PROJECT-I REPORT

ON

BLOOD DONATION MANAGEMENT SYSTEM

Submitted In Partial Fulfillment of the Requirements for
the Degree of

Bachelor of Technology
In
INFORMATION TECHNOLOGY

Submitted By:

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BATCH: 2021-2025

Under the Guidance of:
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To

Department of Information Technology

Seth Jai Parkash Mukand Lal Institute of Engineering and Technology,

Radaur – 135133 (Yamuna Nagar)

Affiliated to Kurukshetra University, Kurukshetra

Session: 2023-24

DECLARATION

I hereby certify that the work which is being presented in the Project Report entitled, **"BLOOD DONATION MANAGEMNET SYSTEM",** by we **Yogesh Kumar (1221661)**, **Sumit Goswami** (1221655) in partial fulfillment of the requirements for the award of degree of **Bachelor of Technology in Information Technology** submitted in the **Department of Information Technology at JMIT Radaur (Affiliated to Kurukshetra University Kurukshetra, Haryana (India))** is an authentic record of my work carried out under the supervision of **Ms. Rakhi Sharma** The matter presented in the report has not been submitted in any other University/Institute for the award of any degree.

Yogesh Kumar
Sumit Goswami

This is to certify that the above statement made by the candidate is correct to the best of our knowledge.

Ms. Rakhi Sharma
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ACKNOWLEDGMENT

The writing of this project report has been assisted by the generous help of many people. We feel that we were very fortunate to receive assistance from them. We wish to express our sincere appreciation to them.

First and foremost, we are indebted to our principal supervisor, Ms. Rakhi Sharma (Asst. Professor, Department of Information Technology) of JMIT Radaur, who has been very supportive at every stage of our project completion. We wish to express our most gratitude to her for the invaluable advice and patience in reading, correcting and commenting on the drafts of this report and, more importantly, for her generosity which we have received throughout our project completion.

We would like to acknowledge and extended our heartfelt gratitude to Ms. Rakhi Sharma who helped and encouraged us throughout this journey.

I wish to express my thanks to all staff members of JMIT Radaur, who also helped me in conducting this study.

Finally, I am particularly indebted to my dearest parents as without their generous assistance and love; this project could never have been completed.

Yogesh Sharma (1221661)

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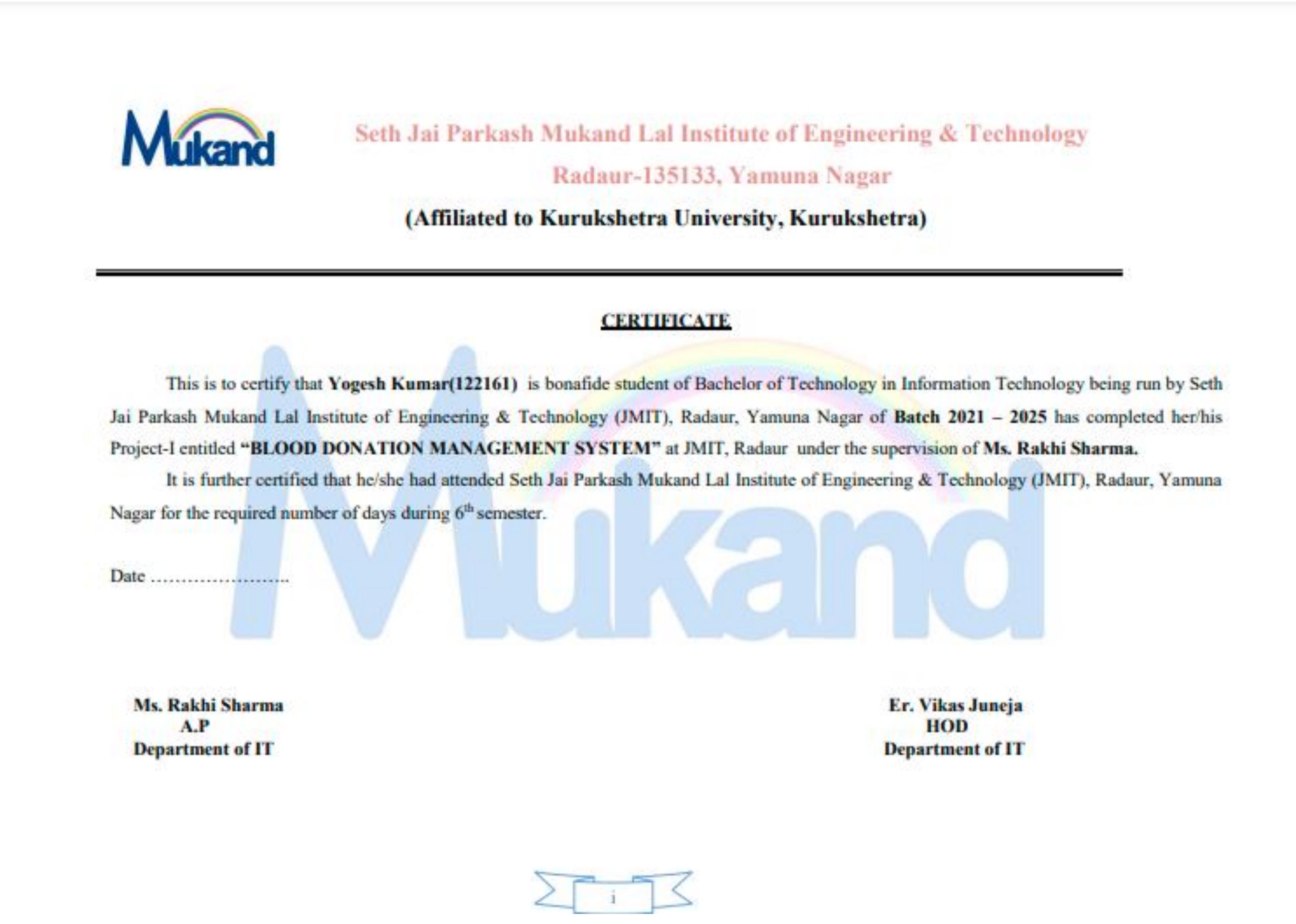

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CERTIFICATE

This is to certify that **Yogesh Kumar(122161)** is bonafide student of Bachelor of Technology in Information Technology being run by Seth Jai Parkash Mukand Lal Institute of Engineering & Technology (JMIT), Radaur, Yamuna Nagar of **Batch 2021 – 2025** has completed her/his Project-I entitled **"BLOOD DONATION MANAGEMENT SYSTEM"** at JMIT, Radaur under the supervision of **Ms. Rakhi Sharma.**

It is further certified that he/she had attended Seth Jai Parkash Mukand Lal Institute of Engineering & Technology (JMIT), Radaur, Yamuna Nagar for the required number of days during 6th semester.

Date ……………………

Ms. Rakhi Sharma **A.P** **Department of IT**	**Er. Vikas Juneja** **HOD** **Department of IT**

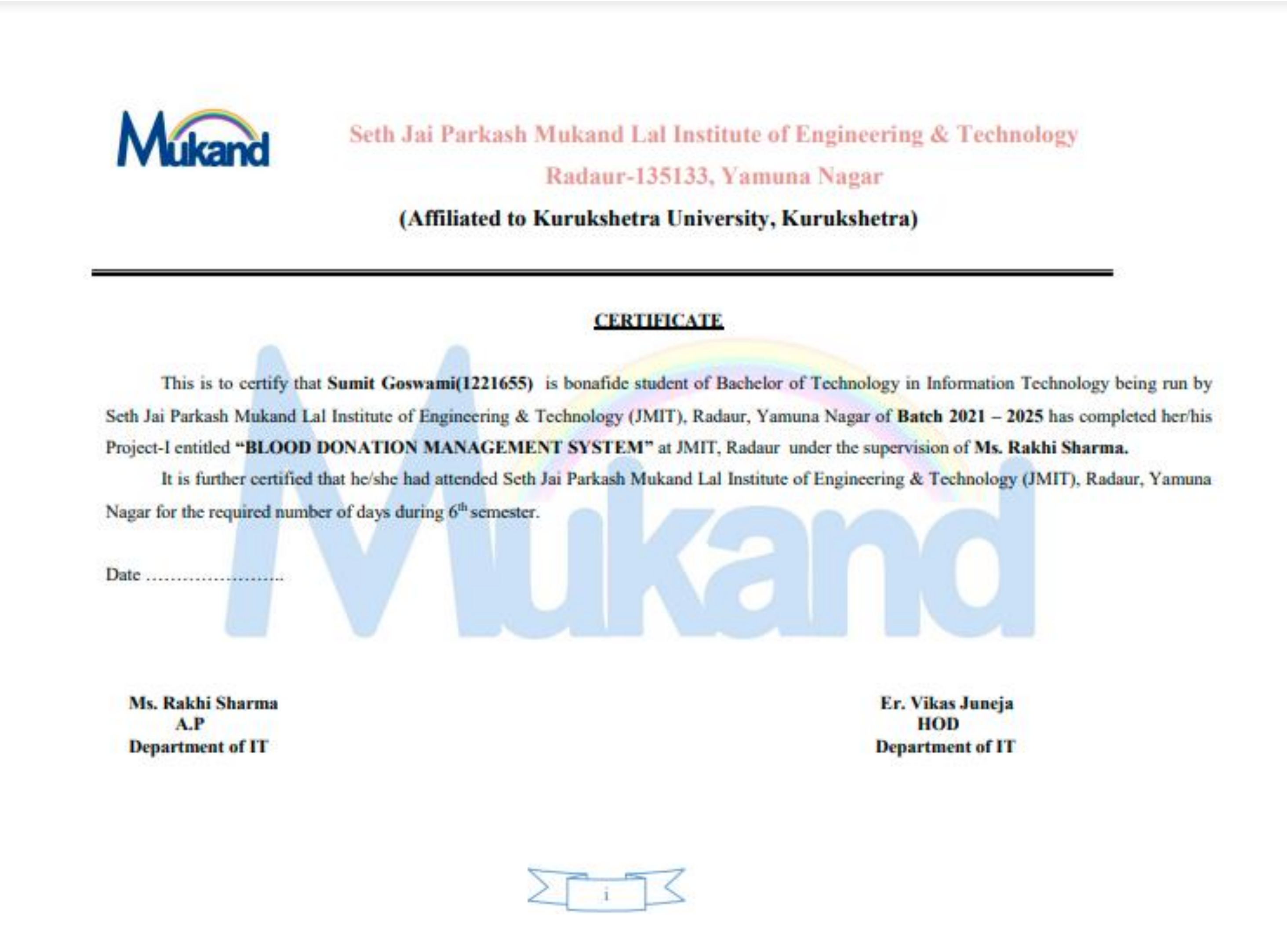

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TABLE OF CONTENT

Chapter 1 Html

Chapter 2 CSS

Chapter 3 JavaScript

LIST OF FIGURES

CHAPTER 1

1.1 What is HTML?

HTML is an acronym which stands for Hyper Text Markup Language which is used for creating web pages and web applications. Let's see what is meant by Hypertext Markup Language, and Web page.

Hyper Text: Hyper Text simply means "Text within Text." A text has a link within it, is a hypertext. Whenever you click on a link which brings you to a new webpage, you have clicked on a hypertext. Hyper Text is a way to link two or more web pages (HTML documents) with each other.

Markup language: A markup language is a computer language that is used to apply layout and formatting conventions to a text document. Markup language makes text more interactive and dynamic. It can turn text into images, tables, links, etc.

Web Page: A web page is a document which is commonly written in HTML and translated by a web browser. A web page can be identified by entering an URL. A Web page can be of the static or dynamic type. With the help of HTML only, we can create static web pages. Hence, HTML is a markup language which is used for creating attractive web pages with the help of styling, and which looks in a nice format on a web browser. An HTML document is made of many HTML tags and each HTML tag contains different content.

HTML text Editors

- An HTML file is a text file, so to create an HTML file we can use any text editors.
- Text editors are the programs which allow editing in a written text, hence to create a web page we need to write our code in some text editor.
- There are various types of text editors available which you can directly download, but for a beginner, the best text editor is Notepad (Windows) or Text Edit (Mac).
- After learning the basics, you can easily use other professional text editors which are, Notepad++, Sublime Text, Vim, etc.

- In our tutorial, we will use Notepad and sublime text editor. Following are some easy ways to create your first web page with Notepad, and sublime text.

HTML Tags

HTML tags are like keywords which defines that how web browser will format and display the content. With the help of tags, a web browser can distinguish between an HTML content and a simple content. HTML tags contain three main parts: opening tag, content and closing tag. But some HTML tags are unclosed tags.

When a web browser reads an HTML document, browser reads it from top to bottom and left to right. HTML tags are used to create HTML documents and render their properties. Each HTML tags have different properties.

An HTML file must have some essential tags so that web browser can differentiate between a simple text and HTML text. You can use as many tags you want as per your code requirement. All HTML tags must enclosed within <> these brackets.

Every tag in HTML perform different tasks.
If you have used an open tag <tag>, then you must use a close tag </tag> (except some tags)

Syntax

<tag> content </tag> HTML Tag Examples

<p> Paragraph Tag </p>

<h2> Heading Tag </h2>

<b> Bold Tag </b>

<i> Italic Tag </i>

<u> Underline Tag</u>

1.2 Elements and Attributes

HTML Elements

An HTML file is made of elements. These elements are responsible for creating web pages and define content in that webpage. An element in HTML usually consist of a start tag <tag name>, close tag </tag name> and content inserted between them. Technically, an element is a collection of start tag, attributes, end tag, content between them.

Example

```
2.1.1    <!DOCTYPE html>
2.1.2    <html>
2.1.3    <head>
2.1.4    <title>WebPage</title>
2.1.5    </head>
2.1.6    <body>
2.1.7    <h1>This is my first web page</h1>
2.1.8    <h2> How it looks?</h2>
2.1.9    <p>It looks Nice!!!!!</p>
2.1.10  </body>  2.1.11
</html>
```

HTML Attribute

HTML attributes are special words which provide additional information about the elements or attributes are the modifier of the HTML element.

Each element or tag can have attributes, which defines the behavior of that element.

Attributes should always be applied with start tag.

The Attribute should always be applied with its name and value pair.

The Attributes name and values are case sensitive, and it is recommended by W3C that it should be written in Lower case only.

You can add multiple attributes in one HTML element, but need to give space between two attributes.

Syntax

```
1. <element attribute_name="value">content</element>
```

Example

```
1.        <!DOCTYPE html>
2.        <html>
3.        <head>
4.        </head>
5.        <body>
```

```
<h1> This is Style attribute</h1>
<p style="height: 50px; color: blue">It will add style property in element</p>
<p style="color: red">It will change the color of content</p>
</body>
</html>
```

1.3 HTML Formatting

HTML Formatting is a process of formatting text for better look and feel. HTML provides us ability to format text without using CSS. There are many formatting tags in HTML. These tags are used to make text bold, italicized, or underlined. There are almost 14 options available that how text appears in HTML and XHTML.

In HTML the formatting tags are divided into two categories:

- Physical tag: These tags are used to provide the visual appearance to the text.
- Logical tag: These tags are used to add some logical or semantic value to the text.

Following is the list of HTML formatting text.

Element name	**Description**
<b>	This is a physical tag, which is used to bold the text written between it.
<strong>	This is a logical tag, which tells the browser that the text is important.
<i>	This is a physical tag which is used to make text italic.
<em>	This is a logical tag which is used to display content in italic.
<mark>	This tag is used to highlight text.
<u>	This tag is used to underline text written between it.
<tt>	This tag is used to appear a text in teletype. (not supported in HTML5)
<strike>	This tag is used to draw a strikethrough on a section of text. (Not supported in HTML5)
<sup>	It displays the content slightly above the normal line.
<sub>	It displays the content slightly below the normal line.

<del>	This tag is used to display the deleted content.
<ins>	This tag displays the content which is added.
<big>	This tag is used to increase the font size by one conventional unit.

1.4 Anchor, Image and Tables

HTML Anchor

The HTML anchor tag defines a hyperlink that links one page to another page. It can create hyperlink to other web page as well as files, location, or any URL. The "href" attribute is the most important attribute of the HTML a tag. and which links to destination page or URL.

“href” attribute of HTML anchor tag

The href attribute is used to define the address of the file to be linked. In other words, it points out the destination page.

The syntax of HTML anchor tag is given below.

<a href = "   "> Link Text </a>

HTML Image

HTML img tag is used to display image on the web page. HTML img tag is an empty tag that contains attributes only, closing tags are not used in HTML image element.

Let's see an example of HTML image.

1. <h2>HTML Image Example</h2>
2. <img src="good_morning.jpg" alt="Good Morning Friends"/>

HTML Table

HTML table tag is used to display data in tabular form (row * column). There can be many columns in a row. We can create a table to display data in tabular form, using <table> element, with the help of <tr>,

<td>, and

<th> elements.

In Each table, table row is defined by <tr> tag, table header is defined by <th>, and table data is defined by <td> tags.

HTML tables are used to manage the layout of the page e.g., header section, navigation bar, body content, footer section etc. But it is recommended to use div tag over table to manage the layout of the page.

1.5 Lists and Forms

HTML Lists

HTML Lists are used to specify lists of information. All lists may contain one or more list elements. There are three different types of HTML lists:

Ordered List or Numbered List (ol)

In the ordered HTML lists, all the list items are marked with numbers by default. It is known as numbered list also. The ordered list starts with <ol> tag and the list items start with <li> tag

Unordered List or Bulleted List (ul)

In HTML Unordered list, all the list items are marked with bullets. It is also known as bulleted list also. The Unordered list starts with <ul> tag and list items start with the <li> tag.

Description List or Definition List (dl)

HTML Description list is also a list style which is supported by HTML and XHTML. It is also known as Definition list where entries are listed like a dictionary or encyclopedia. The definition list is very appropriate when you want to present glossary, list of terms or another name-value list. The HTML definition list contains following three tags:

<dl>tag defines the start of the list.

<dt> tag defines a term.

<dd> tag defines the term definition (description).

Note: We create a list inside another list, which will be termed as nested List.

HTML Form

An HTML form is a section of a document which contains controls such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc.

An HTML form facilitates the user to enter data that is to be sent to the server for processing such as name,email address, password, phone number, etc.

Why use HTML Form

HTML forms are required if you want to collect some data from of the site visitor. For example: If a user want to purchase some items on internet, he/she must fill the form such as shipping address and credit/debit card details so that item can be sent to the given address.

HTML Form Syntax

1. <form action="server url" method="get|post">
2. //input controls e.g. textfield, textarea, radiobutton, button
3. </form>

HTML Form Input Types

In HTML <input type=" "> is an important element of HTML form. The "type" attribute of input element can bevarious types, which defines information field. Such as <input type="text" name="name"> gives a text box.

Following is a list of all types of <input> element of HTML.

type=" "	Description
text	Defines a one-line text input field.
password	Defines a one-line password input field.
submit	Defines a submit button to submit the form to server.
reset	Defines a reset button to reset all values in the form.

radio	Defines a radio button which allows select one option.
file	Defines to select the file from device storage.
image	Defines a graphical submit button.
checkbox	Defines checkboxes which allow select multiple options form.

HTML5 added new types on <input> element.

1.6 HTML Classes

Class Attribute in HTML

The HTML class attribute is used to specify a single or multiple class names for an HTML element. The class name can be used by CSS and JavaScript to do some tasks for HTML elements. You can use this class in CSS with a specific class, write a period (.) character, followed by the name of the class for selecting elements.

A class attribute can be defined within <style> tag or in separate file using the (.) character. In an HTML document,

Advantages of HTML

Simplicity and Ease of Use. A primary advantage of using HTML is that it is simple and practical. ...

Compatibility. ...

Search Engine Optimization (SEO) Friendliness. ...

Flexibility and Extensibility. ...

Accessibility. ...

Efficiency and Performance. ...

Community and Resources. ...

Continuous Evolution.

CHAPTER-2

CSS Introduction

Cascading Style Sheets (CSS) is a style sheet language used for specifying the presentation and styling of a document written in a markup language such as HTML or XML (including XML dialects such as SVG, Math ML or XHTML).

2.1 CSS

- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files.

Why Use CSS?

CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.

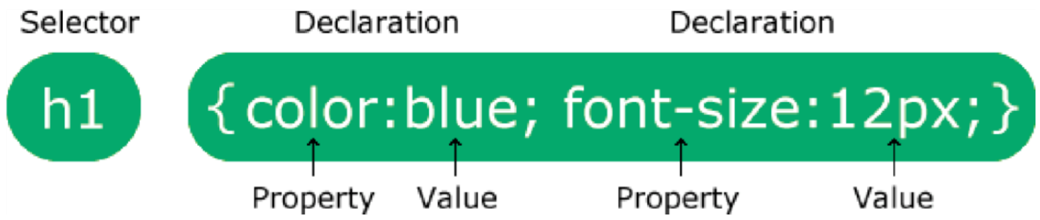
CSS Solved a Big Problem

HTML was NEVER intended to contain tags for formatting a web page! HTML was created to describe the content of a web page, like:

```
<h1>This is a heading</h1>
<p>This is a paragraph. </p>
```

When tags like <font>, and color attributes were added to the HTML 3.2 specification, it started a nightmare for web developers. Development of large websites, where fonts and color information were added to every single page, became a long and expensive process. To solve this problem, the World Wide Web Consortium (W3C) created CSS.CSS removed the style formatting from the HTML page!

CSS Syntax



The selector points to the HTML element you want to style.

How to add CSS

CSS is added to HTML pages to format the document according to information in the style sheet. There are three ways to insert CSS in HTML documents.

1. Inline CSS
2. Internal CSS
3. External CSS

CSS Selector

CSS selectors are used to select the content you want to style. Selectors are the part of CSS rule set. CSS selectors select HTML elements according to its id, class, type, attribute etc.

There are several different types of selectors in CSS.

1. CSS Element Selector

The element selector selects the HTML element by name.

2. CSS Id Selector

id selector selects the id attribute of an HTML element to select a specific element. An id is always unique within the page so it is chosen to select a single, unique element.

It is written with the hash character (#), followed by the id of the element.

3. CSS Class Selector

The class selector selects HTML elements with a specific class attribute. It is used with a period character. (Full stop symbol) followed by the class name.

4. CSS Universal Selector

The universal selector is used as a wildcard character. It selects all the elements on the pages.

5. CSS Group Selector

The grouping selector is used to select all the elements with the same style definitions. Grouping selector is used to minimize the code. Commas are used to separate each selector in grouping.

Inline CSS

We can apply CSS in a single element by inline CSS technique.

The inline CSS is also a method to insert style sheets in HTML document. This method mitigates some advantages of style sheets so it is advised to use this method sparingly.

If you want to use inline CSS, you should use the style attribute to the relevant tag.

Syntax:

1. <html tag style="cssproperty1:value; cssproperty2:value;"> </html tag>Example:
2. <h2 style="color: red; margin-left:40px;">Inline CSS is applied on this heading. </h2>
3. <p>This paragraph is not affected. </p>

Output:

Inline CSS is applied on this heading. This paragraph is not affected.

Disadvantages of Inline CSS

- You cannot use quotations within inline CSS. If you use quotations the browser will interpret this as an end of your style value.
- These styles cannot be reused anywhere else.

- These styles are tough to be edited because they are not stored at a single place.
- It is not possible to style pseudo-codes and pseudo-classes with inline CSS.
- Inline CSS does not provide browser cache advantages.

Internal CSS

The internal style sheet is used to add a unique style for a single document. It is defined in <head> section of the HTML page inside the <style> tag.

Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
background-color: linen;
}
h1 {
color: red;
margin-left: 80px;
}
</style>
</head>
<body>
<h1>The internal style sheet is applied on this heading.</h1>
<p>This paragraph will not be affected.</p>
</body>
</html>
/
```

External CSS

The external style sheet is generally used when you want to make changes on multiple pages. It is ideal for this condition because it facilitates you to change the look of the entire web site by changing just one file.

It uses the <link> tag on every page and the <link> tag should be put inside the head section.

Example:

1. **<head>**
2. **<link** rel="stylesheet" type="text/CSS" href="mystyle.css">
3. **</head>**

The external style sheet may be written in any text editor but must be saved with a .css extension. This file should not contain HTML elements.

Comments, Color, Padding and Margins

CSS Comments

Comments are used to explain the code, and may help when you edit the source code at a later date. Comments are ignored by browsers.

A CSS comment is placed inside the <style> element, and starts with /* and ends with */

CSS Colors

Colors are specified using predefined color names, or RGB, HEX, HSL, RGBA, HSLA values.

CSS Background Color

You can set the background color for HTML elements:

Hello World

<h1 style="background-color: Dodger Blue;">Hello World</h1>

CSS Text Color

You can set the color of text: Hello World

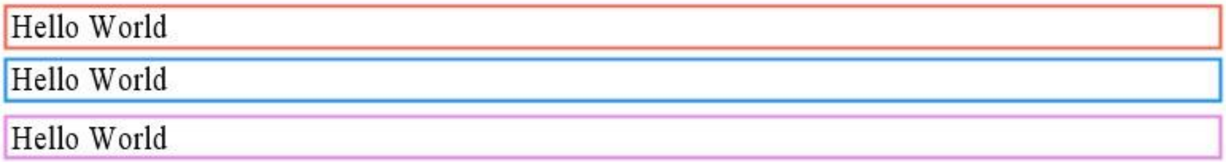
Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonarmy nib eulimid incident at labret dolore magna aliquot at volitant.

Ut wise denim ad minim venial, quiz nostrum exercise station clamorer suscept laborites nil at Ali quip ex ear commode consequent.

```
<h1 style="color: Tomato;">Hello World</h1>
<p style="color: Dodger Blue;">Lorem        ipsum...</p>
<p       style="color: MediumSeaGreen;">Ut wise denim...</p>
```

CSS Border Color

You can set the color of borders:



Hello World

Hello World

Hello World

```
<h1 style="border:2px solid Tomato;">Hello          World</h1>
<h1 style="border:2px solid Dodger Blue;">Hello World</h1>
<h1 style="border:2px solid Violet;">Hello World</h1>
```

CSS Margins

The CSS margin properties are used to create space around elements, outside of any defined borders. With CSS, you have full control over the margins. There are properties for setting the margin foreach side of an element (top, right, bottom, and left).

CSS Margin Properties

Property	Description
margin	This property is used to set all the properties in one declaration.
margin-left	it is used to set left margin of an element.
margin-right	It is used to set right margin of an element.
margin-top	It is used to set top margin of an element.
margin- bottom	It is used to set bottom margin of an element.

2.2 CSS Padding

The CSS padding properties are used to generate space around an element's content, inside of any defined borders.

With CSS, you have full control over the padding. There are properties for setting the padding foreach side of an element (top, right, bottom, and left).

The CSS Box Model

In CSS, the term "box model" is used when talking about design and layout.

The CSS box model is essentially a box that wraps around every HTML element. It consists of: margins, borders, padding, and the actual content. The image below illustrates the box model:

Explanation of the different parts:

- **Content** - The content of the box, where text and images appear
- **Padding** - Clears an area around the content. The padding is transparent
- **Border** - A border that goes around the padding and content
- **Margin** - Clears an area outside the border. The margin is transparent The box model allows us to add a border around elements, and to define space between elements.

Icons, Lists and Buttons

Icons can easily be added to your HTML page, by using an icon library.

How To Add Icons

The simplest way to add an icon to your HTML page, is with an icon library, such as Font Awesome.

Add the name of the specified icon class to any inline HTML element (like <i> or <span>).

All the icons in the icon libraries below, are scalable vectors that can be customized with CSS(size, color, shadow, etc.)

Styling Links

Links can be styled with any CSS property (e.g., color, font-family, background, etc.). a {color: hot pink;}

In addition, links can be styled differently depending on what state they are in the four links states are:

- a: link - a normal, unvisited link
- a: visited - a link the user has visited
- a: hover - a link when the user movses over it
- a: active - a link the moment it is clicked

CSS Lists

CSS list properties allow you to:

- Set different list item markers for ordered lists
- Set different list item markers for unordered lists
- Set an image as the list item marker
- Add background colors to lists and list items

CSS Buttons

In HTML, we use the button tag to create a button, but by using CSS properties, we can style the buttons. Buttons help us to create user interaction and event processing. They are one of the widely used elements of web pages. During the form submission, to view or to get some information, we generally use buttons.

2.3 Display and Position Property

Every HTML element has a default display value depending on what type of element it is.

The default display value for most elements is block or inline. **The position Property**

The position property specifies the type of positioning method used for an element. There are five different position values:

- static
- relative
- fixed

- absolute
- sticky

Elements are then positioned using the top, bottom, left, and right properties. However, these properties will not work unless the position property is set first. They also work differently depending on the position value.

2.4 Navigation bar and Radio Button

CSS Navigation bar

A Navigation bar or navigation system comes under GUI that helps the visitors in accessing information. It is the UI element on a webpage that includes links for the other sections of the website.

A navigation bar is mostly displayed on the top of the page in the form of a horizontal list of links. It can be placed below the logo or the header, but it should always be placed before the main content of the webpage.

It is important for a website to have easy-to-use navigation. It plays an important role in the website as it allows the visitors to visit any section quickly.

The horizontal navigation bar is the horizontal list of links, which is generally on the top of the page.

CSS Radio Button

The radio button is an HTML element that helps to take input from the user. Although it is hard to style the radio button, pseudo-elements make it easier to style the radio button. Radio buttons are applied when there is the requirement of a single selection from a group of items.

This HTML element is generally used on every website, but without styling them, they look similar on every website. So, styling them will make our site different and attractive. Designing the radio button using CSS is an interesting and creative task, which will provide a new look to the default radio button.

To create the custom radio buttons, we require to write an HTML markup, and to style, we have to write the CSS.

2.5 CSS Animation

CSS Animation property is used to create animation on the webpage. It can be used as a replacement of animation created by Flash and JavaScript.

CSS3 @keyframes Rule
The animation is created in the @keyframe rule. It is used to control the intermediate steps in a CSS animation sequence.

What animation does?

An animation makes an element change gradually from one style to another. You can add as many as properties you want to add. You can also specify the changes in percentage.0% specify the start of the animation and 100% specify its completion.

CSS Solved a Big Problem

HTML was NEVER intended to contain tags for formatting a web page!

HTML was created to describe the content of a web page, like:

<h1>This is a heading</h1>

<p>This is a paragraph.</p>

When tags like <font>, and color attributes were added to the HTML 3.2 specification, it started a nightmare for web developers. Development of large websites, where fonts and color information were added to every single page, became a long and expensive process**.**

Shorthands

Some properties like font, background, padding, border, and margin are called **shorthand properties.** This is because shorthand properties set several values in a single line.

CHAPTER-3

3.1 JavaScript Introduction

JavaScript is the world's most popular programming

Language. JavaScript is the programming language of the Web. JavaScript is easy to learn.

The <script> Tag

In HTML, JavaScript code is inserted between <script> and </script> tags.

```
<script> document.getElementById("demo").inner HTML = "My First
JavaScript";

</script>
```

JavaScript Programs

A computer program is a list of "instructions" to be "executed" by a computer. In a programming language, these programming instructions are called statements. A JavaScript program is a list of programming statements. In HTML, JavaScript programs are executed by the web browser.

JavaScript Syntax

JavaScript syntax is the set of rules, how JavaScript programs are constructed:

```
// How to create variables: var x; let
y;

// How to use variables:
x = 5; y = 6;
let z = x + y;
```

3.2 Variables and Data Types

JavaScript variable is simply a name of storage location. There are two types of variables in JavaScript: local variable and global variable.

There are some rules while declaring a JavaScript variable (also known as identifiers).

1. Name must start with a letter (a to z or A to Z), underscore( ), or dollar($) sign.
2. After first letter we can use digits (0 to 9), for example value1.
3. JavaScript variables are case sensitive, for example x and X are different variables.

Correct JavaScript variables

1. var x = 10;
2. var _value="sonoo";

Incorrect JavaScript variables

1 . var 123=30;

2. var *aa=320;

JavaScript Global Variable

A JavaScript global variable is declared outside the function or declared with window object. It can be accessed from any function.

JavaScript Data Types

JavaScript provides different **data types** to hold different types of values. There are two types of data types in JavaScript.

1. Primitive data type
2. Non-primitive (reference) data type

JavaScript is a **dynamic type language**, means you don't need to specify type of the variable because it is dynamically used by JavaScript engine. You need to use var here to specify the datatype. It can hold any type of values such as numbers, strings etc. For example:

1. var a=40;//holding number
2. var b="Rahul";//holding string

I. Arithmetic operators and operator Precedence

Arithmetic operators perform arithmetic on numbers (literals or variables).

Operator	Description
+	Addition
-	Subtraction
*	Multiplication
**	Exponentiation (ES2016)
/	Division
%	Modulus (Remainder)
++	Increment
--	Decrement

Arithmetic Operations

A typical arithmetic operation operates on two numbers. The two numbers can be literals:

let x = 100 + 50;

3.3 JavaScript Operator Precedence

Operator precedence describes the order in which operations are performed in an arithmetic expression.

Multiplication (*) and division (/) have higher precedence Then addition (+) and subtraction (-).

Objects, Arrays and Functions JavaScript Objects

You have already learned that JavaScript variables are containers for data values. This code assigns a simple value (Fiat) to a variable named car: let car = "Fiat";

Objects are variables too. But objects can contain many values. This code assigns many values (Fiat, 500, white) to a variable named car: const car =

{type: “Fiat", model:"500", color: “white"};

3.4 JavaScript Arrays

An array is a special variable, which can hold more than one value: const cars = ["Saab", "Volvo", "BMW"];

Why Use Arrays?

If you have a list of items (a list of car names, for example), storing the cars in single variables could look like this:

```
let car1="Saab";  let
car2="Volvo”;  let
car3= "BMW";
```

An array can hold many values under a single name, and you can access the values by referring to an index number.

3.5 JavaScript Functions

A JavaScript function is a block of code designed to perform a particular task. A JavaScript function is executed when "something" invokes it (calls it).

```
// Function to compute the product of p1 and p2function my Function (p1, p2) { return
p1 * p2;

}
```

3.6 JavaScript String

The JavaScript string is an object that represents a sequence of characters. There are 2 ways to create string in JavaScript

1. By string literal
2. By string object (using new keyword)

Conditional Statements and Loops Conditional Statements

Very often when you write code, you want to perform different actions for different decisions. You can use conditional statements in your code to do this. In JavaScript we have the following conditional statements:

- Use if to specify a block of code to be executed, if a specified condition is true
- Use else to specify a block of code to be executed, if the same condition is false
- Use else if to specify a new condition to test, if the first condition is false
- Use switch to specify many alternative blocks of code to be executed

3.7 JavaScript Loops

Loops are handy, if you want to run the same code over and over again, each time with a different value. Often this is the case when working with arrays.

There are four types of loops in JavaScript.

1. for loop
2. while loop
3. do-while loop
4. for-in loop

JavaScript Switch

The JavaScript switch statement is used to execute one code from multiple expressions. It is just like else if statement that we have learned in previous page. But it is convenient than if… else... If because it can be used with numbers, characters etc.

Type Conversion and Essential set Methods

JavaScript Type Conversion

JavaScript variables can be converted to a new variable and another data type:

- By the use of a JavaScript function
- Automatically by JavaScript itself

Essential Set Methods

Method	Description

new Set()	Creates a new Set
add()	Adds a new element to the Set
delete()	Removes an element from a Set
has()	Returns true if a value exists in the

3.8 Exception Handling in JavaScript

An exception signifies the presence of an abnormal condition which requires special operable techniques. In programming terms, an exception is the anomalous code that breaks the normal flow of the code. Such exceptions require specialized programming constructs for its execution.

What is Exception Handling

In programming, exception handling is a process or method used for handling the abnormal statements in the code and executing them. It also enables to handle the flow control of the code/program. For handling the code, various handlers are used that process the exception and execute the code. For example, the Division of a non-zero value with zero will result into infinity always, and it is an exception. Thus, with the help of exception handling, it an be executed and handled.

In exception handling

A throw statement is used to raise an exception. It means when an abnormal condition occurs, an exception is thrown using throw.

JavaScript try…catch

A try…catch is a commonly used statement in various programming languages. Basically, it is used to handle the error-prone part of the code. It initially tests the code for all possible errors it may contain, then it implements actions to tackle those errors (if occur). A good programming approach is to keep the complex code within the try…catch statements. Let's discuss each block of statement individually:

try{} statement any error occur, it passes to the catch{} block for taking suitable actions and handle the error. Otherwise, it executes the code written within.

catch{} statement: This block handles the error of the code by executing the set of statements written within the block. This block contains either the user-defined exception handler or the built-in handler. This block executes only when any error-prone code needs to be handled in the try block. Otherwise, the catch block is skipped.

CHAPTER-4

4.1 Bootstrap Introduction

- Bootstrap is the most popular HTML, CSS and JavaScript framework for developing responsive and mobile friendly website.
- It is absolutely free to download and use.
- It is a front-end framework used for easier and faster web development.
- It includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many others.
- It can also use JavaScript plug-ins.
- It facilitates you to create responsive designs.

4.2 Button, Grid, Table, Form

There are seven styles to add a button in Bootstrap. Use the following classes to achieve the different button styles:

- .btn-default
- .btn-primary
- .btn-success
- .btn-info
- .btn-warning
- .btn-danger
- .btn-link

GRID

A grid is a structure (usually two-dimensional) made up of a series of intersecting straight (vertical, horizontal) lines used to structure the content. It is widely used to design layout and content structure in print design. In web design, it is a very effective method to create a consistent layout rapidly and effectively using HTML and CSS."

Bootstrap Tables

We can create different types of Bootstrap tables by using different classes to style them.

Bootstrap Basic Table

The basic Bootstrap table has a light padding and only horizontal dividers. The .table class issued to add basic styling to a table.

Bootstrap Forms

In Bootstrap, there are three types of form layouts:

- Vertical form (this is default)
- Horizontal form
- Inline form
- Bootstrap Form Rules
- There are three standard rules for these 3 form layouts:
- Always use <form role="form"> (helps improve accessibility for people using screen readers)
- Wrap labels and form controls in <div class="form-group"> (needed for optimum spacing)
- Add class. form-control to all textual <input>, <textarea>, and <select> elements

4.3 Badges, Labels and Panels

Bootstrap Badges

Bootstrap Badges are numerical indicators used to show that how many items are associated with the specific link. Badges are used to highlight new or unread items. The class. badge within the <span> element is used to create badges.

Bootstrap Labels

Bootstrap labels are used to specify the additional information about something like offering counts, tips, or other makeup for pages. The class. label is used to display the labels.

Bootstrap Panels

In Bootstrap, a panel is a bordered box with some padding around its element. The panel components are used when you want to put your DOM component in a box.

The class. panel is used within the <div> element to create Bootstrap panels. The content inside the panel has a. panel-body class.

4.4 Images, Progress bar, List Group and Dropdowns

Bootstrap Images

Bootstrap supports for images. There are three classes in Bootstrap that can be used to apply some simple style to the images.

Bootstrap Progress Bar

The progress bar shows how far a user is in a process. In Bootstrap, there are several types of progress bars.

The class. progress within a <div> element is used to create a default progress bar in bootstrap.

Bootstrap Dropdowns

Dropdown menus are toggleable, contextual menus, used for displaying links in a list format. It facilitates users to choose one value from a predefined list. This can be made interactive with the dropdown JavaScript plugin.

You have to wrap dropdown menu within the class .dropdown to create Bootstrap Dropdown

Bootstrap List Groups

Bootstrap list group is used to create a group of list with list items. The most basic list group is an unordered list containing list items.

The class ".list-group" within the <ul> element and the class ".list-group-item" within the <li>element are used to create a basic list group.

4.5 Alert, wells, Collapse, Pagination, Pages

Bootstrap Alerts

Bootstrap Alerts are used to provide an easy way to create predefined alert messages. Alert adds a style to your messages to make it more appealing to the users.

There are four classes that are used within <div> element for alerts.

- .alert-success
- .alert-info
- .alert-warning .alert-danger

Bootstrap Wells

In Bootstrap, wells are used to add a rounded border around an element with a gray background color and some padding. It is like a container that displays the content.

The class. well, is used with <div> element to add well.

Bootstrap Collapse

Bootstrap collapse is used when you want to hide and show large amount of content. The “. collapse" class is used to specify the collapsible element.

Bootstrap Pagination

Pagination is used to sort the web pages of your website in an organized manner. It becomes very necessary if your website has a lot of web pages.

Following is a list of classes that Bootstrap provides to handle pagination.

Class	Description

.pagination	Add this class to get the pagination on your page.
.disable, .active	You can customize links by using .disable for unclickable links and .active to indicate the current page.
.pagination- lg, .pagination- sm	Use these classes to get different size items.

Bootstrap Pager: Bootstrap pager is a form of pagination. It is used to create previous and next buttons (links). The ".pager" class is used within the <ul> element to create the previous / next button.

Using Sass

While Bootstrap is built on Less, it also has an official Sass port. We maintain it in a separate GitHub repository and handle updates with a conversion script.

What's included

Since the Sass port has a separate repo and serves a slightly different audience, the contents of the project differ greatly from the main Bootstrap project. This ensures the Sass port is as compatible with as many Sass-based systems as possible.

Path	Description
`lib/`	Ruby gem code (Sass configuration, Rails and Compass integrations)
`tasks/`	Converter scripts (turning upstream Less to Sass)
`test/`	Compilation tests
`templates/`	Compass package manifest
`vendor/assets/`	Sass, JavaScript, and font files
`Rakefile`	Internal tasks, such as rake and convert

Visit the Sass port's GitHub repository to see these files in action.

CHAPTER-5

About Project

BLOOD DONATION MANAGEMENT SYSTEM

5.1 Introduction:

The healthcare industry plays a pivotal role in the well-being of individuals and communities. Efficient management of healthcare facilities is essential to ensure the delivery of quality patient care and streamline administrative processes. In response to the growing complexity of healthcare services, the implementation of a School, Colleges, Hospitals or Camps etc.

5.2 Background:

This project aims to develop a comprehensive Blood Donation Management System that addresses the diverse needs of a modern Blood need facility. The system is designed to integrate and automate various aspects of hospital operations, including patient information management, appointment scheduling, billing, and reporting. By leveraging technology, the BDMS intends to enhance the overall efficiency, accuracy, and accessibility of healthcare services. It will tell us when, where and how to donate blood and your data will also be saved.

5.3 Objective

The primary objectives of the Blood Donation Management System project are as follows:

- **Streamline Donor Data Management:** Create a centralized system for managing donor records, ensuring easy access to accurate and up-to-date information.
- **Optimize Appointment Scheduling:** Develop a scheduling module to facilitate the efficient allocation of appointments for donor, reducing waiting times and improving resource utilization.

.

5.4 Purpose

The purpose of a Blood Donation Management System (BDMS) implemented in Django.

- Donor Information Management.
- Appointment Scheduling.
- Doctor Information.
- User Authentication and Access Control.
- Easy to Access or awareness to donate blood

5.5 Scope

The scope of the Blood Donation Management System project encompasses the development of a user-friendly and scalable software solution. The system will cater to the needs of various stakeholders, including healthcare professionals, administrative staff, and Donor. The initial phase will focus on core functionalities, with provisions for future enhancements and integration with other healthcare IT systems.

5.6 Features and functionality

There are two main actors of the application who will interact directly with the application. Admin and a user. Admin can add, edit, delete the any user in the system and the user can view, search, check the detail according his\her account type and download the required data.

Admin:

- Admin can view all the available users in the application.
- Admin can ADD/DELETE/UPDATE user of the BDMS.

User:

User can view data according to his\her account type in the application. **Features:**

The key features of HMS project are listed below:

- **Donor registration and record keeping:** Store demographics, medical history, allergies, medications, immunization records, and more.
- **Appointment scheduling and management:** Allow patients to book appointments online or through reception, manage cancellations and rescheduling, notify Donors about appointments
- **Doctor profiles and schedule management:** Maintain doctor profiles with specialties, qualifications, and availability.
- **Scalability and security:** Django can handle large volumes of data and ensure secure access to sensitive patient information.
- **Flexibility and customization:** Django allows for building custom features and functionalities to meet specific needs.
- **User roles and permissions:** Define different user roles (doctors, nurses, administrators) with specific access levels to ensure data security.

Benefits of blood bank management information system to donors 1. It provides the unique identification number at the time of blood donation camp which helps him for the future correspondence. MIS gives the unique user id and password for those donors who are applying online. They can edit their information time to time. This feature helps administrator to collect the information of all the donors area wise and blood group wise. 2. Donors can view the blood donation camp organising at the different places. 3. As it is a web based application, its index page encourages the donor to donate the blood. 4. Donor can also check his blood group medical status whether it is healthy or unhealthy. 5. Donor can check the status of the particular blood group just on one click sitting at home. Benefits of blood bank management information system to seekers 1. Seeker can get the information of the desired blood group from the central inventory 2. Seeker can get the list of donors' area wise, blood group wise if the desired blood group is not available in the central inventory. 3. Seeker can get the information of the particular blood group available in the blood bank. 4. Seeker can get the information of that blood group which is not fit for blood transfusion. 5. Seeker can get the blood units according to his requirement from the blood bank. Benefits of blood bank management information system to blood bank 1. Blood bank in charge is getting rid from manual procedure. Now they to do the entries in the information system.

5.7 Modules included: -

- Dashboard
- Doctors
- Donor Details □ Appointments
- Settings
- More Features

5.8 Technology Used: -

- HTML
- CSS
- JavaScript

- Bootstrap
- Php

Software / Hardware Required:

- VS Code
- Windows OS
- Min. Processor i5/Ryzen 5
- Min. RAM 8GB
- Storage 40GB

CHAPTER-6

CONCLUSION

In conclusion, the **Blood Donation Management System** project seeks to revolutionize healthcare administration by leveraging technology to create a more efficient, organized, and patient-centric environment.

Benefits:

- **Increased Efficiency:** Streamlined processes like appointment scheduling, billing, and data management improve operational efficiency.
- **Enhanced Patient Care:** Electronic medical records, telehealth options, and mobile access empower patients and improve care quality.
- **Improved Data Management:** Secure storage and easy access to patient data enables informed decision-making and better resource allocation.
- **Scalability and Customization:** Django's flexibility allows for building custom features and adapting the system to specific needs as the hospital grows.
- **Security and Reliability:** Django's robust framework ensures secure data handling and reliable operation, vital for sensitive medical information.

CHAPTER-7

SCREENSHOTS

Login Page

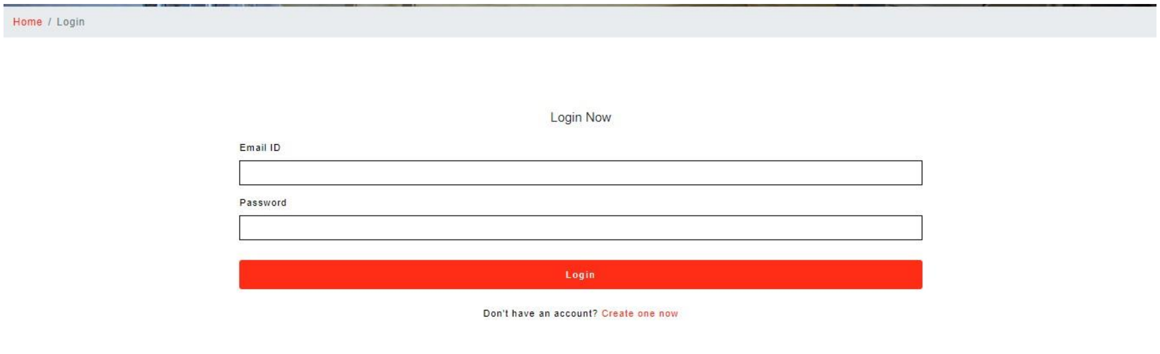


Figure 7.1

Create User Page

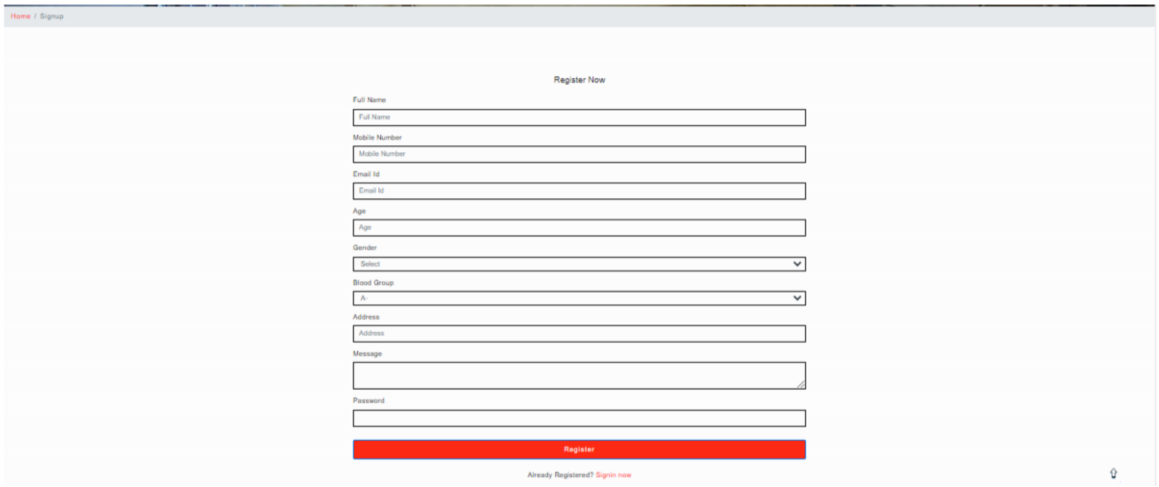
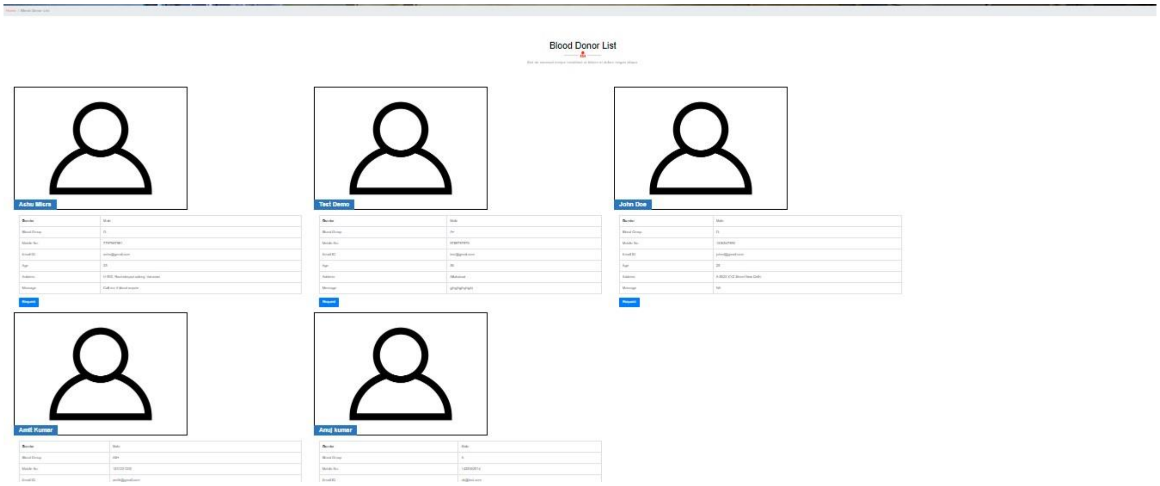


Figure 7.2

Donor Page



Blood Donor List

Ashu Misra

Gender	Male
Blood Group	[illegible]
Mobile No	[illegible]
Email ID	[illegible]
Age	[illegible]
Address	[illegible]
Message	[illegible]

Request

Test Demo

Gender	Male
Blood Group	[illegible]
Mobile No	[illegible]
Email ID	[illegible]
Age	[illegible]
Address	[illegible]
Message	[illegible]

Request

John Doe

Gender	Male
Blood Group	[illegible]
Mobile No	[illegible]
Email ID	[illegible]
Age	[illegible]
Address	[illegible]
Message	[illegible]

Request

Amit Kumar

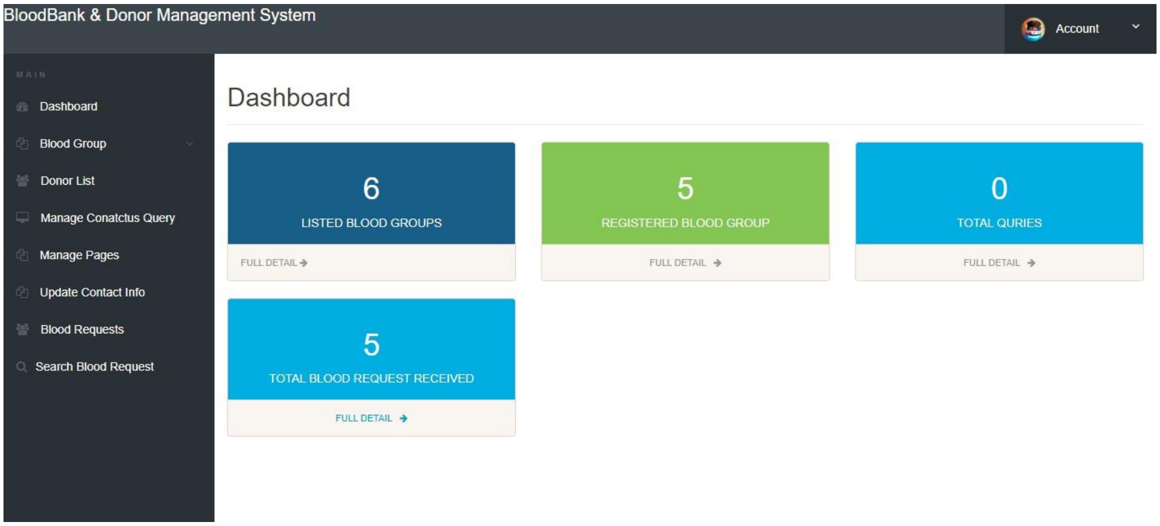
Gender	Male
Blood Group	[illegible]
Mobile No	[illegible]
Email ID	[illegible]

Anuj kumar

Gender	Male
Blood Group	[illegible]
Mobile No	[illegible]
Email ID	[illegible]

Figure 7.3

Dashboard



Dashboard

6 LISTED BLOOD GROUPS — FULL DETAIL

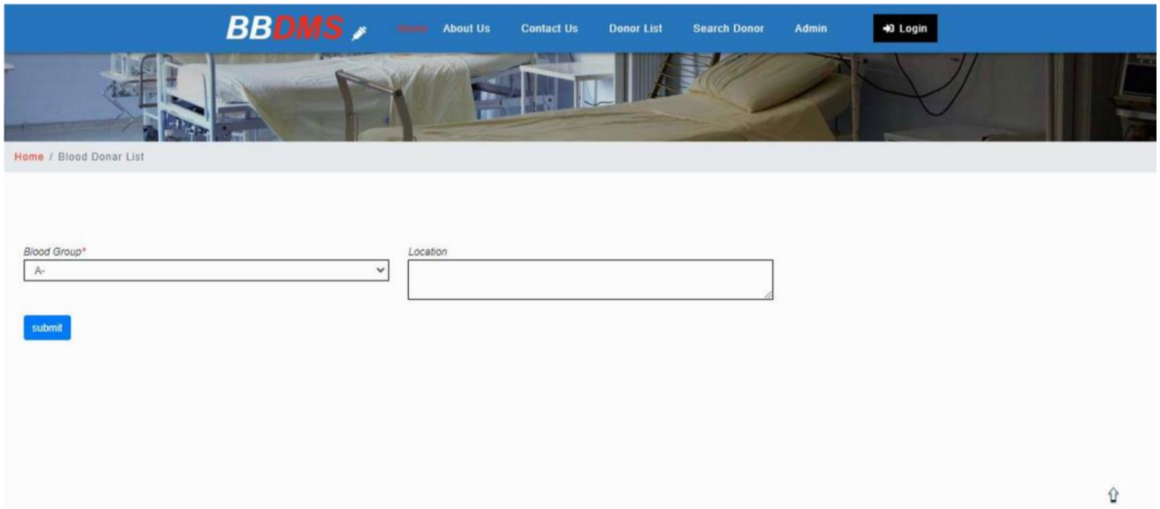
5 REGISTERED BLOOD GROUP — FULL DETAIL

0 TOTAL QURIES — FULL DETAIL

5 TOTAL BLOOD REQUEST RECEIVED — FULL DETAIL

Figure 7.4

Donor Search Detail List



Blood Group*: A-

Figure 7.5

Main Page

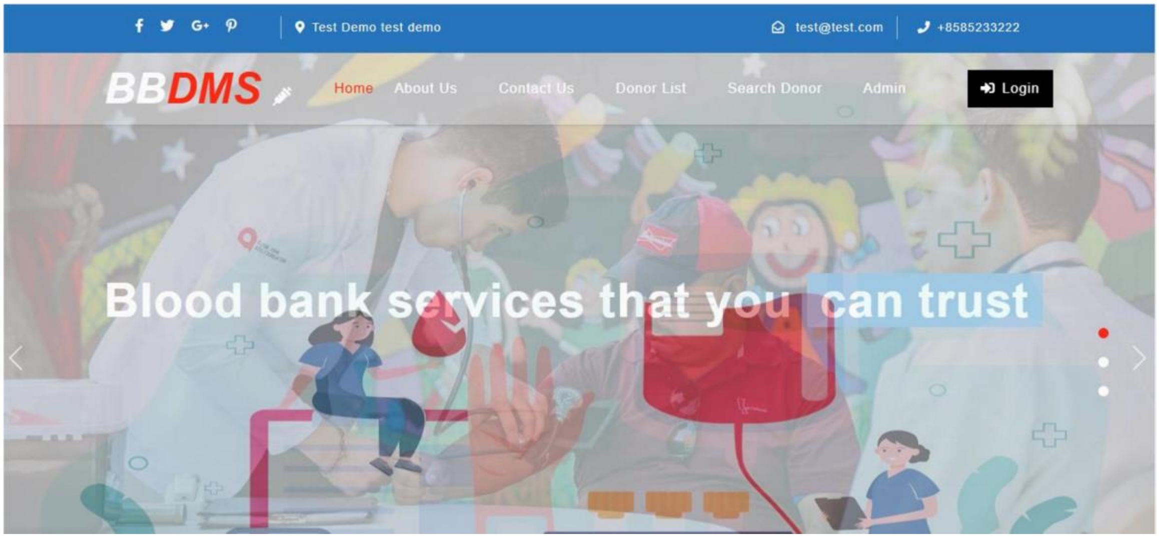
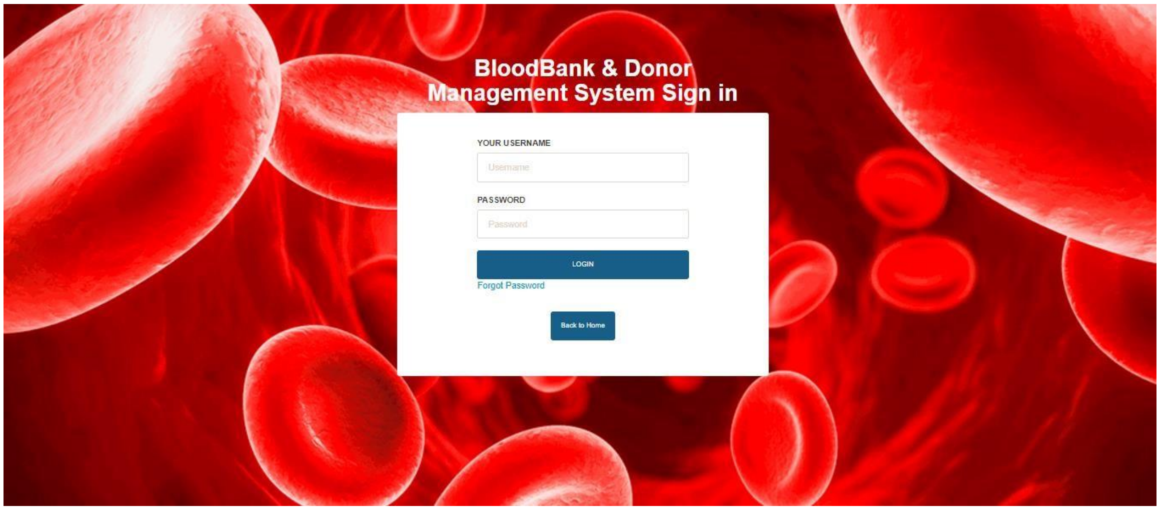


Figure 7.6

Admin Login Page



BloodBank & Donor Management System Sign in

Figure 7.7