Project Overview

The project entitled "Online Blood Donation" is done to make the manual process easier by making it a computerised system for registering and maintaining details of the donor or other people.

The project can be used to store useful data online , and to automate the storing and retrieval of data. It is very helpful in maintaining the record of the user like name , address , contact information, email address and other information.

The entered data can also be updated or deleted as per the requirement of the user. The user need to signin and update the information of their choice. All details are processed very easily.

Project Description

The project named "Online Blood Donation System" is done to make the manual process easier by making it a computerised system for maintaining all the records.

The user sign up in the directory and then log in their account all store information and all the data is stored in the database. This system is very simple and efficient.

Blood Donation System proposed to be an automate database management and transaction. This stores username, address, contact no., email address , resident addres. It also provide facility of advanced search. It provides data storing with graphical user interface.

The following are involved in this project: Donor Details, Blood Banks, Blood Group etc.

Objectives

The main objective of this project are summarised below:

- *To design and develop a user friendly efficient computerised Blood Donation System.*
- *An accurate system without data redundancy.*
- *Secured data storage for authority end.*
- *To provide a graphical user interface.*
- *To store large amount of data.*
- *To develop a flexible system which can update and delete the various entered records.*
- *Computerisation that can be helpful as means of saving time and money.*

Hardware Specification

Processor : Intel core i3

RAM : 4GB

CD Drive : DVD/RW

Hard Drive : 1 Tb SATA

Monitor : 15.6” SVGA

Software Specification

Operating System : Windows 8.1

Front End :Visual Studio 2015 -Asp.Net

Back End : SQL Server

ASP.NET is a web development platform, which provides a programming model, a comprehensive software infrastructure and various services required to build up robust web applications for PC, as well as mobile devices.

ASP.NET works on top of the HTTP protocol, and uses the HTTP commands and policies set browser-to-server bilateral communication and cooperation.

ASP.NET is a part of Microsoft .Net platform. ASP.NET applications are compiled codes, written using the extensible and reusable components or objects present in .Net framework. The ASP.NET application codes can be written in any of the following languages:

C#, Visual Basic.Net , Jscript , J#

System Analysis & Design

It is a process of collecting and interpreting facts, identifying the problems, and decomposition of a system into its components.

*System analysis is conducted for the purpose of studying a system or its parts in order to identify its objectives. It is a problem solving technique that improves the system and ensures that all the components of the system work efficiently to accomplish their purpose.*Analysis specifies **what the system should do**.

System Design is a process of planning a new business system or replacing an existing system by defining its components or modules to satisfy the specific requirements. Before planning, you need to understand the old system thoroughly and determine how computers can best be used in order to operate efficiently.

System Design focuses on ***how to accomplish the objective of the system****.*

System Analysis and Design (SAD) mainly focuses on – Systems, Processes, Technology.

The way that is followed while carrying on with the development application is as follows :

Defining a problem and Feasibility study.

Defining a problem *is one of the important activities of the project. The main objective is to define precisely the business problem to be solved and thereby determined the scope of the new system. This phase consist of two main tasks. The first task within this activity is to review the organisation needs that originally initiated the project. The second task is to identify at an abstract or general level, the expected capabilities of the new system, thus it helps us to define the goal to be achieved and the boundary of the system.*

Feasibility Study *: The system objectives outlined during the feasibility study serve as the basic from which the work of system design is initiated. Much of the activities involved at*

this stage is of technical nature requiring a certain degree of experience in designing system, sound knowledge of computer related technology and through understanding of computer knowledge. The following feasibility was undertaken for proposed system: Technical feasibility, Economic feasibility, Social feasibility.

Introduction to asp.net

ASP.NET is a web development platform, which provides a programming model, a comprehensive software infrastructure and various services required to build up robust web applications for PC, as well as mobile devices.

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ASP.NET is a part of Microsoft .Net platform. ASP.NET applications are compiled codes, written using the extensible and reusable components or objects present in .Net framework. These codes can use the entire hierarchy of classes in .Net framework.

The ASP.NET application codes can be written in any of the following languages:

C#, Visual Basic.Net , Jscript , J#

ASP.NET is used to produce interactive, data-driven web applications over the internet. It consists of a large number of controls such as text boxes, buttons, and labels for assembling, configuring, and manipulating code to create HTML pages.

ASP.NET Web Forms Model

ASP.NET web forms extend the event-driven model of interaction to the web applications. The browser submits a web form to the web server and the server returns a full markup page or HTML page in response.

All client side user activities are forwarded to the server for stateful processing. The server processes the output of the client actions and triggers the reactions.

Now, HTTP is a stateless protocol. ASP.NET framework helps in storing the information regarding the state of the application, which consists of:

- Page state
- Session state

The page state is the state of the client, i.e., the content of various input fields in the web form. The session state is the collective information obtained from various pages the user visited and worked with, i.e., the overall session state. To clear the concept, let us take an example of a shopping cart.

User adds items to a shopping cart. Items are selected from a page, say the items page, and the total collected items and price are shown on a different page, say the cart page. Only HTTP cannot keep track of all the information coming from various pages. ASP.NET session state and server side infrastructure keeps track of the information collected globally over a session.

The ASP.NET runtime carries the page state to and from the server across page requests while generating ASP.NET runtime codes, and incorporates the state of the server side components in hidden fields.

This way, the server becomes aware of the overall application state and operates in a two-tiered connected way.

The ASP.NET Component Model

The ASP.NET component model provides various building blocks of ASP.NET pages. Basically it is an object model, which describes:

- Server side counterparts of almost all HTML elements or tags, such as <form> and <input>.
- Server controls, which help in developing complex user-interface. For example, the Calendar control or the Gridview control.

ASP.NET is a technology, which works on the .Net framework that contains all web-related functionalities. The .Net framework

is made of an object-oriented hierarchy. An ASP.NET web application is made of pages. When a user requests an ASP.NET page, the IIS delegates the processing of the page to the ASP.NET runtime system.

The ASP.NET runtime transforms the .aspx page into an instance of a class, which inherits from the base class page of the .Net framework. Therefore, each ASP.NET page is an object and all its components i.e., the server-side controls are also objects.

ASP .NET : Data Source

A data source control interacts with the data-bound controls and hides the complex data binding processes. These are the tools that provide data to the data bound controls and support execution of operations like insertions, deletions, sorting, and updates.

Each data source control wraps a particular data provider-relational databases, XML documents, or custom classes and helps in:

- Managing connection
- Selecting data
- Managing presentation aspects like paging, caching, etc.
- Manipulating data

There are many data source controls available in ASP.NET for accessing data from SQL Server, from ODBC or OLE DB servers, from XML files, and from business objects.

Based on type of data, these controls could be divided into two categories:

- Hierarchical data source controls
- Table-based data source controls

The data source controls used for hierarchical data are:

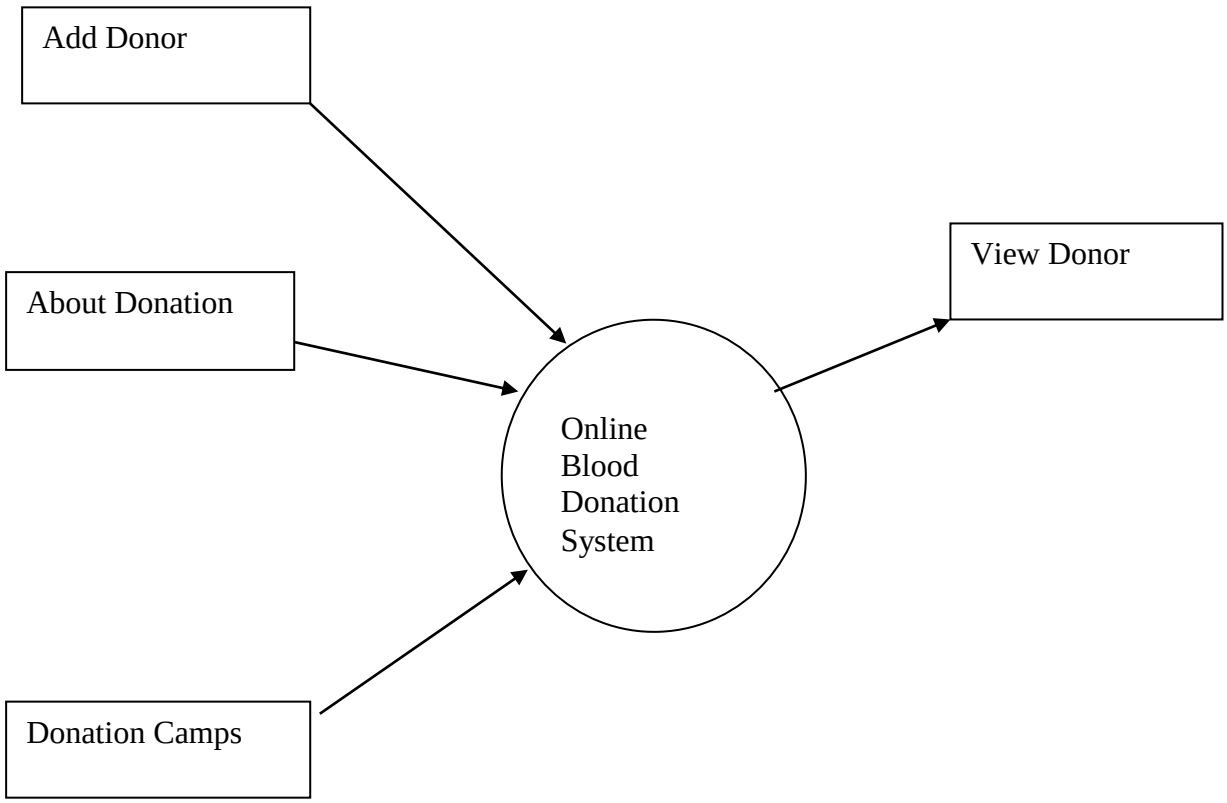
- **XMLDataSource** - It allows binding to XML files and strings with or without schema information.
- **SiteMapDataSource** - It allows binding to a provider that supplies site map information.

The data source controls used for tabular data are:

Data source controls	Description
SqlDataSource	It represents a connection to an ADO.NET data provider that returns SQL data, including data sources accessible via OLEDB and ODBC.
ObjectDataSource	It allows binding to a custom .Net business object that returns data.
LinqdataSource	It allows binding to the results of a Linq-to-SQL query (supported by ASP.NET 3.5 only).
AccessDataSource	It represents connection to a Microsoft Access database.

Data Flow Diagram

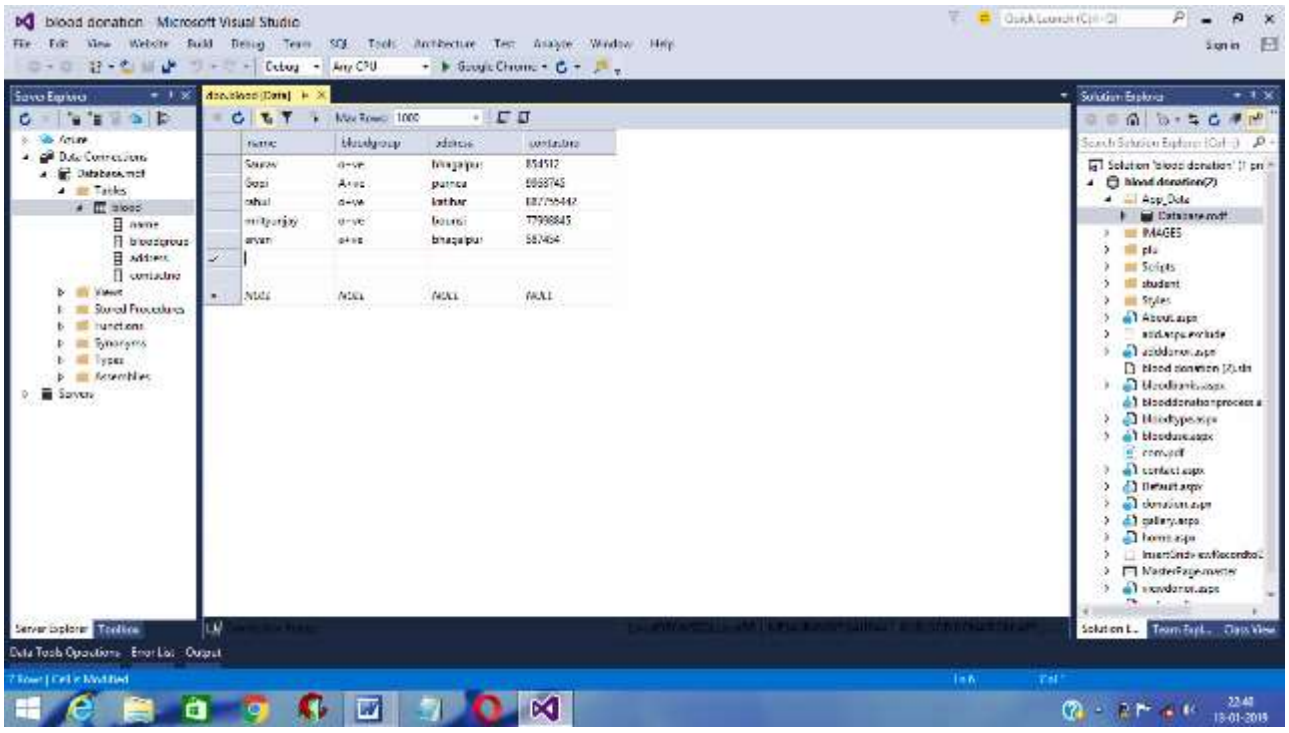
A data flow diagram is the best and easiest tool to represent the flow of the data in the project. It is otherwise known as bubble chart. It has the purpose of clarifying system requirements and identifying major transformation that will become programs in the system design. It is the major starting point in the design phase that functionally decomposes the requirement specification down to the lowest level of detail. It has four major symbol :
A square represents source or destination
A arrow represents the data flow
A circle represents the process
An open rectangle represents a data store.


Add Donor
About Donation
Donation Camps
Online
Blood
Donation
System
View Donor

Project Code & Screen Layouts

Database Design :

Database name - Database
Table used - Name, BloodGroup, Address, Contact Number



Home Page(.aspx)

```
<%@ Page Title="" Language="C#"
MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="home.aspx.cs"
Inherits="home" %>
<asp:Content ID="Content1"
ContentPlaceHolderID="HeadContent" Runat="Server">
</asp:Content>
<asp:Content ID="Content2"
ContentPlaceHolderID="MainContent" Runat="Server">
<div style="height: 387px; width: 845px">
<form id="form">
<div align="right"
            style="width: 733px; margin-left: 2px; height:
28px;">
                <asp:LinkButton ID="LinkButton1" runat="server"
onclick="LinkButton1_Click"
                    Font-Bold="True" ForeColor="#003366"
Height="20px"></asp:LinkButton>
                  
                <asp:LinkButton ID="LinkButton2" runat="server"
onclick="LinkButton2_Click"
                    Font-Bold="True" ForeColor="#003366"
Height="20px"></asp:LinkButton>
                  
                <asp:LinkButton ID="LinkButton3" runat="server"
onclick="LinkButton3_Click"
                    Font-Bold="True" ForeColor="#003366"
Height="20px"></asp:LinkButton>
   </div>
```


<asp:Image ID="Image1" runat="server" Height="342px" ImageUrl="~/IMAGES/93.jpg" Width="233px" style="margin-top: 2px" />

<asp:Label ID="Label1" runat="server" Font-Bold="True" ForeColor="#CC6600" Text="Blood Donation Process" Width="400px" Font-Size="Large"></asp:Label>

Preparation

the day before, focus on drinking plenty of water prior to your donation. Eat a hearty meal the night before your donation and get plenty of rest. Eat a well-balanced meal one to two hours prior to donation and remember to drink water throughout the day limit caffeine intake. If you are donating
platelets, do not take aspirin or products containing aspirin for at least 48 hours prior to donation. Please consult your physician prior to stopping any medications. For a list of medications acceptable for donation.

Donations and Iron Deficiency

is important for making red blood cells and transporting oxygen. Loss of red blood cells through blood donation may deplete the body of iron over time, and frequent blood donors may become low on iron before becoming anemic. Young women are particularly at risk of low iron due to blood
loss during their menstrual cycles. Diet alone may not be enough to replace iron,
especially if you have gastrointestinal issues or do not eat red meat. If you think you may be at risk of low iron,
you may consider calling your physician or taking an oral iron supplement. Do not take iron without consulting your doctor if you have
any family history of too much iron in the body.

</form>

</asp:Content>

Master Page(.master)

```
<%@ Master Language="C#" AutoEventWireup="true"
CodeFile="MasterPage.master.cs" Inherits="MasterPage" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0
Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-
transitional.dtd">

<script src="student/js/validation.js"
type="text/javascript"></script>
<link href="plu/Calendar/calendar/css/smoothness/jquery-ui-
1.7.1.custom.css" rel="stylesheet" type="text/css" />
<script src="plu/Calendar/calendar/js/jquery-1.3.2.min.js"
type="text/javascript"></script>
<script src="plu/Calendar/calendar/js/jquery-ui-
1.7.1.custom.min.js" type="text/javascript"></script>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>BloodDonationCamp</title>
    <link href="Styles/Site.css" rel="stylesheet" type="text/css"
/>
    <asp:ContentPlaceHolder id="HeadContent" runat="server">
                </asp:ContentPlaceHolder>
        <style type="text/css">
        #Form1
        {
            height: 758px;
            width: 1109px;
        }
        .style1
        {
```

```
  width: 29px;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
    <div class="page">
        <div class="header"
            style="background-color: #FFFFFF; top: 0px; left: 2px;
height: 712px;">
            <div class="title" style="width:30px";>
                <h1 style="background-color: #CC0000; width:
1087px; height: 101px;">
                    <asp:Image ID="Image1" runat="server"
ImageUrl="~/IMAGES/6.jpeg"
                        style="z-index: 1; left: 4px; top: 1px; position:
absolute; width: 1103px; height: 100px; margin-top: 0px;" />
                </h1>
                <h1 align="center"
                    style="background-color: #CC0000; width: 1087px;
height: 32px;">

        &nbs
p;        &n
bsp;        
        &nbs
p;        &n
bsp;        
       
                    Blood donation PROJECT</h1>
            </div>
            <div class="clear hideSkiplink"
                style="background-color: #CC0000; height: 31px;">
```

```
<asp:Menu ID="NavigationMenu" runat="server"
CssClass="menu"
                EnableViewState="false"
IncludeStyleBlock="false" Orientation="Horizontal"
                BackColor="#00CCFF" BorderStyle="Solid" Font-
Bold="True" ForeColor="White">
                <Items>
                    <asp:MenuItem Text="Blood Donate"
Value="Blood Donate">
                        <asp:MenuItem NavigateUrl="~/home.aspx"
Text="Blood donation process"
                            Value="Blood donation
process"></asp:MenuItem>
                    </asp:MenuItem>
                    <asp:MenuItem NavigateUrl="~/About.aspx"
Text="About">
                    </asp:MenuItem>
                    <asp:MenuItem Text="Blood Facts"
Value="Blood Facts">
                        <asp:MenuItem
NavigateUrl="~/bloodtype.aspx" Text="Blood Types"
                            Value="Blood Types">
                        </asp:MenuItem>
                        <asp:MenuItem
NavigateUrl="~/blooduse.aspx" Text="Blood use"
Value="Blood use">
                        </asp:MenuItem>
                        <asp:MenuItem
NavigateUrl="~/donation.aspx" Text="Type of Donation"
                            Value="Type of
Donation"></asp:MenuItem>
                    </asp:MenuItem>
```

```
                    <asp:MenuItem
NavigateUrl="~/bloodbanks.aspx" Text="Blood Bank"
                        Value="New Item"></asp:MenuItem>

                    <asp:MenuItem Text="Contact Us"
Value="Contact Us" NavigateUrl="~/contact.aspx"
></asp:MenuItem>
                </Items>
            </asp:Menu>
        </div>
        <div>
             </div>
        <div style="width: 188px; float: left;">
        <table cellpadding="1" cellspacing="1"
    style="border: thick double #000000; width: 154px; color:
#FFFFFF; background-color: #003366; font-weight: bold;"
    border="1">
    <tr>
        <td class="style1">
             </td>
    </tr>
    <tr>
        <td class="style1">
            <asp:HyperLink ID="HyperLink2" runat="server"
Width="168px"
                Font-Underline="False" Font-Bold="True"
ForeColor="White"
                Font-Names="Mangal" NavigateUrl="~/gallery.aspx"
BackColor="#CC0000">    Gallery</asp:HyperLink>
            <asp:HyperLink ID="HyperLink1" runat="server"
Width="168px"
                Font-Underline="False" Font-Bold="True"
```

```
ForeColor="White" Font-Names="Mangal"
NavigateUrl="~/adddonor.aspx" BackColor="#CC0000">
AddDonor</asp:HyperLink>
          <asp:HyperLink ID="HyperLink3" runat="server"
Width="168px"
              Font-Underline="False" Font-Bold="True"
ForeColor="White"
              Font-Names="Mangal"
NavigateUrl="~/viewdonor.aspx" BackColor="#CC0000">
ViewDonor</asp:HyperLink>
       </td>
    </tr>
    </table>
          </div>
          <div class="main" style="float: right">
          <asp:ContentPlaceHolder ID="MainContent"
runat="server"/>
       </div>
          </div>
    </div>
    <div class="footer">
       Copyright &copy; Krishna_Aryan_Akash_Ashish_Rahul
    </div>
    </form>
</body>
</html>
```

Add Donor(.aspx)

```
<%@ Page Language="C#" AutoEventWireup="true"
CodeFile="adddonor.aspx.cs" Inherits="adddonor" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
    <style type="text/css">
        .auto-style1 {
            font-size: x-large;
            font-weight: bold;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
    <div style="height: 66px">
    <table style="height: 241px; width: 395px; z-index: 1; left:
420px; top: 135px; position: absolute">
       <tr>
            <td>Name</td>
            <td><asp:TextBox ID="TextBox1"
runat="server"></asp:TextBox></td>
        </tr>
         <tr>
            <td>Blood Group</td>
                <td><asp:TextBox ID="TextBox2"
runat="server"></asp:TextBox></td>
        </tr>
         <tr>
            <td>Address</td>
```

```
            <td><asp:TextBox ID="TextBox3"
runat="server"></asp:TextBox></td>
        </tr>
         <tr>
            <td>Contact No</td>
            <td><asp:TextBox ID="TextBox4"
runat="server"></asp:TextBox></td>
        </tr>
        <tr>
            <td colspan="2" align="center">
                <asp:Button ID="Button1" runat="server"
Text="Button" OnClick="Button1_Click" />
            </td>
        </tr>
        </table>
        &
        <br />
nbsp;     <span class="auto-
style1">ADD DONORS</span></div>
    </form>
</body>
</html>
```

Add Donor(.aspx.cs)

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Data.SqlClient;

public partial class adddonor : System.Web.UI.Page
{
   SqlConnection con = new SqlConnection(@"Data Source =
(LocalDB)\MSSQLLocalDB;AttachDbFilename=|DataDirectory
|\Database.mdf;Integrated Security = True");
   protected void Button1_Click(object sender, EventArgs e)
   {
      con.Open();
      SqlCommand cmd = con.CreateCommand();
      cmd.CommandType = CommandType.Text;
      cmd.CommandText = "insert into blood
values('"+TextBox1.Text+"','"+TextBox2.Text+"','"+TextBox3.
Text+"','"+TextBox4.Text+"')";
      cmd.ExecuteNonQuery();
      Response.Write("<script>alert('record inserted
successfully');</script>");
      con.Close();
   }
}
```

About(.aspx)

```
<%@ Page Title="" Language="C#"
MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="About.aspx.cs"
Inherits="About" %>

<asp:Content ID="Content1"
ContentPlaceHolderID="HeadContent" Runat="Server">
</asp:Content>
<asp:Content ID="Content2"
ContentPlaceHolderID="MainContent" Runat="Server">
 <div align="center"
        style="color: #FFFFFF; font-weight: bold; font-size: xx-
large; background-color: #CC0000">
      Six Things You Might Not Know About Blood Donation:
</div>
<div style="color: #003366">
<br />
Have you ever thought about donating blood but decided not to
for some reason or another? You’re not alone! Thirty-seven
percent of the population in our area is eligible to give blood,
but less than four percent of those eligible actually give.

There is always a need for blood. And the process is always life-
prolonging, life-enhancing, or life-saving. Here are a few more
things you might not know about the blood donation process and
the importance of being a frequent donor.




<br /><br />
```

1. Blood cannot be manufactured.
There is no substitute for human blood. Patients requiring a blood transfusion rely solely on the kindness of volunteer donors to provide them with this life-saving treatment.

2. There are not warehouses filled with unused blood.
It is a common misconception that there is plenty of blood to go around. Because it is living tissue, blood has a limited shelf life. Red blood cells must be used within 42 days following donation, platelets only have a five-day shelf life, and plasma can be frozen and stored for up to one year. To maintain a safe and sufficient blood supply, Carter BloodCare relies on donors giving regularly for patients in the community.

3. Giving with your community blood center is the best way to support the blood needs of local patients.
National blood collection organizations can collect locally to support hospitals in another state, but giving with an independent community blood center like Carter BloodCare means the first priority is to help local patients – your friends, colleagues, and neighbors. Blood can be sent elsewhere if local patient needs are met or there is a rare blood match required outside the area.

4. You cannot get an infectious disease by donating blood.
Each time the phlebotomist collects blood, he/she uses a brand new supply kit that includes a single-use, sterile needle. Our phlebotomists are also trained in procedures that are unique to blood banking to result in a safe and positive experience for each donor.

5. There is a need for ALL blood types.

Although blood centers often run short of type O-, all blood types are essential. As the universal donor, O- is most often used in emergencies and when the patient's blood type is unknown. However, the blood in greatest demand is the type required by a patient when the order is placed. In other words, we want to store all types to help a variety of patients.

6. Summer and winter are always tough months for the blood industry.
High school blood drives contribute more than 20 percent to our annual blood collections. However, when school is not in session, we often struggle to have enough donors come through the doors. With the lack of school drives combined with the winter holidays and summer festivities, many blood centers run low of all blood types. July, August, December, and January are the toughest months for us to keep blood on the shelves. If you are contemplating donating blood, consider donating during our times of urgent need. And it's also a good time to host a blood drive.

</asp:Content>

BloodType(.aspx)

```
<%@ Page Title="" Language="C#"
MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="bloodtype.aspx.cs"
Inherits="bloodtype" %>
<asp:Content ID="Content1"
ContentPlaceHolderID="HeadContent" Runat="Server">
</asp:Content>
<asp:Content ID="Content2"
ContentPlaceHolderID="MainContent" Runat="Server">
    <div align="center"
          style="color: #FFFFFF; font-weight: bold; font-size: xx-
large; background-color: #CC0000">
        About Blood Types
    </div>
```

If a doctor talks about your blood type, usually he or she is referring to two things: your type in the ABO system and Rhesus (Rh) factor.

Human blood type is determined by antigens on the red blood cells. An antigen is a structure on the cell surface that causes a human immune response reacts to if the structure is foreign to the person's body. As a result, blood type match is of critical importance. The donor's blood type is identified at the Blood Centre, and the patient's blood type is determined before transfusion.

The ABO system

The most important blood group system is ABO, in which your blood is classified as A, B, O or AB. This is determined by two antigens on the red blood cells:

```
<br />
```

 A — red blood cells have only the A antigen
 B — red blood cells have only the B antigen
 AB — red blood cells have the A and B antigens
 O — neither A nor B antigen

If a person has A, B or O blood type, their plasma contains antibodies that destroy the antigens that the person doesn't have. For example: If you have blood type A, it's imperative that you don't receive a B type transfusion, as you have antibodies that will destroy B antigens. If you have blood type O, you have antibodies that will fight the A and B antigens.

If a person has blood type AB, they don't have such antibodies, and they can accept transfusions from all other blood types. Thus AB blood type people can be termed universal patients.

But O Rh negative donors can be called universal donors, as red blood cells from such donors can be used for transfusions for all patients.
The Rh system

A person's Rh group can be positive (+) or negative (-).This depends on the existence of antigen RhD on the red blood cells. If the RhD antigen is present, a person is Rh positive and if RhD is not present, the person is Rh negative.
If a person is Rh negative, they may develop antibodies on exposure to Rh positive blood (such as during transfusions or pregnancy). These antibodies may cause pregnancy complications for Rh negative women giving birth to an Rh positive child.
In addition, about 30 other blood group systems have been identified besides the ABO and Rh blood group systems. Of these, the clinically most significant are Kell, Kidd and Duffy systems. Donors are also tested for Kell blood group.

How is the blood type identified?
The person’s blood is combined with a reagent with antibodies.

For instance, three drops of a donor’s blood are placed on a slide or dish. Anti-A reagent is added to the first drop, anti-B reagent to the second one and anti-D – RhD reagent – to the third one. If agglutination is noted in the first drop, that shows that the person has A antigen. If the same thing doesn’t happen in the second drop, the person has no B antigen; and if agglutination is seen in the third drop, the person is Rh positive. We can say based on that example that the donor is A positive.

Ensuring a match between donor and patient is extremely important; otherwise a patient may have a dangerous reaction to the transfusion.
Blood types heredity and frequency in the Estonian population

People inherit traits equally from their mother and father. So inherited genes are always in two parts: one part mother, one part father .

When we examine blood type heredity, we should keep in mind that:
there are two copies of most of our genes
 we pass on only one of the copies to our children (randomly)
 genes come in different versions (alleles)
</asp:Content>

BloodUse(.aspx)

<%@ Page Title="" Language="C#"
MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="blooduse.aspx.cs"
Inherits="blooduse" %>

<asp:Content ID="Content1"
ContentPlaceHolderID="HeadContent" Runat="Server">
</asp:Content>
<asp:Content ID="Content2"
ContentPlaceHolderID="MainContent" Runat="Server">

Processing
After you give blood, we begin testing and processing your blood so it can be used to give life. For each donation, blood samples are tested to make sure it can be transfused to patients safely.
Processing begins by separating the blood using a centrifuge. The centrifuge spins the blood, separating the components by density into three parts: red blood cells, plasma, and platelets. Each component is collected into a separate storage bag and stored in our monitored storage devices.
Transfusion
Transfusion is the process by which a doctor or medical professional prescribes blood products for a patient using blood donated by someone like you. On average, one in every seven hospital patients is in need of a life-saving blood transfusion. Blood transfusions are commonly used for patients undergoing organ transplants, bone marrow transplants, heart surgery, burn treatments, or those who have been in an automobile accident. Cancer patients are one of the most common recipients of blood products.

Research
Carter BloodCare works with local and regional academic institutions and select commercial entities and vendors in developing new services and products related to blood transfusion, cellular therapy and supportive services. Personal information will never be shared.
ABOUT US

With origins in the 1950s, Carter BloodCare is one of Texas' largest blood centers, providing 300,000 units of life-saving blood and blood components to patients in North, Central, and East Texas annually. We save lives by making transfusion possible.
NEWSLETTER

Stay connected with the latest information from Carter BloodCare in your local community.

</asp:Content>

BloodUse(.aspx)

<%@ Page Title="" Language="C#"
MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="blooduse.aspx.cs"
Inherits="blooduse" %>

<asp:Content ID="Content1"
ContentPlaceHolderID="HeadContent" Runat="Server">
</asp:Content>
<asp:Content ID="Content2"
ContentPlaceHolderID="MainContent" Runat="Server">

Processing

After you give blood, we begin testing and processing your blood so it can be used to give life. For each donation, blood samples are tested to make sure it can be transfused to patients safely.
Processing begins by separating the blood using a centrifuge. The centrifuge spins the blood, separating the components by density into three parts: red blood cells, plasma, and platelets. Each component is collected into a separate storage bag and stored in our monitored storage devices.
Transfusion
Transfusion is the process by which a doctor or medical professional prescribes blood products for a patient using blood donated by someone like you. On average, one in every seven hospital patients is in need of a life-saving blood transfusion. Blood transfusions are commonly used for patients undergoing organ transplants, bone marrow transplants, heart surgery, burn treatments, or those who have been in an automobile accident.

Cancer patients are one of the most common recipients of blood products.
Research
Carter BloodCare works with local and regional academic institutions and select commercial entities and vendors in developing new services and products related to blood transfusion, cellular therapy and supportive services. Personal information will never be shared.
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</asp:Content>

View Donor(.aspx)

```
<%@ Page Language="C#" AutoEventWireup="true"
CodeFile="viewdonor.aspx.cs" Inherits="viewdonor" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
    <style type="text/css">
        .auto-style1 {
            color: #FF9933;
            font-family: "Lucida Bright";
            font-size: large;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
    <div>
    <center>
        <asp:GridView ID="GridView1" runat="server" style="z-
index: 1; left: 543px; top: 199px; position: absolute; height:
133px; width: 187px">
        </asp:GridView>
        <span class="auto-style1"><strong>LIST OF
DONORS</strong></span></center>
    </div>
    </form>
</body>
</html>
```

View Donor(.aspx.cs)

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Data.SqlClient;
public partial class viewdonor : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        show_data();
    }
    private void show_data()
    {
        DataTable dt = new DataTable();
        SqlConnection con = new SqlConnection(@"Data
Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=|Data
Directory|\Database.mdf;Integrated Security=True");
        SqlCommand cmd = new SqlCommand("select * from
blood", con);
        con.Open();
        SqlDataReader dr = cmd.ExecuteReader();
        dt.Load(dr);
        GridView1.DataSource = dt;
        GridView1.DataBind();
        con.Close();
    }
}
```

Testing & Future Work

Software testing is the process of evaluation a software item to detect differences between given input and expected output. Also to access the feature of a software item. Testing accesses the quality of the product. Software testing is a process that should be done during the development stage. In other words software testing is a verification and validation process.

Verification is the process to make sure the product satisfies the conditions inmposed at the end of the development phase. In other words , to make sure the product is built as per customer requirement.

Online Blood Donation System was tested using the following two techniques of application testing:

Unit testing:

- *In the line of strategy the entire individual function and modules were put to test independently.*
- *By following this strategy all the errors in coding were identified and corrected.*

- *It was seen that the pages opens properly based on related menu based commands.*
- *It was tested whether all relevant menus , buttons , icons and other controls are displayed properly.*

The main error that occurred during this project was connecting picture with database and retrieving from it.

Future Work

The project has been developed in a very short period of time and all efforts have been taken so that this project is very efficient in its execution.
There is still some scope of improvement in our project. The following list of enhancement that can be added incorporate into this project.
Database management can be updated which helps the administrator.
Scope could be changed.
Additional information could be added.
Barcode generation option can be given.
User picture could be updated.