

Chapter 6: Information Representation Method — HTML-II

Solutions

Summative Assessment

Multiple-Choice Questions (MCQs)

1. Web browsers display images in the following format:
- | | |
|---------|-----------------|
| a. GIF | b. XBM |
| c. JPEG | d. All of these |

Ans. d

2. The attribute of the tag is used to provide alternate text for an image.
- | | |
|--------|------------------|
| a. ALT | b. SRC |
| c. IMG | d. None of these |

Ans. a

3. Which of the following attributes is used to set the color of visited links?
- | | |
|--------------|------------|
| a. LINKCOLOR | b. LINK |
| c. VLINK | d. BGCOLOR |

Ans. c

4. Which of the following tags supports the CELSPACING attribute?
- | | |
|------------|---------|
| a. <TABLE> | b. <TH> |
| c. <TD> | d. <TR> |

Ans. a

Very Short Answer Questions

5. Which attribute of the tag is used to insert an image in a Web page?

Ans. The SRC attribute of the tag is used to insert an image in a Web page.

6. How can you apply alternate text to an image?

Ans. In HTML, the ALT attribute of the tag is used to provide alternate text for an image.

7. Which tag is used to create a hyperlink?

Ans. The <A> tag is used to create a hyperlink.

8. In which attribute of the <A> tag, do you specify the URL of the file that you want to link?

Ans. In the HREF attribute of the <A> tag, we specify the URL of the file that we want to link.

Short Answer Questions

9. How many alignments are available for aligning images in a Web page? Name them.

Ans. In HTML, five types of alignment are available to align an image, which are:

- Top
- Middle
- Bottom
- Left
- Right

10. Which attribute is used to name the different sections of a Web page?

Ans. The NAME attribute is used to name the different sections of a Web page.

11. Define the <TH> and <TR> tags. Are the two tags similar?

Ans. TH in the <TH> tag stands for Table Header. You can use the <TH> tag to display the content of a table in the heading style, which appears in bold. On the other hand, TR in the <TR> tag stands for Table Row. This tag is used to create a table row. No, <TH> and <TR> tags are not similar.

12. What is the function of the <TD> tag?

Ans. The <TD> tag allows you to create cells in an HTML table.

13. What is the function of the <TR> tag?

Ans. The <TR> tag is used to create a table row.

14. Which tag helps to divide a table horizontally?

Ans. The <TR> tag helps to divide a table horizontally as it allows you to create a new row in a table.

15. In HTML, which attribute is used to apply a border to a table?

Ans. The BORDER attribute is used to apply a border to a table.

Long Answer Questions

16. Insert an image in a Web page. Apply the border to the image and provide alternate text to it. Now, link the image in the Web page to another document.

Ans. The source code of HTML_Test2.html is shown as follows:

```
<HTML>
<HEAD>
<TITLE>
Inserting an Image
</TITLE>
</HEAD>
<BODY>
```

```
<A HREF="HTML_Doc.html"> <IMG SRC="fairy.jpg"
BORDER=2 ALT="Image is linked"> </A>
</BODY>
</HTML>
```

The source code of HTML_Doc.html is shown as follows:

```
<HTML>
<HEAD>
<TITLE>
</TITLE>
</HEAD>
<BODY BGCOLOR="red" TEXT="white">
<CENTER> <B> Welcome to HTML </B> </CENTER>
This is the destination page.
</BODY>
</HTML>
```

The output of the HTML_Test2.html Web page is shown in Figure 1:

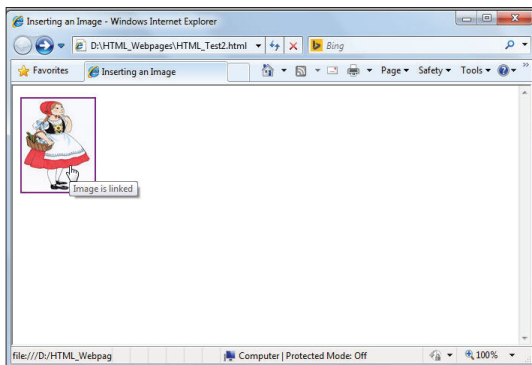


Figure 1: Inserting and Linking an Image

The ALT attribute is not supported by Mozilla Firefox; therefore, this Web page is shown in Internet Explorer.

When we click the image, the page is redirected to the Htm1_Doc.html page, as shown in the Figure 2:

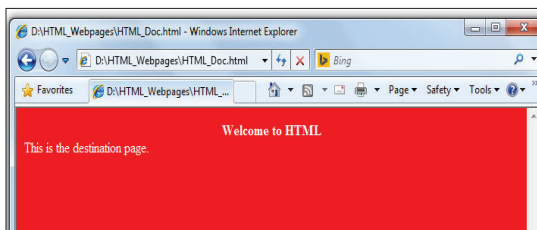


Figure 2: The Htm1_Doc.html Page

17. What is the difference between internal and external linking?

Ans. The main difference between external and internal linking is that in external linking, when you click the hyperlink, a document or Web page (to which the hyperlink is linked) opens in a new window. On the other hand, internal linking allows you to link different sections of the same Web page as well as different sections of different Web pages.

18. What do you understand by a table? Which tag is used to create a table in HTML?

Ans. According to W3C "The HTML table model allows authors to arrange data – text, preformatted text, images, links, forms, form fields, other tables, etc. – into rows and columns of cells."

An HTML table consists of rows and columns, which are further divided into cells in which you can enter data. Tables allow you to arrange disparate data in the Web page in a format that is easy to read and understand. The data of a table may be text or graphics. Cells are a combination of rows and columns. The data of a table is contained in its cells. In HTML, you can create a table by using the <TABLE> tag.

19. Create a Web page that contains some text. Now, link the text with another Web page. In addition, ensure that when you move the mouse pointer over the hyperlinked text, the name and information related to the hyperlink Web page is displayed.

Ans.

```
<HTML>
<HEAD>
<TITLE> Linking Web pages
</TITLE>
</HEAD>
<BODY BGCOLOR="yellow">
<CENTER> <B> Welcome to HTML </B> </CENTER>
<A HREF="HTML_Doc.html" TITLE=" Linked with
HTML_Doc.html"> Click Here </A>
</BODY>
</HTML>
```

The output of the above mentioned code is shown in Figure 3:

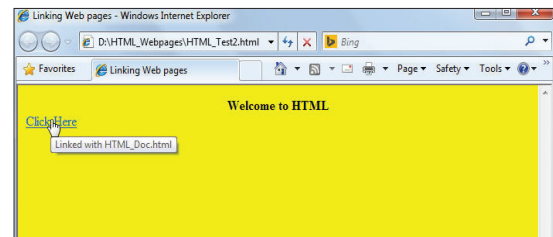


Figure 3: Creating a Hyperlink

20. What is the difference between an ordered and unordered list?

Ans. In an unordered list, the list items are represented in the bulleted form; whereas, in an ordered list, the list items are represented in the alphabetical, numerical, or roman numerical form.

21. Write the HTML code to insert a table that has three columns and four rows.

Ans.

```
<HTML>
<HEAD>
<TITLE>
</TITLE>
</HEAD>
<BODY>
<TABLE BORDER=1>
<TR>
<TD> A </TD>
<TD> B </TD>
<TD> C </TD>
</TR>
<TR>
<TD> D </TD>
<TD> E </TD>
<TD> F </TD>
```

```

</TR>
<TR>
<TD> G </TD>
<TD> H </TD>
<TD> I </TD>
</TR>
<TR>
<TD> J </TD>
<TD> K </TD>
<TD> L </TD>
</TR>
</TABLE>
</BODY>
</HTML>

```

The output of the above mentioned code is shown Figure 4:

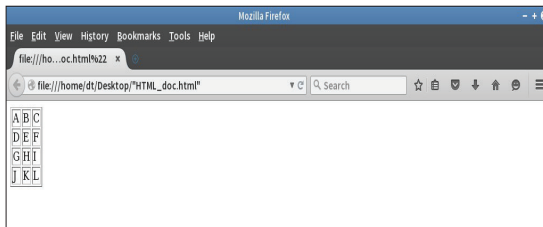


Figure 4: Inserting a Table on a Web Page

22. What is the purpose of using the **CELLPADDING** and **CELLSPACING** attributes in a table?

Ans. The purpose of the **CELLPADDING** attribute is to specify the space between the edges of a cell and its content. On the other hand, the **CELLSPACING** attribute is used to specify the space between the borders of a cell.

23. What is the difference between the **ROWSPAN** and **COLSPAN** attributes?

Ans. The **ROWSPAN** attribute is used to merge (combine) two or more rows of a table. On the other hand, the **COLSPAN** attribute is used to merge two or more columns of a table.

24. Write the HTML code to insert an image in a Web page and align it to the right of the Web page.

Ans.

```

<HTML>
<HEAD>
<TITLE>
Inserting an Image
</TITLE>
</HEAD>
<BODY>
<IMG SRC="doll.jpg" ALIGN="right">
</BODY>
</HTML>

```

The output of the above mentioned code is shown in Figure 5:

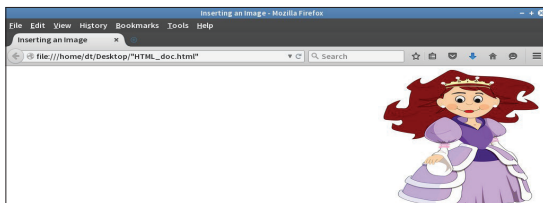


Figure 5: Aligning an Image

25. Define the **VALIGN** attribute in HTML with an example.

Ans. The **VALIGN** attribute, when used with the **<TD>** tag, helps align data in a single cell. For example, the data of cells that have a span of more than one row can be vertically aligned using the **VALIGN** attribute. The various values of the **VALIGN** attribute are top, bottom, and middle.

26. Define the **<THEAD>**, **<TBODY>**, and **<TFOOT>** tags with respect to a table.

Ans. In HTML, the **<THEAD>**, **<TBODY>**, and **<TFOOT>** tags are used inside the **<TABLE>** tag. These tags divide a table in different sections. The **<THEAD>** tag is used to define the header of the table. The **<TBODY>** tag defines the body of the table, and has several attributes, such as **BGCOLOR** and **ALIGN**. You can use these attributes to change the default setting of the table body. The **<TFOOT>** tag is used to define the footer of a table.

27. Explain the difference between the **CELLSPACING** and **CELLPADDING** attributes of the **<TABLE>** tag with the help of an example.

Ans. The **CELL PADDING** attribute allows the amount of space, in pixels, between the edges of a cell and its content. On the other hand, the **CELLSPACING** attribute allows the amount of space, in pixels, between the borders of cells.

28. What is the function of the **SUMMARY** attribute?

Ans. The **SUMMARY** attribute of the **<TABLE>** tag is used to provide information about a table. It enables you to know the type of information a table contains. For example, you can create a student table in HTML and write "Information about students" inside the **SUMMARY** attribute.

In this way, you can easily know that the information contained in the table is about students. More importantly, the **SUMMARY** attribute is used to provide access to non-visual browsers (such as BrailleSurf), which are used by users with visual impairment.

29. Distinguish between the **FRAME** and **RULES** attributes of the **<TABLE>** tag.

Ans. The **FRAME** attribute is used to display a specific outer portion of a table border while the **RULES** attribute is used to display a specific inside portion of a table border.

30. Name the attributes that are used to do the following in HTML:

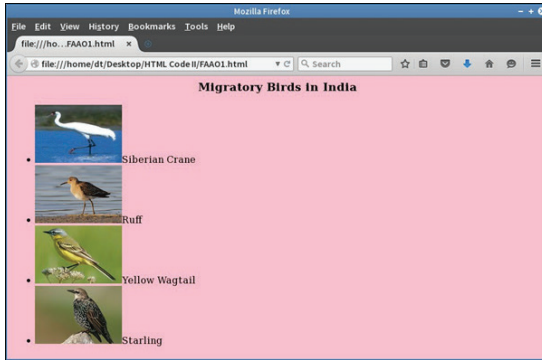
- Merge two or more rows.
- Change the background color of the cells in a table.
- Vertically align cell content.
- Merge two or more columns.

Ans. a. **ROWSPAN**
 b. **BGCOLOR**
 c. **VALIGN**
 d. **COLSPAN**

Formative Assessment

Application-Oriented Questions

- Write the HTML code to generate the following output:



Ans.

```
<HTML>
<HEAD>
<TITLE>
</TITLE>
</HEAD>
<BODY BGCOLOR="pink">
<CENTER>
<B>
Migratory Birds in India
</B>
</CENTER>
<UL>
<LI><IMG SRC="Siberian-Crane.jpg" WIDTH=100
HEIGHT=100 > Siberian-Crane </LI>
<LI><IMG SRC="Ruff.jpg" WIDTH=100 HEIGHT=100
> Ruff </LI>
<LI><IMG SRC="Yellow-Wagtail.jpg" WIDTH=100
HEIGHT=100 > Yellow Wagtail </LI>
<LI><IMG SRC="Starling.jpg" WIDTH=100
HEIGHT=100 > Starling </LI>
</UL>
</BODY>
</HTML>
```

- Consider the following Web page:



Answer the following questions:

- Identify the alignment of D.
 - Right
 - Left
 - Center
 - None
- What are the major features of this Web page?
 - Image and hyperlink
 - Text in bold style
 - Text and image
 - Table and text
- What will happen if you click any of the hyperlinks indicated in A?
- Identify the alignment of C.
 - Right
 - Left
 - Center
 - None
- Which of the following tags helps to insert an image in a Web page?
 - <IMAGE>
 -
 - <ADDIMAGE>
 - <INSERT>

Ans.

- Left
- Image and hyperlink
- You are redirected to the page linked with the hyperlink.
- Center
-

- Create the following table in HTML by using suitable tags:

The Student Details Table					
Student RollNo	Student Name	Marks			Total Marks
		English	Maths	Science	
101	Amisha	20	18	20	58
102	Nidhi	19	20	18	57
103	Sheetal	19	19	17	55
104	Aman	18	17	20	55

Ans.

```
<HTML>
<HEAD>
<TITLE>
</TITLE>
</HEAD>
<BODY>
<TABLE BORDER=1>
```

```
<TR>
<TH COLSPAN=6 ALIGN="center"> The Student De-
tails Table</TH>
</TR>
<TR>
<TH ROWSPAN=2>Student RollNo</TH>
<TH ROWSPAN=2> Student Name</TH>
<TH COLSPAN=3> Marks </TH>
<TH ROWSPAN=2>Total Marks</TH>
</TR>
<TR>
<TH>English</TH>
<TH>Maths</TH>
<TH>Science</TH>
</TR>
<TR>
<TD>101 </TD>
<TD> Amisha </TD>
<TD> 20 </TD>
<TD> 18 </TD>
<TD> 20 </TD>
<TD> 58 </TD>
</TR>
<TR>
<TD>102 </TD>
<TD> Nidhi </TD>
<TD> 19 </TD>
<TD> 20 </TD>
<TD> 18 </TD>
<TD> 57 </TD>
</TR>
<TR>
<TD>103 </TD>
<TD> Sheetal </TD>
<TD> 19 </TD>
<TD> 19 </TD>
<TD> 17 </TD>
<TD> 55 </TD>
</TR>
<TR>
<TD>104 </TD>
<TD> Aman </TD>
<TD> 18 </TD>
<TD> 17 </TD>
<TD> 20 </TD>
<TD> 55 </TD>
</TR>
</TABLE>
</BODY>
</HTML>
```

The output of the above mentioned code is shown in Figure 6:

The Student Details Table					
Student RollNo	Student Name	Marks			Total Marks
		English	Maths	Science	
101	Amisha	20	18	20	58
102	Nidhi	19	20	18	57
103	Sheetal	19	19	17	55
104	Aman	18	17	20	55

Figure 6: Creating the Student Details Table

4. Consider the following code:

```
<HTML>
<HEAD>
<TITLE>
Aligning an Image in different Alignment
</TITLE>
</HEAD>
<BODY BGCOLOR="pink">
<CENTER>
The water image is shown
</CENTER>
<IMG SRC="water.jpg"
ALIGN="right">
</BODY>
</HTML>
```

In the preceding code, an image is inserted on the right side of a Web page. Now, perform the following activities:

- Change the alignment of the image from the right side to the left side and view the changes in the Web browser.
- Similarly, change the image alignment from the right side to the center and view the changes in the Web browser.
- Insert a horizontal row below the text “The water image is shown”.
- Left-align the text “The water image is shown”.

Ans. a. Write the following code to change the image alignment from right to left:

```
<IMG SRC="water.jpg" ALIGN="left">
```

b. Write the following code to center align an image:

```
<CENTER> <IMG SRC="water.jpg"> </CENTER>
```

c. The <HR> tag used just below the “The water image is inserted” text to insert the horizontal rule.

d. Write the following code to left align the selected text:

```
<P ALIGN="left"> The water image is shown
</P>
```

5. Write the HTML code to create a Web page that contains an image which is linked to another HTML document. Clicking the image redirects you to the linked HTML document.

Ans. The source code of Linking_Image.html:

```
<HTML>
<HEAD>
<TITLE>
Link an Image
</TITLE>
</HEAD>
<BODY>
<A HREF="HTML_Doc.html"> <IMG SRC="fairy1.
jpg"> </A>
</BODY>
</HTML>
```

The source code of HTML_DOC.html:

```
<HTML>
<HEAD>
<TITLE>
```

```

</TITLE>
</HEAD>
<BODY BGCOLOR="red" TEXT="white">
<CENTER> <B> Welcome to HTML </B> </CENTER>
This is the destination page.
</BODY>
</HTML>

```

The output of the linking_Image.html page is shown in Figure 7:

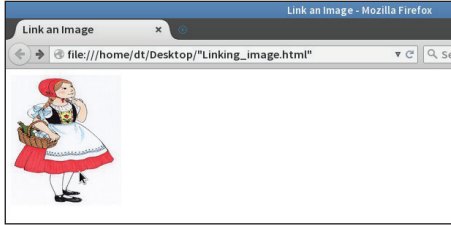


Figure 7: Creating an Image Link

On clicking the image, you are redirected to the HTML_Doc.html Web page, which is shown in Figure 8:

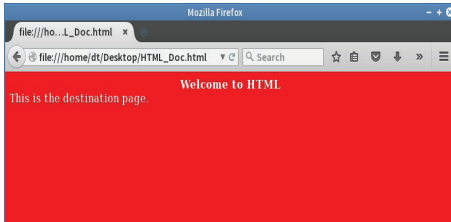


Figure 8: Displaying the Destination Page

6. Write the HTML code to generate the following output:

1			
2		3	
4	5	6	
7	8	9	10

Ans.

```

<HTML>
<HEAD>
<TITLE>
</TITLE>
</HEAD>
<BODY>
<TABLE BORDER=1>
<TR>
<TD COLSPAN=4 ALIGN="center"> 1 </TD>
</TR>
<TR>
<TD COLSPAN=2 ALIGN="center"> 2 </TD>
<TD COLSPAN=2 ALIGN="center"> 3 </TD>
</TR>
<TR>
<TD> 4 </TD>
<TD COLSPAN=2 ALIGN="center"> 5 </TD>
<TD> 6 </TD>
</TR>
<TR>
<TD> 7 </TD>

```

```

<TD> 8 </TD>
<TD> 9 </TD>
<TD> 10 </TD>
</TR>
</TABLE>
</BODY>
</HTML>

```

7. Write the HTML code to generate the following output.

The following are the main parts of a computer:

- CPU
- Monitor
- Keyboard
- Mouse

Ans. The following code allows you to display the given text in the given unordered list format:

```

<HTML>
<HEAD>
<TITLE>
</TITLE>
</HEAD>
<BODY>
The parts of computer are:
<UL TYPE="circle">
<LI> Monitor </LI>
<LI> Keyboard </LI>
<LI> Mouse </LI>
</UL>
</BODY>
</HTML>

```

8. Write the HTML code to create a table with six rows and three columns. In the table, two header rows have the pink color, two table body rows have the orange color, and the last two footer rows have the red color. Insert some data in the table.

Ans.

```

<HTML>
<HEAD>
<TITLE>
</TITLE>
</HEAD>
<BODY>
<TABLE BORDER="4">
<THEAD BGCOLOR="pink">
<TR>
<TD> RollNo </TD>
<TD> Name </TD>
<TD> Grade </TD>
</TR>
<TR>
<TD> 111 </TD>
<TD>Amita Arora </TD>
<TD> 150 </TD>
</TR>
</THEAD>
<TBODY BGCOLOR="orange">
<TR>
<TD> 112 </TD>
<TD> Kartik Bhat </TD>

```

```
<TD> 165 </TD>
</TR>
<TR>
<TD> 113 </TD>
<TD> Sidharth Sharma </TD>
<TD> 160 </TD>
</TR>
</TBODY>
<TFOOT BGCOLOR="red">
<TR>
<TD> 114 </TD>
<TD> Kamal Sachdeva </TD>
<TD> 175 </TD>
</TR>
<TR>
<TD> 115 </TD>
<TD> Sonal Kapur </TD>
<TD> 170 </TD>
</TR>
<TFOOT>
</TABLE>
</BODY>
</HTML>
```

The output of the above mentioned code is shown in Figure 9:

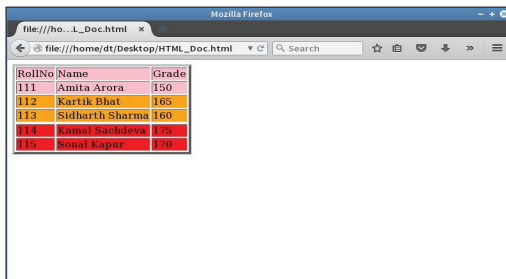
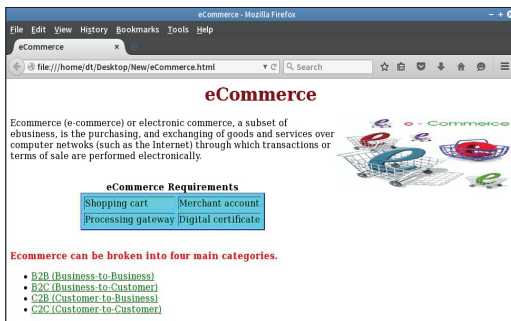


Figure 9: Creating a Table as per the Given Specifications

Unsolved Examination Questions

- Write the HTML code to generate the following output: [Delhi 2012 (8 marks)]



Note the following points while generating the Web page:

- Link color is green, active link color is blue, and visited link color is red.
- Title of the page is “eCommerce”.
- Color of the heading of the page is maroon.

- Image used is “ecommerce.jpg”.
- Caption of table is blue.
- Background of table is “cyan”.
- Table border is blue and of size 2.
- The 4 links are one.html, two.html, three.html, and four.html.
- Link Heading is red.

Ans.

```
<HTML>
<HEAD>
<TITLE> eCommerce</Title>
</HEAD>
<BODY LINK="green" ALINK="blue" VLINK="red">
<H1 ALIGN="center"> <FONT COLOR="maroon">eCommerce</FONT></H1>
<IMG SRC="ecommerce.jpg" ALIGN="right" HEIGHT="30%" WIDTH="35%">
<P ALIGN="left">Ecommerce (e-commerce) or electronic commerce, a subset of ebusiness, is the purchasing, and exchanging of goods and services over computer networks (such as the Internet) through which transactions or terms of sale are performed electronically.</P><BR>
<TABLE BGCOLOR="cyan" BORDER="2" BORDER-COLOR="blue" ALIGN="center" CELLSPACING="5">
<CAPTION><B>eCommerce Requirements</B></CAPTION>
<TR>
<TD> Shopping cart</TD>
<TD> Merchant account</TD>
</TR>
<TR>
<TD> Processing gateway</TD>
<TD> Digital certificate</TD>
</TR>
</TABLE><BR>
<P><FONT COLOR="red"><B>Ecommerce can be broken into four main categories.</B></FONT></P>
<UL>
<LI><A HREF="one.html"> B2B (Business-to-Business) </A></LI>
<LI><A HREF="two.html"> B2C (Business-to-Customer) </A></LI>
<LI><A HREF="three.html"> C2B (Customer-to-Business) </A></LI>
<LI><A HREF="four.html"> C2C (Customer-to-Customer) </A></LI>
</UL>
</BODY>
</HTML>
```

- Explain the command Click here for wild animals [Delhi 2006 (2 marks)]

Ans. This command will open the “wild.htm” Web page in the browser when you click the “Click here for wild animals” link.

- What do you understand by VLINK? [Outside Delhi 2005 (1 mark)]

Ans. The VLINK attribute allows you to set the color of the visited links on the Web page. Visited links are hyperlinks that have been clicked or visited by the user.

4. Why is linking between Web pages required? Explain with an example. **(Outside Delhi 2005 [2 marks])**

Ans. Links are required to connect one Web page to another. When a user clicks a link, he or she is redirected (sent) to the Web page specified as the destination Web page for the link. Let's understand how two Web pages are linked together through the following code:

The source code of HTML_Doc.html is shown as follows:

```
<HTML>
<HEAD>
<TITLE>
Linking Web pages
</TITLE>
</HEAD>
<BODY BGCOLOR="pink">
<BR>
<A HREF="test.html"> Click Here </A>
</BODY>
</HTML>
```

The source code of test.html is shown as follows:

```
<HTML>
<HEAD>
<TITLE>
Destination Web page
</TITLE>
</HEAD>
<BODY BGCOLOR="red">
<BR> <BR> <BR>
<CENTER>
<IMG SRC="image.jpeg">
</CENTER>
</BODY>
</HTML>
```

The output of HTML_Doc.html is shown in Figure 10:

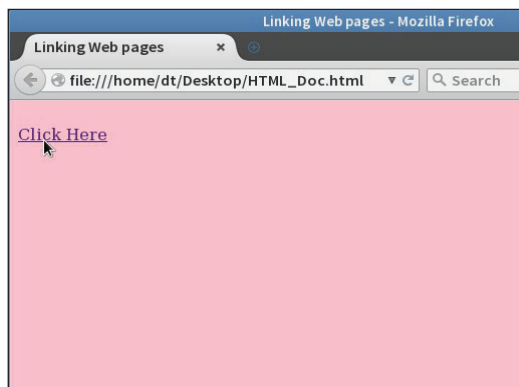


Figure 10: Linking of Web Pages

On clicking the text, you are redirected to the test.html Web page, which is shown in Figure 11:

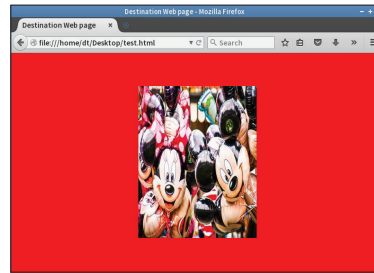


Figure 11: The test.html Web Page

5. How can an image be inserted in a Web page? **(Outside Delhi 2005 [1 mark])**

Ans. In HTML, you can insert an image by using the tag. In the tag, there is an attribute named SRC, which contains the URL of an image that you want to insert.

6. Consider the HTML code Introduction

In the above code:

- What is the purpose of # ?
- What will happen when the user clicks "Introduction"? **(Outside Delhi 2005 [1 mark])**

Ans. a. The # symbol is used to tell the Web browser that this link is in the same Web page.
b. When you click Introduction, you are redirected (or sent) to the section named 'intro' in the Web page.

7. Expand the following tags used in HTML:

-
-
- <HR>
-

(Delhi 2005 [2 marks])

Ans. a. : Stands for ordered list. The tag is used to create an ordered list in the Web page.
b. : Stands for Bold. The tag is used to apply the bold style to the selected text.
c. <HR>: Stands for Horizontal Rule. The <HR> tag is used to create a horizontal rule in a Web page.
d. : Stands for Image. The tag is used to insert an image in the Web page.

8. The following code is written to align the image in the center of the browser's window. However, the desired result is not achieved. Mention the reason.

```
<IMG SRC="house.gif " ALIGN= "center">
```

(Delhi 2005 [2 marks])

Ans. In HTML, five types of alignments are available to align an image. The alignments are top, bottom, middle, left, and right. Thus, the desired output is not achieved. If you want to center align an image, you need to use the <CENTER> tag.