http://java.sun.com/jsf/core">
    <h:head>
        <title>Blood Bank</title>
    </h:head>
    <h:body>

        <h1>ABC Blood Bank</h1>

        <h:form>
            <h:outputLabel for="txtGrp" >
                <h:outputText value="Enter Blood Group you need:"/>
            </h:outputLabel>
            <h:selectOneRadio id="grp" required="true" requiredMessage="please choose your blood group to proceed" value="#{blood.newbloodgrp}">
                <f:selectItem itemValue="#{blood.grpAp}" itemLabel="A+ve"/>
                <f:selectItem itemValue="#{blood.grpAn}" itemLabel="A-ve"/>
                <f:selectItem itemValue="#{blood.grpBp}" itemLabel="B+ve"/>
                <f:selectItem itemValue="#{blood.grpBn}" itemLabel="B-ve"/>
                <f:selectItem itemValue="#{blood.grpAbp}" itemLabel="AB+ve"/>
                <f:selectItem itemValue="#{blood.grpAbn}" itemLabel="AB-ve"/>
                <f:selectItem itemValue="#{blood.grpOp}" itemLabel="O+ve"/>
                <f:selectItem itemValue="#{blood.grpOn}" itemLabel="O-ve"/>
            </h:selectOneRadio>
            <br><br>
            <br><br>
        </h:form>
    </h:body>
</html>

```

BloodDonation - Apache NetBeans IDE 12.6

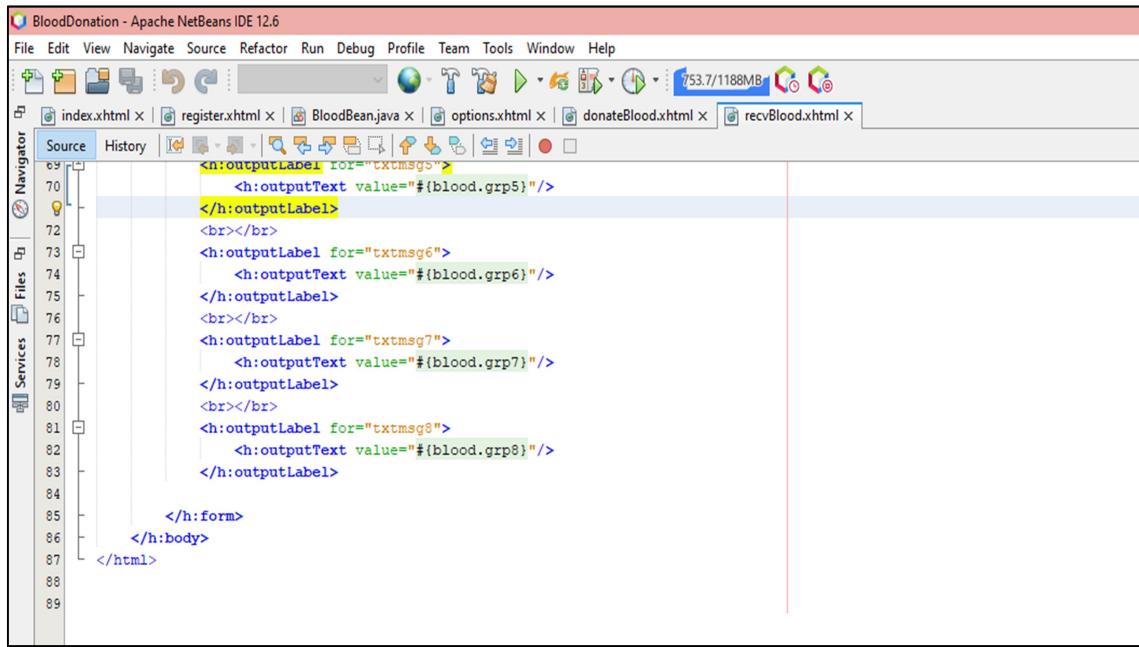
```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
index.xhtml | register.xhtml | BloodBean.java | options.xhtml | donateBlood.xhtml | recvBlood.xhtml | Search (Ctrl+F)
Source History Navigator Files Services
<h:outputText value="Enter Number of Units you need:"/>
</h:outputLabel>
<h:inputText id="txtUnits" value="#{blood.newunits}" />
<br><br>
<br><br>
<h:commandButton id="cmdrecvUnits" value="Get" action="#{blood.bloodRecv}" />

<h:outputLabel for="txtmsg">
| <h:outputText value="#{blood.msg3}" />
</h:outputLabel>
<br><br>
<br><br>
</h:form>

<h:form>
<h:commandButton id="cmdBOption" value="Back to options" action="#{blood.opt}" />
<br><br>
<br><br>
<br><br>
<h:commandButton id="cmdUnits" value="Display Availability" action="#{blood.bloodAvail}" />
<br><br>
<br><br>
<br><br>
<h:outputLabel for="txtmsg1">
| <h:outputText value="#{blood.grp1}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg2">
| <h:outputText value="#{blood.grp2}" />
</h:outputLabel>
<br><br>
```

BloodDonation - Apache NetBeans IDE 12.6

```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
index.xhtml | register.xhtml | BloodBean.java | options.xhtml | donateBlood.xhtml | recvBlood.xhtml | Search (Ctrl+F)
Source History Navigator Files Services
<h:outputText value="#{blood.grp1}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg2">
| <h:outputText value="#{blood.grp2}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg3">
| <h:outputText value="#{blood.grp3}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg4">
| <h:outputText value="#{blood.grp4}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg5">
| <h:outputText value="#{blood.grp5}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg6">
| <h:outputText value="#{blood.grp6}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg7">
| <h:outputText value="#{blood.grp7}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg8">
| <h:outputText value="#{blood.grp8}" />
</h:outputLabel>
```



```
<n:outputLabel for="txtmsg5">
    <h:outputText value="#{blood.grp5}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg6">
    <h:outputText value="#{blood.grp6}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg7">
    <h:outputText value="#{blood.grp7}" />
</h:outputLabel>
<br><br>
<h:outputLabel for="txtmsg8">
    <h:outputText value="#{blood.grp8}" />
</h:outputLabel>

</h:form>
</h:body>
</html>
```

## BloodBean.java

```
import javax.faces.bean.ManagedBean;
import javax.faces.bean.SessionScoped;
import java.sql.*;

@ManagedBean(name="blood")
@SessionScoped
public class BloodBean {
    private String name;
    private String msg1;
    private String newuser;
    private String grpAp,grpAn,grpBp,grpBn,grpABp,grpABn,grpOp,grpOn;
    private String bloodgrp;
    private int units,newunits;
    private String msg2,msg3,wmsg;

    public String getWmsg() {
        return wmsg;
    }
```

```
public void setWmsg(String wmsg) {
    this.wmsg = wmsg;
}
private String newbloodgrp,grp1,grp2,grp3,grp4,grp5,grp6,grp7,grp8;

public int getNewunits() {
    return newunits;
}

public void setNewunits(int newunits) {
    this.newunits = newunits;
}

public String getNewbloodgrp() {
    return newbloodgrp;
}

public void setNewbloodgrp(String newbloodgrp) {
    this.newbloodgrp = newbloodgrp;
}

public String getGrp1() {
    return grp1;
}

public void setGrp1(String grp1) {
    this.grp1 = grp1;
}

public String getGrp2() {
    return grp2;
}

public void setGrp2(String grp2) {
    this.grp2 = grp2;
}
```

```
public String getGrp3() {
    return grp3;
}

public void setGrp3(String grp3) {
    this.grp3 = grp3;
}

public String getGrp4() {
    return grp4;
}

public void setGrp4(String grp4) {
    this.grp4 = grp4;
}

public String getGrp5() {
    return grp5;
}

public void setGrp5(String grp5) {
    this.grp5 = grp5;
}

public String getGrp6() {
    return grp6;
}

public void setGrp6(String grp6) {
    this.grp6 = grp6;
}

public String getGrp7() {
    return grp7;
}

public void setGrp7(String grp7) {
    this.grp7 = grp7;
}
```

```
public String getGrp8() {
    return grp8;
}

public void setGrp8(String grp8) {
    this.grp8 = grp8;
}

public String getMsg2() {
    return msg2;
}

public void setMsg2(String msg2) {
    this.msg2 = msg2;
}

public String getMsg3() {
    return msg3;
}

public void setMsg3(String msg3) {
    this.msg3 = msg3;
}

public int getUnits() {
    return units;
}

public void setUnits(int units) {
    this.units = units;
}

public String getBloodgrp() {
    return bloodgrp;
}

public void setBloodgrp(String bloodgrp) {
    this.bloodgrp = bloodgrp;
}
```

```
public String getGrpAp() {
    return grpAp;
}

public void setGrpAp(String grpAp) {
    this.grpAp = grpAp;
}

public String getGrpAn() {
    return grpAn;
}

public void setGrpAn(String grpAn) {
    this.grpAn = grpAn;
}

public String getGrpBp() {
    return grpBp;
}

public void setGrpBp(String grpBp) {
    this.grpBp = grpBp;
}

public String getGrpBn() {
    return grpBn;
}

public void setGrpBn(String grpBn) {
    this.grpBn = grpBn;
}

public String getGrpABp() {
    return grpABp;
}

public void setGrpABp(String grpABp) {
    this.grpABp = grpABp;
}

public String getGrpABn() {
    return grpABn;
}
```

```
public void setGrpABn(String grpABn) {
    this.grpABn = grpABn;
}

public String getGrpOp() {
    return grpOp;
}

public void setGrpOp(String grpOp) {
    this.grpOp = grpOp;
}

public String getGrpOn() {
    return grpOn;
}

public void setGrpOn(String grpOn) {
    this.grpOn = grpOn;
}

public BloodBean() {
    setGrpAp("A+ve");
    setGrpAn("A-ve");
    setGrpBp("B+ve");
    setGrpBn("B-ve");
    setGrpABp("AB+ve");
    setGrpABn("AB-ve");
    setGrpOp("O+ve");
    setGrpOn("O-ve");
}

public String getName() {
    return name;
}

public void setName(String name) {
    this.name = name;
}
```

```

public String getMsg1() {
    return msg1;
}

public void setMsg1(String msg1) {
    this.msg1 = msg1;
}

public String getNewuser() {
    return newuser;
}

public void setNewuser(String newuser) {
    this.newuser = newuser;
}

public String opt()
{
    try
    {
        Class.forName("com.mysql.cj.jdbc.Driver");

        Connection
        con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","root","");
        Statement stmt=con.createStatement();
        ResultSet res;
        res=stmt.executeQuery("select username from donors");
        while(res.next())
        {
            if(getName().equals(res.getString(1)))
            {
                return "options";
            }
        }
        con.close();
    }
    catch(Exception e)
    {
        System.out.println(e);
    }
    return "register";
}

```

```

public String reg()
{
    return "register";
}
public String ind()
{
    return "index";
}
public void addUser()
{
    try
    {
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","roo
t","");
Statement stmt=con.createStatement();
ResultSet res;
res=stmt.executeQuery("select username from donors");

while(res.next())
{
    if(getNewuser().equals(res.getString(1)))
    {
        setMsg1("UserName exists");
        return;
    }
}
stmt.executeUpdate("insert into
values(""+getNewuser()+","+getBloodgrp()+", 0)");
setMsg1("Register Success");
con.close();
}
catch(Exception e)
{
    System.out.println(e);
}
}

```

```
public String donate()
{
    return "donateBlood";
}
public String recv()
{
    return "recvBlood";
}

public void addUnits()
{
    if(getUnits() == 0){
        setMsg2("No of Units is required to donate!");
        return; }

    try
    {

        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","root","");
        Statement stmt=con.createStatement();
        ResultSet res;
        res=stmt.executeQuery("select * from donors");
        String grp="";
        while(res.next())
        {
            if(getName().equals(res.getString(1)))
            {
                grp=res.getString(2);
                int temp=res.getInt(3);
                temp+=getUnits();
                stmt.executeUpdate("update donors set unit='"+temp+"' where
username='"+getName()+"'");
                break;
            }
        }
    }
}
```

```

res=stmt.executeQuery("select * from avail");
while(res.next())
{
    if(grp.equals(res.getString(1)))
    {
        int temp=res.getInt(2);
        temp+=getUnits();
        stmt.executeUpdate("update avail set unit='"+temp+"' where
bgroup='"+grp+"'");
        setMsg2("Blood Donated!");
        return;
    }
}
con.close();
}
catch(Exception e)
{
    System.out.println(e);
}
}

```

```

public void bloodAvail()
{
    try
    {
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","roo
t","");
        Statement stmt=con.createStatement();
        ResultSet res;
        res=stmt.executeQuery("select * from avail");
        int i=1;
        while(res.next())
        {
            if(i==1)
            {
                setGrp1(res.getString(1)+" - "+res.getInt(2));
            }
        }
    }
}

```

```
        else if(i==2)
        {
            setGrp2(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==3)
        {
            setGrp3(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==4)
        {
            setGrp4(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==5)
        {
            setGrp5(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==6)
        {
            setGrp6(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==7)
        {
            setGrp7(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==8)
        {
            setGrp8(res.getString(1)+" - "+res.getInt(2));
        }
        else
        {
            ;
        }

        i++;
    }

    con.close();
}
```

```

        catch(Exception e)
        {
            System.out.println(e);
        }
    }

    public void bloodRecv(){
        if(getNewunits() == 0){
            setMsg3("No of Units is required to receive!");
            return;
        }
        try{
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","roo
t","");
            Statement stmt=con.createStatement();
            ResultSet res;
            res=stmt.executeQuery("select * from avail");
            while(res.next()){
                if(getNewbloodgrp().equals(res.getString(1))){
                    int temp=res.getInt(2);
                    if(temp>=getNewunits()){
                        temp-=getNewunits();
                        stmt.executeUpdate("update avail set unit='"+temp+"' where
bgroup='"++getNewbloodgrp()+"'");
                        setMsg3("Blood Received!");
                        bloodAvail();
                        return ;
                    }
                }
            }
            setMsg3("Blood Cannot be Received!");
            con.close();
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
    }
}

```

BloodDonation - Apache NetBeans IDE 12.6

```
Source History | index.xhtml | register.xhtml | BloodBean.java | options.xhtml | donateBlood.xhtml | recvBlood.xhtml | Search (Ctrl+F)
```

```
1 import javax.faces.bean.ManagedBean;
2 import javax.faces.bean.SessionScoped;
3 import java.sql.*;
4
5 @ManagedBean (name="blood")
6 @SessionScoped
7 public class BloodBean {
8     private String name;
9     private String msg1;
10    private String newuser;
11    private String grpA,grpAn,grpB,grpBn,grpAB,grpABn,grpOp,grpOn;
12    private String bloodgrp;
13    private int units,newunits;
14    private String msg2,msg3,wmsg;
15
16    public String getWmsg() {
17        return wmsg;
18    }
19
20    public void setWmsg(String wmsg) {
21        this.wmsg = wmsg;
22    }
23    private String newbloodgrp,grp1,grp2,grp3,grp4,grp5,grp6,grp7,grp8;
24
25    public int getNewunits() {
26        return newunits;
27    }
28
29    public void setNewunits(int newunits) {
30        this.newunits = newunits;
31    }
32}
```

Output

463:1 | INS | Windows (CRLF)  
9:12 PM 1/17/2022

BloodDonation - Apache NetBeans IDE 12.6

```
Source History | index.xhtml | register.xhtml | BloodBean.java | options.xhtml | donateBlood.xhtml | recvBlood.xhtml | Search (Ctrl+F)
```

```
48
49     this.grp1 = grp1;
50
51     public String getGrp2() {
52         return grp2;
53     }
54
55     public void setGrp2(String grp2) {
56         this.grp2 = grp2;
57     }
58
59     public String getGrp3() {
60         return grp3;
61     }
62
63     public void setGrp3(String grp3) {
64         this.grp3 = grp3;
65     }
66
67     public String getGrp4() {
68         return grp4;
69     }
70
71     public void setGrp4(String grp4) {
72         this.grp4 = grp4;
73     }
74
75     public String getGrp5() {
76         return grp5;
77     }
78}
```

Output

463:1 | INS | Windows (CRLF)  
9:13 PM 1/17/2022

BloodDonation - Apache NetBeans IDE 12.6

```
Source History | 38897/1188MB 23°C 9:14 PM 1/17/2022
```

```
88     this.grp6 = grp6;
89 }
90
91     public String getGrp7() {
92         return grp7;
93     }
94
95     public void setGrp7(String grp7) {
96         this.grp7 = grp7;
97     }
98
99     public String getGrp8() {
100        return grp8;
101    }
102
103    public void setGrp8(String grp8) {
104        this.grp8 = grp8;
105    }
106
107    public String getMsg2() {
108        return msg2;
109    }
110
111    public void setMsg2(String msg2) {
112        this.msg2 = msg2;
113    }
114
115    public String getMsg3() {
116        return msg3;
117    }
118 }
```

Output

```
463:1 | INS | Windows (CRLF)
```

BloodDonation - Apache NetBeans IDE 12.6

```
Source History | 5537/1188MB 23°C 9:14 PM 1/17/2022
```

```
124     public int getUnits() {
125         return units;
126     }
127
128     public void setUnits(int units) {
129         this.units = units;
130     }
131
132
133     public String getBloodgrp() {
134         return bloodgrp;
135     }
136
137     public void setBloodgrp(String bloodgrp) {
138         this.bloodgrp = bloodgrp;
139     }
140
141
142     public String getGrpAp() {
143         return grpAp;
144     }
145
146     public void setGrpAp(String grpAp) {
147         this.grpAp = grpAp;
148     }
149
150     public String getGrpAn() {
151         return grpAn;
152     }
153 }
```

Output

```
463:1 | INS | Windows (CRLF)
```

BloodDonation - Apache NetBeans IDE 12.6

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

index.xhtml | register.xhtml | BloodBean.java | options.xhtml | donateBlood.xhtml | recvBlood.xhtml | 618M/1888MB

Source History Navigator Files Services Output

```
158     public String getGrpBp() {
159         return grpBp;
160     }
161
162     public void setGrpBp(String grpBp) {
163         this.grpBp = grpBp;
164     }
165
166     public String getGrpBn() {
167         return grpBn;
168     }
169
170     public void setGrpBn(String grpBn) {
171         this.grpBn = grpBn;
172     }
173
174     public String getGrpABp() {
175         return grpABp;
176     }
177
178     public void setGrpABp(String grpABp) {
179         this.grpABp = grpABp;
180     }
181
182     public String getGrpABn() {
183         return grpABn;
184     }
185
186     public void setGrpABn(String grpABn) {
187         this.grpABn = grpABn;
188     }
```

463:1 INS Windows (CRLF)

Output

Windows Links

23°C 9:14 PM 1/17/2022

BloodDonation - Apache NetBeans IDE 12.6

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+F)

index.xhtml | register.xhtml | BloodBean.java | options.xhtml | donateBlood.xhtml | recvBlood.xhtml | 945M/1888MB

Source History Navigator Files Services Output

```
219     return name;
220 }
221
222     public void setName(String name) {
223         this.name = name;
224     }
225
226     public String getMsg1() {
227         return msg1;
228     }
229
230     public void setMsg1(String msg1) {
231         this.msg1 = msg1;
232     }
233
234     public String getNewuser() {
235         return newuser;
236     }
237
238     public void setNewuser(String newuser) {
239         this.newuser = newuser;
240     }
241
242     public String opt()
243     {
244         try
245         {
246             Class.forName("com.mysql.cj.jdbc.Driver");
247             Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","root","");
248             Statement stmr=con.createStatement();
249             ResultSet res;
```

225:1 INS Windows (CRLF)

Output

Windows Links

23°C 9:14 PM 1/17/2022

BloodDonation - Apache NetBeans IDE 12.6

```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
index.html x register.html x BloodBean.java x options.html x donateBlood.html x recvBlood.xhtml x
Source History Navigator Services Files Output
242     public String opt()
243     {
244         try
245         {
246             Class.forName("com.mysql.cj.jdbc.Driver");
247             Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","root","");
248             Statement stmt=con.createStatement();
249             ResultSet res;
250             res=stmt.executeQuery("select username from donors");
251             while(res.next())
252             {
253                 if(getName().equals(res.getString(1)))
254                 {
255                     return "options";
256                 }
257             }
258             con.close();
259         }
260         catch(Exception e)
261         {
262             System.out.println(e);
263         }
264         return "register";
265     }
266
267     public String reg()
268     {
269         return "register";
270     }
271     public String ind()
272     {
273         BloodBean >
```

225:1 | INS | Windows (CRLF)

9:14 PM 23°C 1/17/2022

BloodDonation - Apache NetBeans IDE 12.6

```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
index.html x register.html x BloodBean.java x options.html x donateBlood.html x recvBlood.xhtml x
Source History Navigator Services Files Output
267     public String reg()
268     {
269         return "register";
270     }
271     public String ind()
272     {
273         return "index";
274     }
275     public void addUser()
276     {
277         try
278         {
279             Class.forName("com.mysql.cj.jdbc.Driver");
280             Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","root","");
281             Statement stmt=con.createStatement();
282             ResultSet res;
283             res=stmt.executeQuery("select username from donors");
284
285             while(res.next())
286             {
287                 if(getNewuser().equals(res.getString(1)))
288                 {
289                     setMsg1("User Name exists");
290                     return;
291                 }
292             }
293             stmt.executeUpdate("insert into donors values('"+getNewuser()+"','"+getBloodgrp()+"', 0)");
294             setMsg1("Register Success");
295             con.close();
296         }
297         catch(Exception e)
298     }
299     BloodBean >
```

225:1 | INS | Windows (CRLF)

9:14 PM 23°C 1/17/2022

BloodDonation - Apache NetBeans IDE 12.6

```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
index.html x register.xhtml x BloodBean.java x options.xhtml x donateBlood.xhtml x recvBlood.xhtml x
Source History Navigator Services Files Output
309     return "recvBlood";
310 }
311
312 public void addUnits()
{
313     if(getUnits() == 0){
314         setMsg2("No of Units is required to donate!");
315         return;
316     }
317     try
{
318
319         Class.forName("com.mysql.cj.jdbc.Driver");
320         Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","root","");
321         Statement stmt=con.createStatement();
322         ResultSet res;
323         res=stmt.executeQuery("select * from donors");
324         String grp="";
325         while(res.next())
{
326             if(getName().equals(res.getString(1)))
{
327                 grp=res.getString(2);
328                 int temp=res.getInt(3);
329                 temp+=getUnits();
330                 stmt.executeUpdate("update donors set unit='"+temp+"' where username='"+getName()+"'");
331                 break;
332             }
333         }
334     }
335 }
336
337
338 }
```

BloodBean

Output

225:1 | INS | Windows (CRLF)

9:14 PM 23°C 1/17/2022

BloodDonation - Apache NetBeans IDE 12.6

```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
index.html x register.xhtml x BloodBean.java x options.xhtml x donateBlood.xhtml x recvBlood.xhtml x
Source History Navigator Services Files Output
341     res=stmt.executeQuery("select * from avail");
342     while(res.next())
{
343         if(grp.equals(res.getString(1)))
{
344             int temp=res.getInt(2);
345             temp+=getUnits();
346             stmt.executeUpdate("update avail set unit='"+temp+"' where bgroup='"+grp+"'");
347             setMsg2("Blood Donated!");
348             return;
349         }
350     }
351
352
353
354
355
356         con.close();
357     } catch(Exception e)
{
358         System.out.println(e);
359     }
360 }
361
362
363
364 public void bloodAvail()
{
365
366
367
368
369
370 }
```

BloodBean

Output

225:1 | INS | Windows (CRLF)

9:14 PM 23°C 1/17/2022

BloodDonation - Apache NetBeans IDE 12.6

```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
873M/1224MB Search (Ctrl+F)
index.html x register.xhtml x BloodBean.java x options.xhtml x donateBlood.xhtml x recvBlood.xhtml x
Source History Navigator Services Files Output
367
368
369
370
371
372
373
374
375
376
try
{
    Class.forName("com.mysql.cj.jdbc.Driver");
    Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","root","");
    Statement stmt=con.createStatement();
    ResultSet res;
    res=stmt.executeQuery("select * from avail");
    int i=1;
    while(res.next())
    {
        if(i==1)
        {
            setGrp1(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==2)
        {
            setGrp2(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==3)
        {
            setGrp3(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==4)
        {
            setGrp4(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==5)
        {
            setGrp5(res.getString(1)+" - "+res.getInt(2));
        }
        else if(i==6)
        {
            setGrp6(res.getString(1)+" - "+res.getInt(2));
        }
    }
}
BloodBean >
225:1 INS Windows (CRLF)
Output
Windows 23°C 9:15 PM 1/17/2022
```

BloodDonation - Apache NetBeans IDE 12.6

```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
248M/1224MB Search (Ctrl+F)
index.html x register.xhtml x BloodBean.java x options.xhtml x donateBlood.xhtml x recvBlood.xhtml x
Source History Navigator Services Files Output
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
        System.out.println(e);
    }
}

public void bloodRecv()
{
    if(getNewunits() == 0){
        setMsg3("No of Units is required to receive!");
        return;
    }
    try
    {
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/blood","root","");
        Statement stmt=con.createStatement();
        ResultSet res;
        res=stmt.executeQuery("select * from avail");
        while(res.next())
        {
            if(getNewbloodgrp().equals(res.getString(1)))
            {
                int temp=res.getInt(2);
                if(temp>getNewunits())
                {
                    temp-=getNewunits();
                    stmt.executeUpdate("update avail set unit='"+temp+"' where bgroup='"+getNewbloodgrp()+"'");
                    setMsg3("Blood Received!");
                    bloodAvail();
                    return ;
                }
            }
        }
    }
}
BloodBean >
225:1 INS Windows (CRLF)
Output
Windows 23°C 9:18 PM 1/17/2022
```