

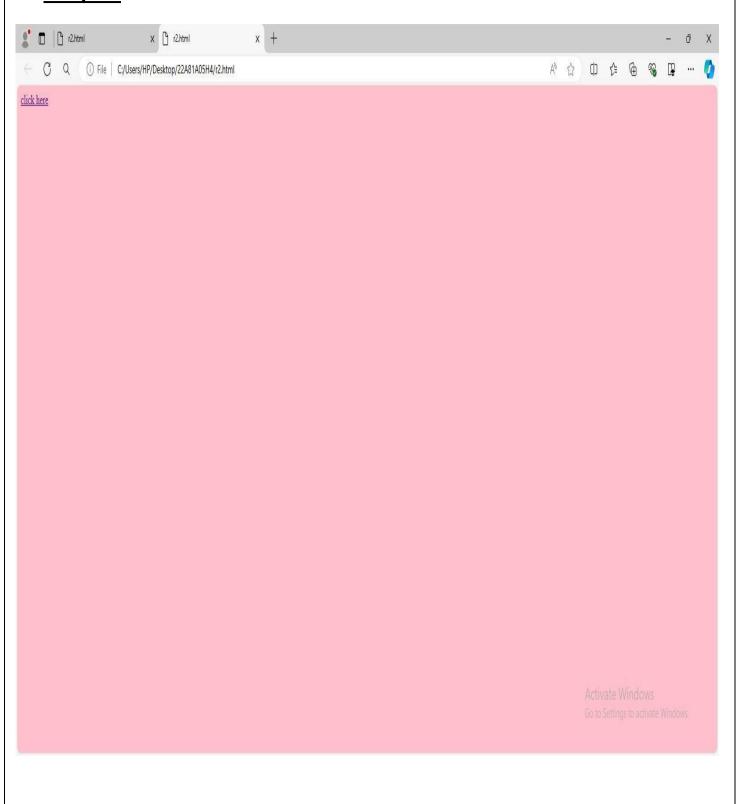
Design HTML Fundamentals constructs

i) Headings:

</html>

<u>Aim:</u>Write a HTML program with use of Headings(<h1>,<h2>,<h3>,<h4>,<h6>) <u>Description:</u>HTML headings are titles or subtitles that you want to display on a webpage.

Code: <!DOCTYPEhtml> <html> <head> <title>MyWebpage</title> </head> <bodybgcolor="pink"text="blue"> <h1align=center>WelcomeTo</h1> <h2align=center>Srivasaviengineeringcollege</h2> <h3align=center>Tadepalligudem</h3> <h4align=center>pedatadepalli</h4> <h5align=center>WestGodavari</h5> <h6align=center>AndhraPradesh</h6> </body>



i)Links:

<u>Aim:</u>WriteaHTMLprogramwiththeuseof<a>(anchor)tag.

<u>Link:</u> The <a> tag defines a hyperlink, which is used to link from one page to another. Themostimportant attribute of the <a>element is the hrefattribute, which indicates the link's destination.

Syntax:

```
<ahref="URL" target="_self/_blank/_parent/_top/framename">
        Link Text
```


<u>hrefattributeofHTMLanchortag</u> Thehrefattributeisusedtodefinetheaddressof the file to be linked. In other words, it points out the destination page.

Code:

<html>

<head>

</head>

<body>

<ahref=https://www.w3schools.com/html/html images.asp>clickhere

</body>

</html>



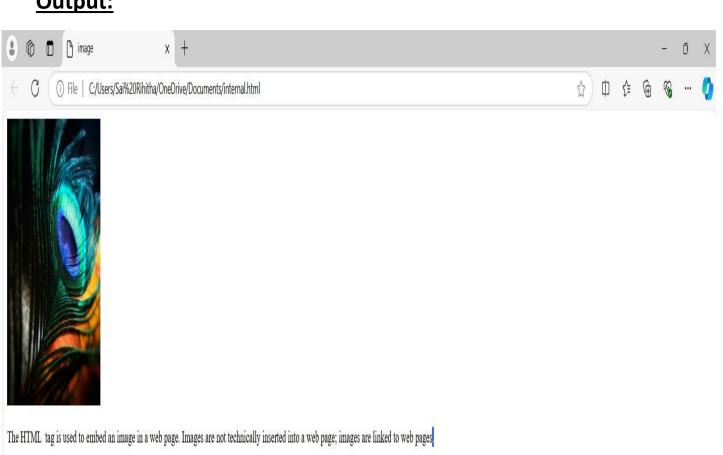
ii) Paragraphs:

Aim: WriteaHTMLprogramwiththeuseof (paragraph)tag.

<u>Description:</u>TheHTMLelementdefinesaparagraph.Aparagraphalwaysstarts on a new line, and browsers automatically add some white space (a margin) before and after a paragraph.

Code: <html> <head> <title>paragraphtags</title> </head> <body> Itisastandardmarkuplanguageforcreatingstaticwebpages.

 Itdescribesthestructureofawebpages,htmlisaelementwhichisdefinedbyastart tag. </body> </html>



iii) Images:

<u>Aim:</u>WriteaHTMLprogramwiththeuseof(image)tag.

<u>Description:</u>ThetagisusedtoembedanimageinanHTMLpage.Imagesarenot technically inserted into a web page; images are linked to web pages. The tag creates aholding space for the referenced image.

Thetaghastworequiredattributes:

- src-Specifiesthepathtotheimage
- alt Specifies an alternate text for the image, if the image for some reason cannot bedisplayed

```
<!DOCTYPEhtml>
<html lang="en">
<head>
<title>image</title>
</head>
<body>
<img
src="https://images.pexels.com/photos/674010/pexels-photo-
674010.jpeg?cs=srgb&dl=pexels-anjana-c-169994-
674010.jpg&fm=jpg"alt="image"width="200px" heigth="200px">
TheHTML<img>tagisusedtoembedanimageinawebpage.Imagesarenot technically inserted into a web page; images are linked to web pages.
</body>
</html>
```

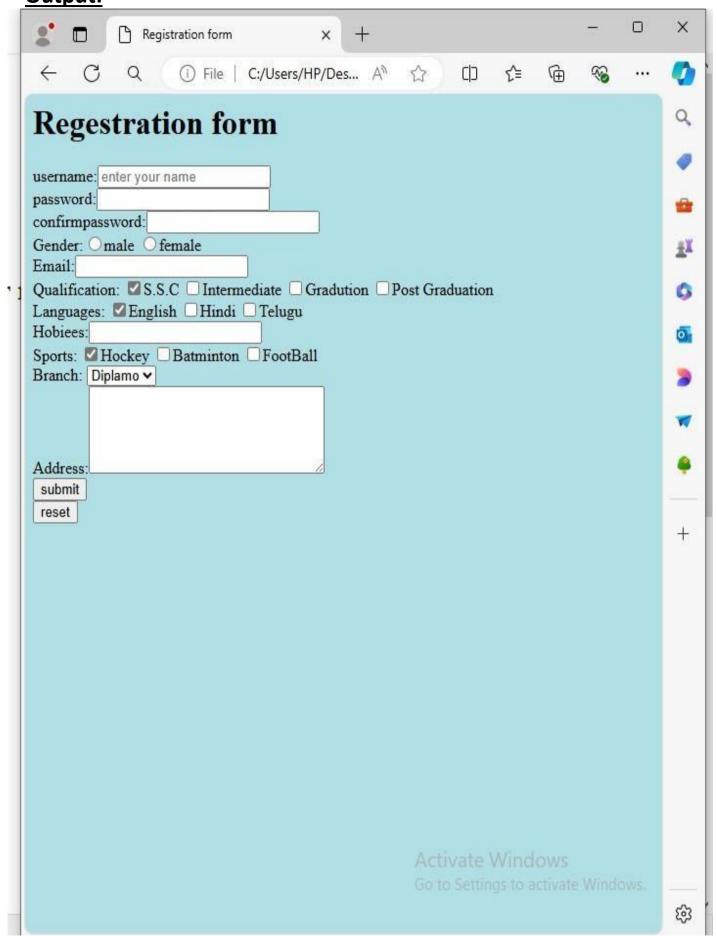
Output: STUDENITIABLE x + - ♂ X C Q ⊕ File C/Users/HP/Desktop/22A81A05HA/tables.html Name Marks | Internal external | labe | 15 | 35 | | def | 14 | 34

Activate Windows
Go to Settings to activate Windows.

V)Tables:

<u>Aim:</u>WriteaHTMLprogramwiththeuseof(table)tag.

<u>Description:</u> The tagdefines an HTML table. An HTML table consists of one element and one or more , , and elements. The element defines at able row, the element defines a table cell.



Design the html fundamentals concepts a)Forms:

Aim: Write a HTML program to design Frames.

<u>Description:</u>HTML frames are used to divide your browser window into multiple sections where each section can load a separate HTML document. A collection of framesinthebrowserwindowisknownasaframeset. The windowisdivided into frames in a similar way the tables are organized: into rows and columns.

```
<u>Code:</u>
<html>
<head>
```

<title>Registrationform</title>

</head>

<body bgcolor="powderblue">

<form>

<h1>Regestrationform</h1>

username:<inputtype="text"maxlength=15size=20placeholder="enteryourname">

password:<inputtype="password"maxlength=15size=20>

Confirmpassword:<inputtype="password"maxlength=15size=20>

Gender:<inputtype="radio"name="a"/>male

<inputtype="radio"name="a"/>female

Email:<inputtype="text"maxlength=15>

Qualification:<inputtype="checkbox"checked="true">S.S.C

<inputtype="checkbox">Intermediate

<inputtype="checkbox">Gradution

<inputtype="checkbox">PostGraduation

Languages:<inputtype="checkbox"checked="true">English

<inputtype="checkbox">Hindi

<inputtype="checkbox">Telugu

Hobiees:<inputtype="text"maxlength=15>
Sports:

<inputtype="checkbox"checked="true">Hockey

<inputtype="checkbox">Batminton

<inputtype="checkbox">FootBall

> Branch:

<select><option>Diplamo<option>CSE<option>ECE<option>EEE</select>

Address:<textarearows=5cols=30></textarea></br>

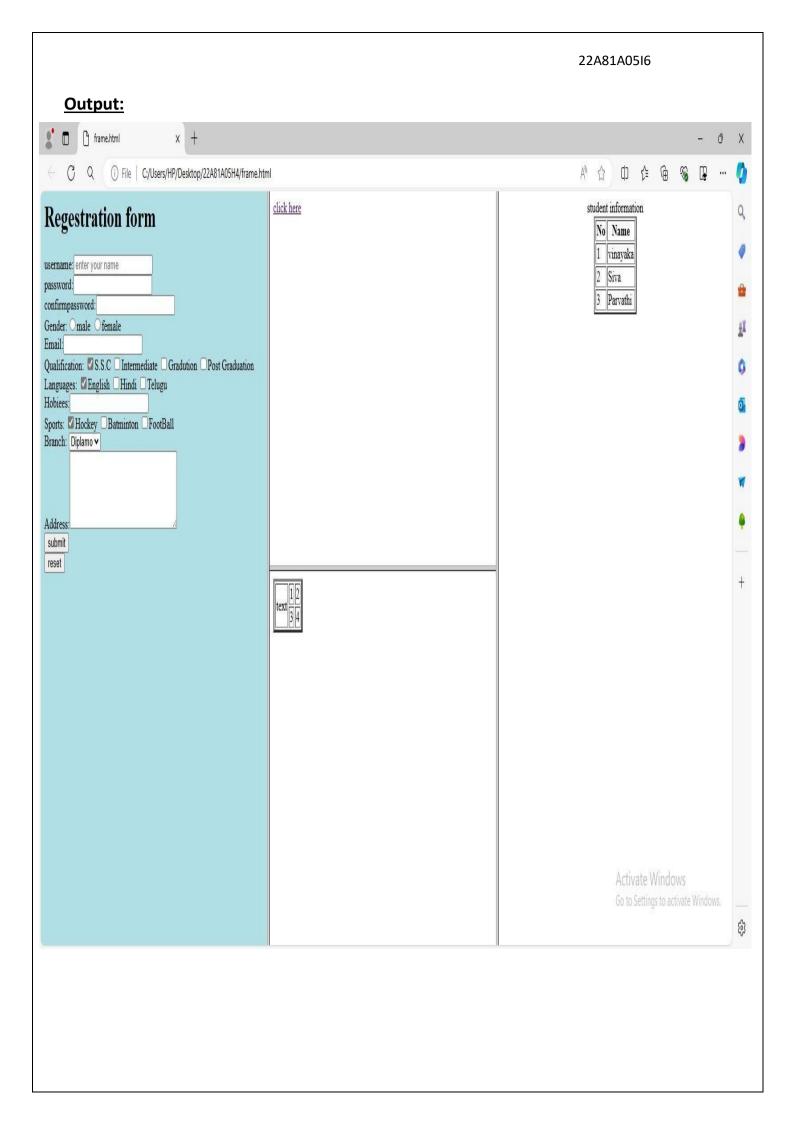
<inputtype="submit"value="submit">

<inputtype="reset"value="reset">

</form>

</body>

</html>

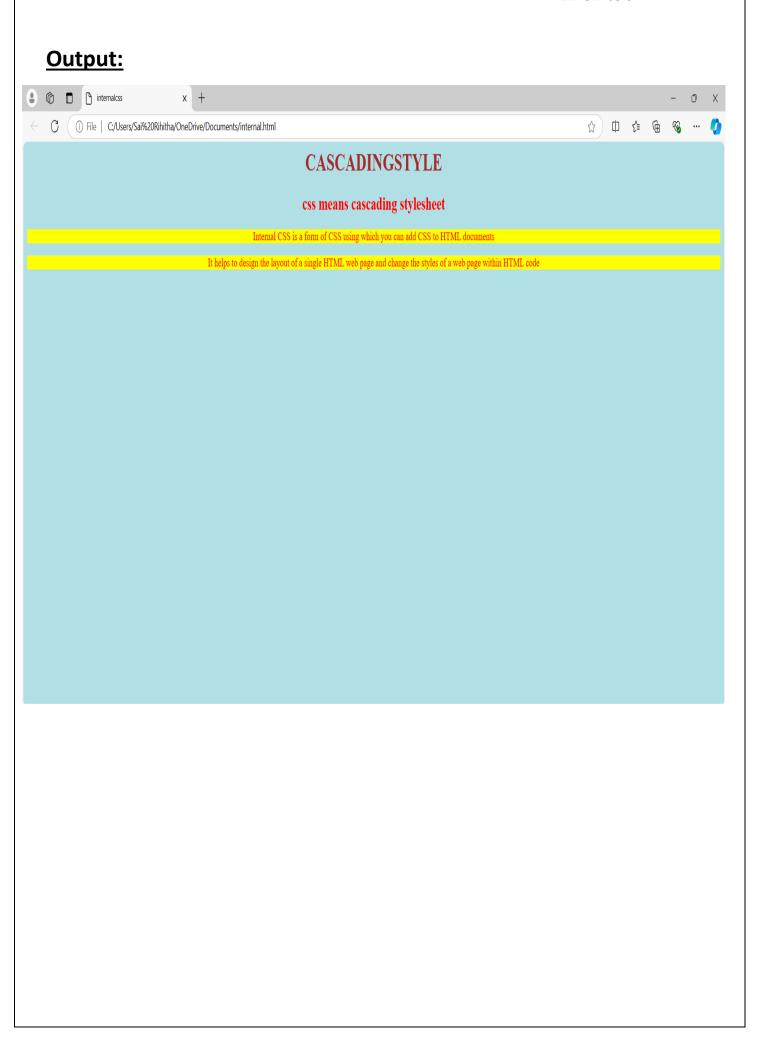


b) Frames:

<u>Aim:</u>WriteaHTMLprogramtodesignFormsandHTMLconstructs.

<u>Description:</u><form>isaHTMLelementtocollectinputdatawithcontaininginteractive controls. It provides facilities to input text, number, values, email, password, and control fields such as checkboxes, radio buttons, submit buttons, etc., or in other words, form is a container that contains input elements like text, email, number, radio buttons, checkboxes, submit buttons, etc. Forms are generally used when you want to collect data from the user.

```
<html>
<framesetcols="33%,33%,34%">
<framesrc="C:\Users\HP\Desktop\22A81A05H4\forms.html">
<framesetrows="50%,*1">
<framesrc="C:\Users\HP\Desktop\22A81A05H4\r2.html">
<framesrc="C:\Users\HP\Desktop\22A81A05H4\rowspan.html">
</frameset>
<framesrc="C:\Users\HP\Desktop\22A81A05H4\table.html">
</frameset>
</frameset>
</frameset>
</html>
```



Design Cascading Stylesheets

i) Internalcss:

<u>Aim:</u>WriteacodetodesignanINTERNALCSS.

<u>Description:</u> Aninternal CSS is defined in the <head> section of an HTML page, within a <style> element.

```
<html lang="en">
<head>
<title>internalcss</title>
<style>p{
color:red;
background-color:yellow;
}
h1{
color:Brown;
body{
text-align:center;
background-color:powderblue;
}
h2{
color:Red;
}
</style>
</head>
<body>
<h1>CASCADINGSTYLE</h1>
<h2>cssmeanscascadingstylesheet</h2>
Internal CSS is a form of CSS using which you can add CSS to HTML
documentsIthelpstodesignthelayoutofasingleHTMLwebpageandchange the
styles of a web page within HTML code
</body>
</html>
```

ii) Externalcss:

<u>Aim:</u>WriteacodetodesignanEXTERNALCSS.

<u>Description:</u> Withanexternalstylesheet, you can change the look of an entire website by changing just one file. Each HTML page must include a reference to the external style sheet file inside the link> element, inside the head section.

```
external.css
.main{
color:white;
text-align:center;
}
body{
background-image:url(https://img.freepik.com/free-vector/realistic-neon-lights-
background_23-2148907367.jpg);
background-size:cover;
background-attachment:fixed;
External.html:
<html>
<head>
<title>externalcss</title>
<linkrel="stylesheet"href="external.css">
</head>
<body>
<divclass=main>
<h1>externalcss</h1>
thisisexternalcss
</body>
</html>
```





Inline css

Inline css is very easy

Inline CSS is the technique to define the single element with the insert style sheets in an HTML document.

We can add CSS in three approaches: Inline, Internal, and External. It has the interactive and unique style to create a single HTML element; we can define the inline CSS on the style attribute.

ii) Inlinecss:

<u>Aim</u>:WriteacodetodesignanINLINECSS.

<u>Description:</u>An inlinestylemay beused to apply a uniquestylefor asingleelement.To useinlinestyles,addthestyleattributetotherelevantelement.Thestyleattributecan contain any CSS property.

- <html>
- <head>
- <title>inlinecss</title>
- </head>
- <body>
- <h1style="color:maroon;text-transformation;font-style:italic">Inlinecss</h1>
- <h1style="color:blue;text-align:center;">Inlinecssisveryeasy</h1>
- <pstyle="color:blue;background-color:pink"> InlineCSSisthetechniquetodefinethe single
 element with the insert style sheets in an HTML document.
- We can add CSS in three approaches: Inline, Internal, and
 External.IthastheinteractiveanduniquestyletocreateasingleHTMLelement;we can
 define the inline CSS on the style attribute.
- </body>
- </html>

BookDetails

Title	Author	ISBN	Publisher	edition	price
C	Balaguruswamy	Edition-II	Mc Graw Graw hill	Edition-IX	\$30.00
C++	yaswanth kanethkar	345678	Himalaya publisher	Edition-I	\$35.00
JAVA	Herbert Schildt	987456	Mc Graw Graw hill	Edition-IV	\$150.00

Write an XML file which will display the book information which includes the following:i)Titleofthebookii)AuthorNameiii)ISBNnumberiv)Publishername v)Edition vi)price

<u>Aim:</u>Program to display Book information using XMLfile.

Description:

XML:XML stands for extensible Markup Language.XML was designed to store and transport data.XML was designed to be both human- and machine-readable.

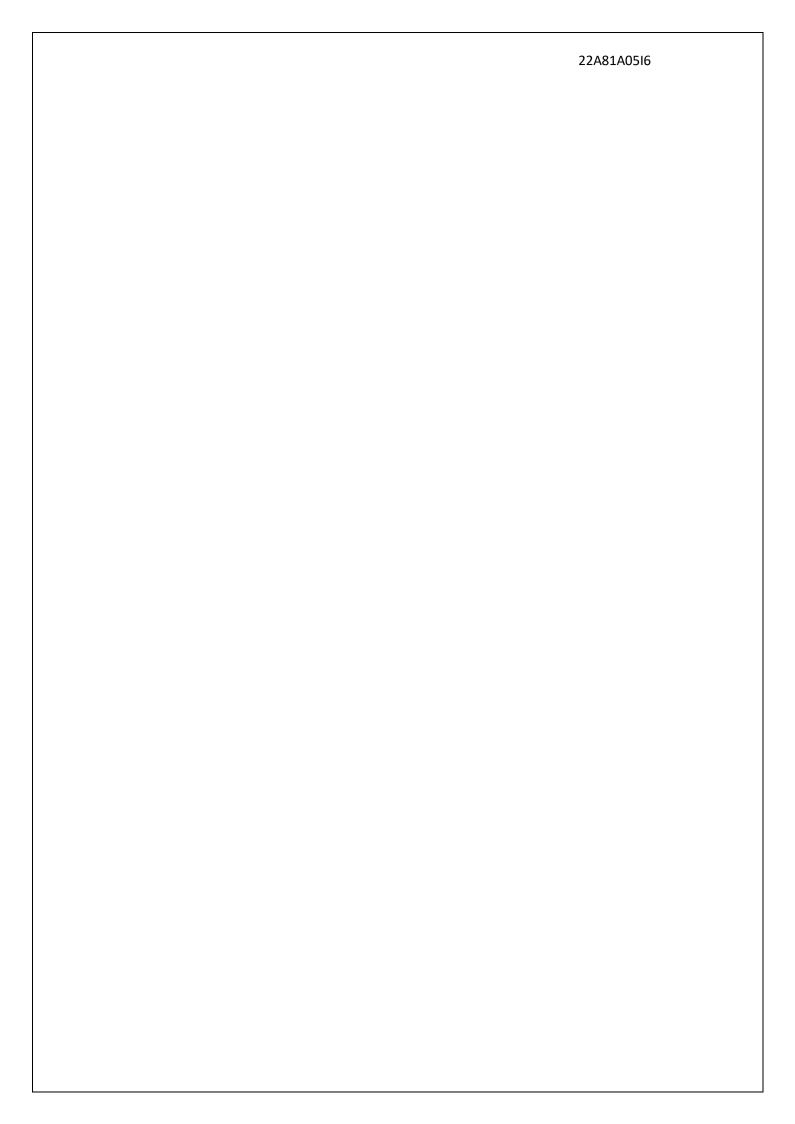
Syntax:<?xmlversion="1.0"encoding="UTF-8"?>

<!DOCTYPERoot-elementSYSTEM"Root-element.dtd">

DTD:DTD stands for Document Type Definition.A DTD defines the structureandthe legal elements and attributes of an XML document.

Syntax:<!DOCTYPEroot-element[elementdeclaration]>

```
Book.xml
<?xmlversion="1.0"?>
<!DOCTYPEbookdetailsSYSTEM"book.dtd">
<?xml-stylesheettype="text/xsl"href="book.xsl"?>
<bookdetails>
<book>
<title>C</title>
<author>Balaguruswamy</author>
<isbn>Edition-II</isbn>
<publisher>McGrawGrawhill</publisher>
<edition>Edition-IX</edition>
<price>$30.00</price>
</book>
<book>
<title>C++</title>
<author>yaswanthkanethkar</author>
<isbn>345678</isbn>
<publisher>Himalayapublisher/publisher>
<edition>Edition-I</edition>
<price>$35.00</price>
</book>
<book>
<title>JAVA</title>
<author>HerbertSchildt</author>
<isbn>987456</isbn>
<publisher>McGrawGrawhill</publisher>
<edition>Edition-IV</edition>
<price>$150.00</price>
</book>
```



```
</bookdetails>Book.dtd
<!Elementbookdetails(book+)>
<!Elementbook(title,author,isbn,publisher,edition,price)>
<!Elementtitle(#PCDATA)>
<!Elementauthor(#PCDATA)>
<!Elementisbn(#PCDATA)>
<!Elementpublisher(#PCDATA)>
<!Elementedition(#PCDATA)>
<!Elementprice(#PCDATA)>Bo
ok.xsl:
<?xmlversion="1.0"encoding="UTF-8"?>
<xsl:stylesheetversion="1.0"xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:templatematch="/">
<html>
<head><center>BookDetails</center></head>
<body>
<hrwidth="50%"/>
<tableborder="1"align="center">
TitleAuthorISBNPublisheredition
price
<xsl:for-eachselect="bookdetails/book">
<tdstyle="color:green;font-weight:bpld;align=center;"><xsl:value-of
select="title"/>
<tdstyle="color:orange;font-weight:bpld;align=center;"><xsl:value-of
select="author"/>
<tdstyle="color:voilet;font-weight:bpld;align=center;"><xsl:value-of
select="isbn"/>
<tdstyle="color:maroon;font-weight:bpld;align=center;"><xsl:value-of
select="publisher"/>
<tdstyle="color:blue;font-weight:bpld;align=center;"><xsl:value-of
select="edition"/>
<tdstyle="color:green;font-weight:bpld;align=center;"><xsl:value-of
select="price"/>
</xsl:for-each>
</body>
</html>
</xsl:template>
</xsl:stylesheet>
```

BookDetails

Title	Author	ISBN	Publisher	edition	price
C	Balaguruswamy	Edition-II	Mc Graw Graw hill	Edition-IX	\$30.00
C++	yaswanth kanethkar	345678	Himalaya publisher	Edition-I	\$35.00
JAVA	Herbert Schildt	987456	Mc Graw Graw hill	Edition-IV	\$150.00

b)Write a XML schema definition(XSD)

Aim: Program to display book information using XSD.

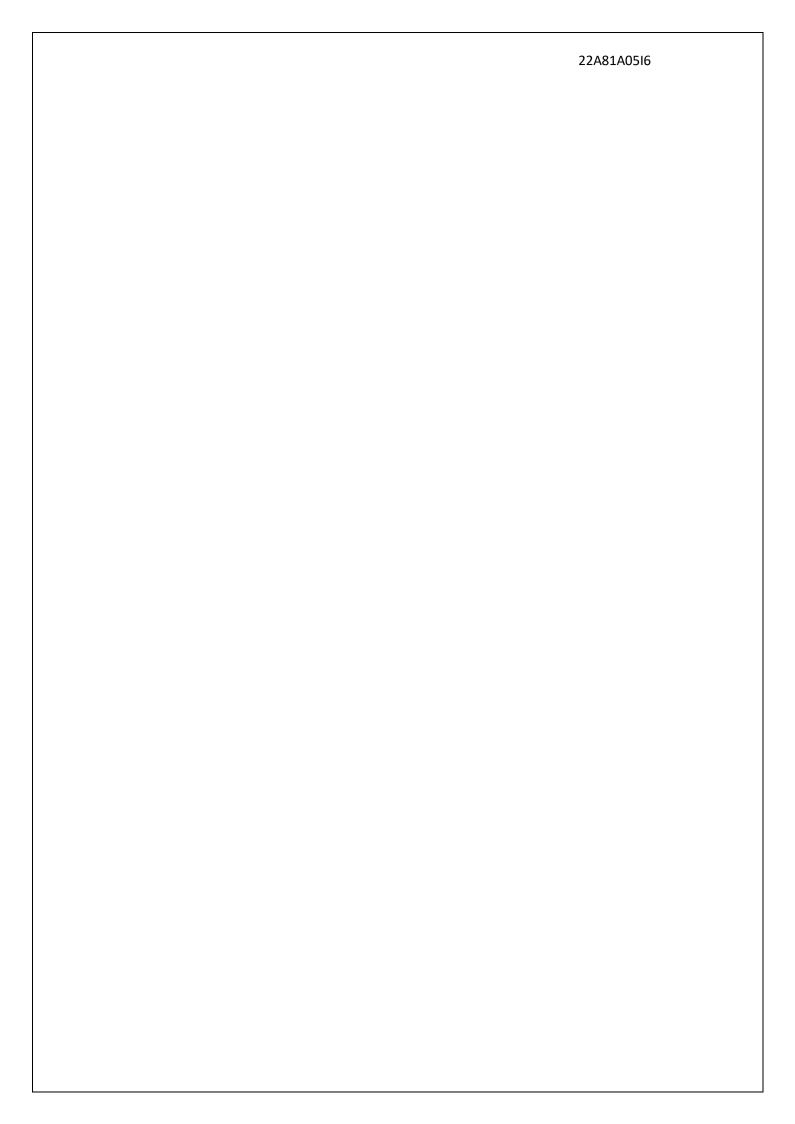
Description:

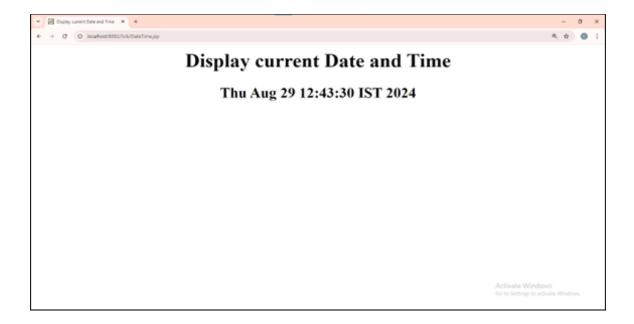
XSD:XML schema definition is commonly known as XSD to describe the XML language to check the validity or structure and vocabulary of the XML document against the dramatical rules of the appropriate XML language.

```
Book xsd.xml:
```

```
<?xmlversion="1.0"encoding="UTF-8"?>
<bookdetails
xmlns="http://www.w3schools.com"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="book1.xsd">
<book>
<title>C</title>
<author>Balaguruswamy</author>
<isbn>Edition-II</isbn>
<publisher>McGrawGrawhill</publisher>
<edition>Edition-IX</edition>
<price>$30.00</price>
</book>
<book>
<title>C++</title>
<author>yaswanthkanethkar</author>
<isbn>345678</isbn>
<publisher>Himalayapublisher/publisher>
<edition>Edition-I</edition>
<price>$35.00</price>
</book>
<book>
<title>JAVA</title>
<author>HerbertSchildt</author>
<isbn>987456</isbn>
<publisher>McGrawGrawhill</publisher>
<edition>Edition-IV</edition>
<price>$150.00</price>
</book>
</bookdetails>
```

```
Book1.xsd:
<?xmlversion="1.0?>
<xs:schemaxmlns:xs="http://www.w3.org/2001/XMLSchema>
<xs:elementname="bookdetails">
<xs:complexType>
<xs:sequence>
<xs:elementname="book"maxoccurs="unbounded"minoccurs="0">
<xs:complexType>
<xs:sequence>
<xs:elementname="title"type="xs:string"/>
<xs:elementname="author"type="xs:string"/>
<xs:elementname="isbn"type="xs:int"/>
<xs:elementname="publisher"type="xs:string"/>
<xs:elementname="edition"type="xs:string"/>
<xs:elementname="price"type="xs:string"/>
</xs:sequence>
</xs:complexType>
</xs:element>
```





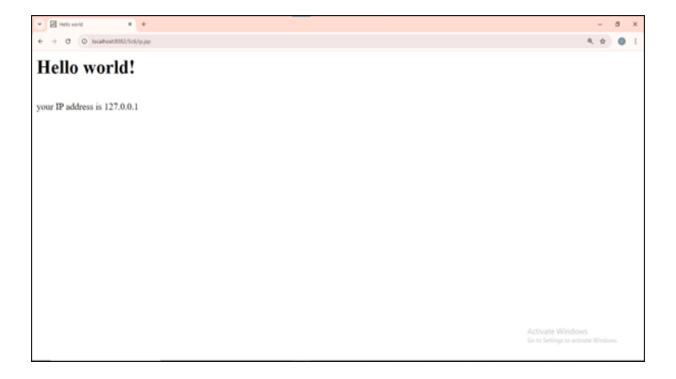
Create a simple JSP to print the current Date and Time.

<u>Aim:</u>To CreateasimpleJSPtoprintthecurrentDateandTime.

Description:

- **new Date():** This creates an instance of the Date class, which represents the current date and time based on the system clock.
- **out.print():** This outputs the string representation of the date to the web page, allowing the current date and time to be displayed within the HTML content.

```
<%@ page import="java.io.*,java.util.*,javax.servlet.*"%>
<html>
<head>
<title>Display Current Date and Time </title>
</head>
<body>
<center>
<h1> Display Current Date and Time</h1>
</center>
<%
   Date date=new Date();
out.print("<h2 align=\"center\">"+date.toString()+"</h2>");
%>
</body>
</html>
```



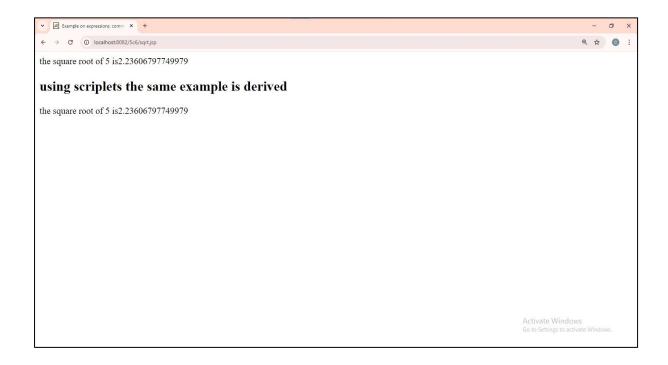
a)Create a simple JSP to display current IP-Address of the System

Aim:To createasimpleJSPtodisplaycurrentIP-Address oftheSystem

Description:

- request.getRemoteAddr():It is a method in Java that retrieves the IP address of the client making the request. It can be used to identify the user's location or for logging and security purposes.
- **out.println():**It is a method in Java used to send output to the client, typically in a web application. It prints the specified text followed by a new line to the response stream.

```
<html>
<head>
<title>HelloWorld!</title>
</head>
<body>
<h1>Helloworld!!</h1>
<br/>
<br/>
<m/d>
out.println("yourlPaddressis"+request.getRemoteAddr());
%>
</body>
</html>
```



b) Findoutthesquareroot foranumber.

Aim:To find out the square root for a number.

Description:

- Math.sqrt(): This method computes the square root of the specified number and returns the result as a double value.
- out.write():It is a method in Java that writes character data to the output stream without automatically appending a newline.

```
<html>
<head>
<title>Example on Experience,comments,Scriplets</title>
</head>
<body>
 the square root of 5 is <%= Math.sqrt(5)%>
<%--Example of sqrt function using two ways--%>
<h2>using scriplets the same example is derived</h2>
<%
out.write("<p>the square root of 5 is"); out.print(Math.sqrt(5));
%>
</body>
</html>
```





EXERCISE -7

Develop JSP Program calculatesfactorial values for an integer number, while the input is taken from html form.

Aim: To Develop JSP program to calculate the factorial values for an integer number, while the input is taken from an html form.

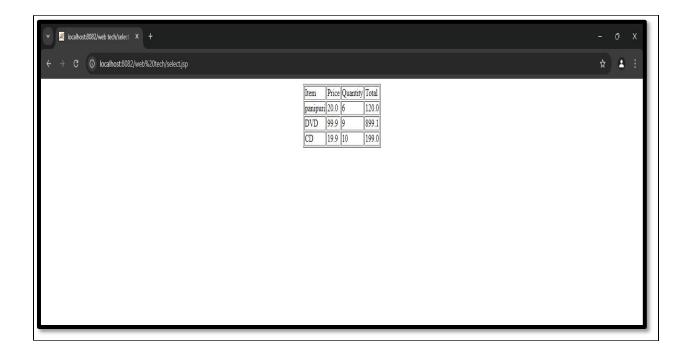
Description:

- request.getParameter():It is a method in Java that retrieves the value of a specified request parameter from the HTTP request, typically used to access form data sent by the client
- **out.print()**: This outputs the string representation of the date to the web page, allowing the current date and time to be displayed within the HTML content.

Factorial. Jsp

```
<%--calculates factorial values for an integer number--%>
<html>
   <body>
     <%!
        long fact(long n1)
        {
           if(n1==1 || n1==0)
            return (1);
            else
            return (fact(n1-1)*n1);
        }
      %>
      <%!
        long result,n;
        %>
      <% n= Long.parseLong(request.getParameter("num1"));</pre>
```

```
result=fact(n);
              out.println("<h1><b>Factorial value=</b>" +result);
           %>
         </body>
     </html>
Factorial.html
<!DOCTYPE html >
<html>
      <head>
           <title>Factorial</title>
      </head>
      <body>
           <h2 align=center>Factorial Calculation</h2>
           <form action = "fact.jsp">
                 <center>
                       Enter number:<input type="text"
name="num1"><br>
                             <input type="submit" value="factorial">
                 </center>
           </form>
     </body>
</html>
```



EXERCISE-8

Aim: Develop JSP program shows a Sample Order Form.

Item	Price	Quantity	Total Price
DVD	19.99	2	39.98
CD	12.99	9	116.91
Diskette	1.99	24	47.76

Description:

	Imports and Declarations: The code imports classes from the java. sql package to missing the context of the property of the
а	nageSQL connections and queries.

DatabaseConne	ection	:Itestab	lish	nesac	connectiont	:oaM	ySQLdatabasenamed"co
llege"usingJDBC,	with	"root"	as	the	username	and	password.

Executinga	Quer	y:ASQLqu	ery(SEI	LECT,	*FROMo	rder	·1)isexe	cute	dtoretrieve	eall
recordsfrom	the	"order1"	table,	and	results	are	stored	in a	ResultSet	t.

Generating	HTMLTa	ble:Ar	1HTMLt	ableiscre	eated,a	ndaloopite	eratest	hro	ughtl	1
e Result Set to	display	item	details	(name,	price,	quantity,	total)	in	the	
table.										

- Closing the Connection: The database connection is closed after retrieving the data tato free up resources.
- ErrorHandling:Anyexceptionsthatoccurduringtheprocessarecaughtandprint edtotheconsolefor debugging purposes

Here's as hortnote about the method sused in the code:

- Class.forName():LoadstheMySQLJDBCdrivertoenabledatabaseconnectivity.
- DriverManager.getConnection():EstablishesaconnectiontotheMyS
 QLdatabaseusingthe URL, username, and password.
- ${\tt 3.} \quad {\tt Connection.createStatement (): Creates a Statement object for executing S}$

QLqueries.

- 4. Statement.executeQuery():ExecutesaSELECTqueryandreturnstheresultinaResultSet.
- 5. ResultSet.next():MovestothenextrowintheResultSetandchecksifmorero wsexist.
- 6. ResultSet.getString(),getFloat(),getInt():Retrievesdatafromthecurren trowoftheResultSet as a string, float, or integer.
- 7. Connection.close():Closesthedatabaseconnectiontofreeresources.
- 8. System.out.println():Printsexceptiondetailstotheconsoleforerrorhandlin g.

```
Price
    Quantity
    Total
 <% while(rs.next()){%>
 <%out.print(rs.getString(1));%>
    <%out.print(rs.getFloat(2));%>
    <%out.print(rs.getInt(3));%>
    <%out.print(rs.getFloat(4));%>
 <%}%>
<%
 con.close();
}
catch(Exception e){
   System.out.println(e);}
%>
</body>
</html>
```

EXERCISE:9

<u>Aim:</u>CreateJSPtoinsert,delete,andupdatethedetailsofstudentintothedatabas eusing JDBC connectivity.

Insert.javaDesc

ription:

This program is used to insert new records into the std1 table in the company 1 database.

- Functionality: It establishes a connection to the MySQLdatabase using JDBC. Three INSERT SQLstatements are created to add new student records, each containing a studentnumber,name,anddepartment.Theserecordsareinsertedone byoneintothe std1 table.
- Purpose:Thisprogramdemonstrateshowtoaddnewdatatoadatabaseus ingINSERT queries in JDBC.

```
import
java.sql.*;
publicclassInser

t{
    publicstaticvoidmain(Stringar
        gs[]){ try{
        Class.forName("com.mysql.jdbc.Driver");
        Connection con =
        DriverManager.getConnection("jdbc:mysql://localhost:3306/company 1","root","root");
        Statementstmt =con.createStatement();
```

```
Strings="INSERTINTOstd1VALUES(6,'mahitha','cse')";
 Strings1="INSERTINTOstd1VALUES(1,'mouni','aiml')";
String s2 = "INSERT INTO std1 VALUES (2, 'sriya', 'eee')";
stmt.executeUpdate(s);
stmt.executeUpdate(s1);
stmt.executeUpdate(s2);
System.out.println("Recordinserted
");
     }
     catch(Exception
       e) {
     System.out.print(
       e); }
   }
 }
```

Update.java:

Description:

This program updates as pecific student's record in the std1 table.

- Functionality: It connects to the company1 database and uses an UPDATE SQL statementtochangethestudentnamefrom'appu'to'Appu'forthematc hingrecordin the std1 table.
- Purpose:Thisprogramdemonstrateshowtomodifyexistingdatainadatab aseusingan UPDATE query in JDBC.

```
import
 java.sql.*;
 Public
 classUpdate
 {
   publicstaticvoidmain(Stringargs[]){
     try {
     Class.forName("com.mysql.jdbc.Driver");
     Connection con
=DriverManager.getConnection("jdbc:mysql://localhost:3306/company1","root"
,"root");
     Statementstmt =con.createStatement();
     Strings="updatestd1setsname='mounika'wheresnamelike'mouni'";
     stmt.executeUpdate(s);
     System.out.println("Recordupdatedsucc
     essfully");
     con.close();
   catch (Exception e)
     {
```

22A81A05I6

```
System.out.println(e);
}
}
```

Delete.java:

Description:

This program deletes are cord from the std1 table in the company 1 database.

- Functionality:ItconnectstothedatabaseandexecutesaDELETESQLsta tementto remove the record where the student number (sno) is 1.
- Purpose:Thisprogramdemonstrateshowtodeletespecificdatafromadat abaseusinga DELETE query in JDBC.

```
import
java.sql.*;
Public class
Delete
{
  publicstaticvoidmain(Stringargs[]){
  try {
    Class.forName("com.mysql.jdbc.Driver");
    Connection con
=DriverManager.getConnection("jdbc:mysql://localhost:3306/company1","roo
t","root");
    Statement stmt =
    con.createStatement();
    Strings="deletefromstd1wheresno
    =6"; stmt.executeUpdate(s);
    System.out.println("RecordDeletedsucc
    essfully"); con.close();}
```

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