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# **RPS GROUP OF INSTITUTIONS, BALANA MOHINDERGARH**

**LAB MANNAUL  
MULTIMEDIA TECHNOLOGY**

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**CSE 5<sup>TH</sup> SEM**

**Department of Computer Science and Engineering**

**2015-16**

**LAB MANUAL**  
**MULTIMEDIA TECHNOLOGY LAB**

**SYLLABUS**

- 1. Write a program to justify a text entered by the user on both the left and right hand side. For example, the text “An architect may have a graphics program to draw an entire building but be interested in only ground floor, can be justified in 30 columns as shown below. An architect may have a Graphics programs draw an enteric building but be interested in only ground floor.**
- 2. Study the notes of a piano and stimulate them using the key board and store them in a file.**
- 3. Write a program to of java script.**
- 4. Devise a routine to produce the animation effect of a square transforming to a triangle and then to a circle.**
- 5. Write a program to show a bitmap image on your computer screen.**
- 6. Create a web page for a clothing company which contains all the details of that company and at-least five links to other web pages.**
- 7. Write a program by which we can split mpeg video into smaller pieces for the purpose of sending it over the web or by small capacity floppy diskettes and then joining them at the destination.**
- 8. Write a program to simulate the game of pool table.**
- 9. Write a program to simulate the game Mine Sweeper.**
- 10. Write a program to play “wave” or “midi” format sound files.**
- 11. Write a program to insert drop down list.**
- 12. Write a program to insert table.**
- 13 Write a program for Formatting Text.**
- 14. Write a program to multiple Images.**
- 15. How to work in Dreamweaver.**

### **Vision of Multimedia Lab:**

- 1) There are so many software tools of multimedia like Photoshop, flash, Dreamweaver so we organize this lab because students can practically understanding of tools.
- 2) Students can create websites what they want from any multimedia software tools.
- 3) Students can make games by using multimedia concepts.
- 4) Multimedia is supportive for informal learning of science and technology. Multimedia provide new platform document.

### **SOFTWARE AND HARDWARE REQUIRMENTS**

#### **HARDWARE REQUIRMENTS FOR SERVER:**

**PROCESSOR:** P-IV

**RAM:** 256MB

**HDD:** 40GB

**SPEED:** 2.4GHZ

#### **SOFTWARE REQUIRMENTS:**

**OPERATING SYSTEM:** WINDOWS 2003, 2007, WINDOWS XP

**Software tools:** FLASH, PHOTOSHOP, DREAMWEAVER, C++

## **Experiment: 1**

**AIM: -To study MULTIMEDIA HARDWARE system.**

- a) INPUT DEVICES
- b) OUTPUT DEVICES
- c) COMMUNICATION DEVICES

**REQUIREMENTS:** - Floppy Disc, Hard Disc, DVD, CD Rom, Input devices like Track Ball, Touch Screen, Mice, Flat Bed, Digital Camera, Output devices like Amplifier speaker, monitor, projector, Printer.

### **THEORY: -**

#### **INPUT DEVICES:**

A great variety of input devices -from the familiar keyboard and handy mouse to touch screen and voice recognition setups can be used for development and delivery of a multimedia project.

#### **1) KEYBOARD:**

A keyboard is the most common method of interaction with a Computer. Keyboards provide various tactile responses and have various layouts depending upon your Computer system and keyboard model. Keyboard is typically rated at least 50 million cycles. The most common keyboard for PCs is the 1011 style, although many styles are available with one or more special keys LED's.

**2) MICE:** A mouse is the standard tool for interacting with a graphical user interface (GUI). All Macintosh computers require a mouse; on PCs, mouse: are not required but recommended. The buttons on the mouse provide additional user input, such as pointing and double clicking to open a document.

#### **3) TRACK BALL:**

Track ball are similar to mice except that the cursor is moved by using one or more fingers to roll across the top of the ball. The track ball does not need the flat space required by a mouse. Track ball have at least two buttons; one for the user to click, and the other to provide the press and hold condition necessary for selecting & dragging operation.

#### **4) TOUCHSCREEN:**

Touch screens are monitors that usually have a textured coating across the glass face. This coating is sensitive to pressure and register the location of the user's finger when it touches the screen. The touch mate system, which has no coating, actually measures the pitch roll, and yaw rotation of the monitor when pressed by finger, and determine how much force exerted and the location where the force was applied.

## **5) MAGNETIC CARD ENCODERS AND READERS:**

Magnetic card setups are useful when you need an interface for a data base application or multimedia project that tracks users. You need both card encoder and a card reader for this type of interface. The encoder connects to the computer at the serial port and transfer information to magnetic strip of tape on the back of the card.

## **6) FLAT-BED SCANNERS:**

A scanner may be the most useful piece of equipment you will use in the course of producing a multimedia project. There are flat bed scanner and handheld scanners. Most commonly available are gray -scale and color flat- bed scanners that provide a resolution of 300 or 600 dots per inch. Professional graphics houses may use even higher resolution unit.

## **7) OPTICAL CHARACTER RECOGNITION (OCR) DEVICES: OCR**

Software such as Omni page from acre or perceive from corona, to convert printed matter to ASCII text files in our computer. We can also convert paper document into a word processing document on our computer without retyping or rekeying. An OCR terminal can be of use to multimedia developer because it recognizes not only printed characters but also handwriting.

## **8) INFRARED REMOTES:**

An infrared remote unit lets a user interact with our project while we are freely moving about. Remotes work like mice and trackballs, except they use infrared light to direct the cursor and require no cables to communicate. Remote mice work well for a lecture or other presentation in an auditorium or similar environment, when the speaker needs to move around the room.

## **9) VOICE RECOGNITION SYSTEM:**

Voice recognition system facilitates hands free interaction with your project. These systems usually provide a unidirectional cardio, noise canceling microphone that automatically filters out background noise.

## **Experiment: 2**

**AIM: To study the Multimedia BASIC SOFTWARE TOOLS.**

**REQUIREMENTS:** Basic software tools.

### **THEORY:**

**1) Text editing and Word processing tools:** - A word processor is usually the first software tool computer users learn. From letter invoice and story boards to project content word processors may also be our most often used tool, as we design or build a multimedia project. Word processor such as Microsoft Word and Word Perfect are powerful that includes spell checkers, table formatters, templates for letters, resume purchase orders and other common documents. In many word processors we can actually embed multimedia elements such as sound, images and video etc.

**2) OCR software network:** - With optical character recognition (OCR) software, a flat-bed scanner and our computer, we can save many hours of rekeying printed words, and get the job done faster and more accurately than roomful of typists. OCR software turns bitmapped characters into electronically recognizable ASCII text. A scanner is typically used to create the bitmap. Then the software breaks the bitmap into chunks according to whether it contains text or graphics by examining the texture and density of area of the bitmap and by detecting edges. The text areas are then converted into ASCII character using probability and expert system algorithms.

**3) Painting and Drawing tools:** - Painting and drawing tools as well as 3D modelers are perhaps the most important items in your toolkit because of all multimedia elements, the graphical impact of our project will likely have the greatest influence on the end user. Painting software such as Corel draw, free hand is dedicated to producing vector based line art easily printed to paper at high resolution.

**4) 3D modeling and animation tools:** - With 3D modeling software, object rendered in perspective appear more realistic. We can create stunning scenes and wander through them by choosing just the right lighting and perspective for our final rendered image. Powerful modeling packages such as Infinite-D, auto desk, strata vision's, secular logo motion, wave front, aids soft images. Important for multimedia developers, many 3D modeling applications also include export features enabling us to save a moving view or journey through our scenes as a quick time or AVI animation file. Each renders 3D image takes from a few seconds to few hours to complete, depending upon the complexity of the drawing and the number of drawn objects included in it. A good 3D modeling tool should include the following features:

- i. Ability to drag and drop primitive shapes into a scene.
- ii. Lathe and extrude features.
- iii. Color and texture mapping.
- iv. Ability to create and sculpt organic objects from scratch with Bezier spline drawing tools.
- v. Unlimited cameras with focal length.

**5) Image editing tools:** - Image editing applications are specialized and powerful tools for enhancing and retouching existing bit-mapped images. These applications also provide many of the features and tools of painting and drawing programs and can be used to create images from scratch as well as images digitized from scanners, video frame grabbers, digital camera clip art files or original artwork files created with painting or drawing package.

**6) Animation:** - Video and digital movie tools : today the most widely used tool for creating multimedia animations for Machintosh and Windows environment is Macromedia director. Animations and digitized video movies are sequences of bit-mapped graphics scene, rapidly played back. Most authoring tools adopt either a frame or object oriented approach to animation, but rarely both. Moviemaking tools typically take advantage of quick time for Machintosh and Windows and Microsoft video for Windows technology and let you create, edit and present digitized motion video segments, usually a small window in your project. To make a movie from video, you need special hardware to convert the analog video signal into digital data movie making tool such as Primer, video shop, media studio pro and let you edit and assemble video clips captured from camera, tape and other digitized audio or midi files.

**7) Sound editing tools:** - System sounds are shipped with both Machintosh and window system, and they are available as soon as we install the operating system. System sounds and beeps are used to indicate an error, warning or special user activity. Using sound editing software we can make our own sound effects. We need software for editing digital sounds. Although we can usually incorporate MIDI sound files in our multimedia project without learning any special skill, using editing tool to make our own MIDI file requires that we understand the way music is sequenced, stored and published. We need to know about tempos, clips, notations and instruments. And we will need a MIDI synthesizer or device connected to our computer. Many MIDI applications provide both sequencing and notation capabilities, and some let you edit both digital audio and MIDI within the same application.

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### Experiment: 3

**Aim: - A PROGRAM TO VIEW A BMP FILE USING C OR C++**

#### **ALGORITHM:**

1. START
2. DETECT THE GRAPHS AND ALSO INITIALIZE THE GRAPHICS.
3. OPEN THE BMP FILE IF AVAILABLE AND SET ITS GRAPHICS.
4. APPLY FOR SOME LOOPS FOR GETTING THE BMP FILE YOU WANT TO HAVE.
5. COMPILE THE PROGRAM AND VIEW THE RESULT OF THE FILE.
6. STOP.

#### **SOURCE CODE:**

```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
void main()
FILE
*p; int i;
int gd=DETECT,gm,x=0,y=480;
int g;
char c;
initgraph(&gd,&gm," ");
p=fopen("F4.bmp","r");
if(p==NULL) printf("file
not found"); else
for(i=0;i<=436;i++)
fscanf(p,"%c",&c);

while(fscanf(p,"%c",&c)!=EOF)
{
i=(int)c;
```

```

x++;
{
if (x>=640)
{
x=0; y--;
}
putpixel(x,y,i);
}
}
}
getch();
}

```

#### **EXPERIMENT: 4**

**Aim: - A PROGRAM TO PRODUCE ANIMATION EFFECT TO TRIANGLE TRANSFORM INTO SQUARE AND THEN INTO**

#### **CIRCLE:-ALGORITHM:**

1. START
2. INITIALIZE THE GRAPHICS.
3. SET THE COLOUR OF THE TRIANGLE.
4. DRAW THE POLYGONAL FORM FROM THE TRIANGLE.
5. SET ITS COLOUR AND THEN TRANSFORM WHOLE INTO A CIRCLE AND FILL IN SOME COLOURS.
6. STOP.

#### **SOURCE CODE:**

```

#include<stdio.h>
#include<conio.h>
#include<graphics.h> void
main()
{
int gd=DETECT,gm,poly[8],c;
initgraph(&gd,&gm,"");
poly[0]=250; poly[1]=200;
poly[2]=200;
poly[3]=300;
poly[4]=300;
poly[5]=300;
poly[6]=250;
poly[7]=200;
setcolor(6);

```

```

setfillstyle(SOLID_FILL,11);
fillpoly(4,poly);
getch();
for(c=1;c<=50;c++)
{
poly[0]--; poly[6]++;
drawpoly(4,poly);
delay(100);
}
getch();
for(c=1;c<=25;c++)
{
setcolor(6);
circle(250,250,75-c);
floodfill(1,1,10);
delay(9);
}
getch();
}

```

### Experiment No. 5

**Aim: - Write a program to insert drop down list.**

#### Source code:

```

<html>
<head>
<script>
function allowDrop(ev)
{ ev.preventDefault();
}

function drag(ev) {
ev.dataTransfer.setData("text", ev.target.id);
}

function drop(ev) {
ev.preventDefault();
var data = ev.dataTransfer.getData("text");
ev.target.appendChild(document.getElementById(data));
}
</script>
</head>
<body>

<div id="div1" ondrop="drop(event)" ondragover="allowDrop(event)"></div>



```

```
</body>
</html>
```

### Experiment No:-6

**Aim: - Write a program to insert Table.**

**Source Code:-**

```
<html>
<body>

<table style="width:100%">
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
  <tr>
    <td>John</td>
    <td>Doe</td>
    <td>80</td>
  </tr>
</table>

</body>
</html>
```

### Experiment No.: -7

**Aim: - Write a program for Formatting Text.**

**Source Code:-**

```
<html>
<body>

<p>This text is normal.</p>

<p><i>This text is italic.</i></p>

</body>
</html>
```

## Experiment No: - 8

**Aim:-Write a program to multiple Images.**

### Source Code:-

```
<html>
<head>
<style>
img {
  width:100%;
}
</style>
</head>
<body>
```

<p>It is better to use the style attribute (instead of the width and height attributes), because it prevents internal or external styles sheets to change the original size of an image:</p>

```


```

```
</body>
</html>
```

## **Experiment No: - 9**

**Aim: -How to work with Dreamweaver.**

### **Study:**

Step 1: Click on Start

Step 2: Select Program

Step 3: Select Macromedia Dreamweaver

Step 4: Click on Dreamweaver

You will get the screen as given below:

On opening Dreamweaver you will get 3 main windows, (1) Object; which contains

Character, Common, Forms, Frames, Head and Invisible. Many options are available

under these, like under common you will get, insertion of image, rollover image, layer,

tabular data, horizontal bar, line break, email link, date, flash movie, fireworks object, shockwave file, generator, plug-ins, active x controls, SSI etc; under character you will find some special character/symbols like ©, ®, £, ¥, ™ etc; under frames you will find

different type/style of frames; under forms you will find all the elements of forms, like

text box, password box, radio button, check box, selection box, jump menu, submit &

reset button etc; (2) Properties; which provides the properties of the selected object/item,

page properties etc; (3) Launcher; which contains: Site, Library, HTML Style, CSS Style, Behaviors, History, HTML Source; On clicking any of the item on the Launcher

the subsequent window opens up.

Before creating your web page you have to create a Root directory in which all of your

work will be saved. Then in dream weaver create a Site and Provide the Root Directory (which you have created). To do this;

Step 1: Select Site from Launcher window

Step 2: Click on Define Site

Step 3: Click on NEW

Step 4: Give a name under "Site Name"

Step 5: Select the folder by browsing under "Local root folder" Step

6: Click on OK

Step 7: Click on DONE

Now start working on Dreamweaver.

Write your text, format the text, insert picture through Object window or by INSERT ->

IMAGE. The Insert Menu provides you all the features available under the Object

window. The modify menu provides you to modify the selection properties, page properties, link, table, frames etc. The Text menu helps to do all the formatting for the text, like selecting font, font-size, color, alignment etc. TO  
**SAVE YOUR FILE**

Step 1: Click on FILE

Step 2: Click on SAVE

Step 3: Choose the folder in which you want to save

Step 4: Provide a name to the file (with .htm / .html extension) Step

5: Click on SAVE

### **DIFFERENT MENUS**

**File Menu:** Under it we have New, Save, Save as, Save as template, Import, Export, Preview in browser etc. options.

**Edit Menu:** In this menu we Cut, Copy, Paste, Undo, Redo, Select all, Find, Replace,

Preference etc. options which helps us in editing the document. View

**Menu:** Rulers, Grids, Plugins etc. are available under it.

**Insert Menu:** It contains almost all the things which are there in the Object tool bar.

**Modify Menu:** Under this we have Page properties, selection properties, Make link, remove link, link target, table, layer, frameset, library, template, timeline, translate etc.

This menu helps to modify the page by choosing the option as per requirement. Text

**Menu:** It helps to format the text written in the page by providing details, such as indent, outdent, list (ol, ul, dl), alignment, font, style, size, size increase, size decrease,

HTML style, CSS style, color etc. It also provides to check the spellings in the page. **Site Menu:** This menu contains site files, site map, new site, open site, define site options.

**Window Menu:** It contains all the different windows, like, object, properties, launcher,

site file, site map, CSS, timeline, history, behavior, layer, frame, library, template etc.

### **ADDING A LAYER TO THE TIMELINE AND GIVING MOTION TO THE LAYER.**

Step 1: Choose Layer from Common toolbar and draw a layer. Step

2: Write the text inside the Layer.

Step 3: Click on Modify (when the layer is selected)

Step 4: Click on Timeline

Step 5: Click on Add layer to timeline.

Step 6: Modify -> Timeline -> Select Record path to Layer Step

7: Drag the layer as per your wish to define a path. Step 8: Tick on Auto Play & Loop (if required)

Step 9: Open it in the Browser to see the effect.

INSERTING SCRIPTS TO YOUR PAGE Step 1:

Click on Insert

Step 2: Click on Script

Step 3: Choose the type of Script Step

4: Write the code in "Content" Step 5:

To finish click on OK

INSERTING EXTERNAL MEDIA'S IN THE WEB PAGE

Step 1: Click on the icon in the object tool bar Or

Insert -> Media -> Choose the media type to be inserted

Step 2: Find and select the file required (browse)

Step 3: Click on OK

ADDING SSI (SERVER-SIDE INCLUDE) TO THE PAGE

Step 1: Click on the icon in the object tool bar Or

Insert -> SSI

Step 2: Select the file

Step 3: Add the file

Step 4: Provide the URL (where to be attached)

Step 5: Provide information on Relative to the document or to the "Site Root" Step

6: Click on OK

TO SHOW/HIDE THE SSI DOCUMENT IN THE PAGE

Step 1: Click on Edit Step

2: Select reference Step 3:

Select Translation Step 4:

Click on SSI

Step 5: For showing the SSI file; choose one from the following option:

a) a) in all files

b) b) in no files

c) c) in files with extension (stm, htm, html, shtm, shtml)

d) d) in files matching one of these expressions "<!-- #include" Example : <!-- #include virtual="/virtual campus/bitmain/result.html" --> Step 6: Click on OK



## ADDING CSS STYLE TO YOUR PAGE

Step 1: Click on Window Menu

Step 2: Select CSS Styles

Or Click on CSS Styles in the “Launcher”

Step 3: Click on New to create a new CSS style

Step 4: Choose the Type

a) a) Make custom style

b) b) Redefine HTML

c) c) Use CSS Selection

Step 5: Give a name Step

Click OK

On choosing (a) of step 4 you will get a new screen in which you have to provide the

following details in Category:

i. i. Type : Provide the Font, Size, Style, Weight, Decoration, then click OK

ii. ii. Background: provide a Color or insert an image, then click OK iii.

iii. Block: Give the alignment style, then click OK

iv. iv. Box: Provide the margin setup of Top, Left, Right & Bottom, then click OK

v. v. Border: Provide the width & color, then click OK

vi. vi. List: Select the list type (OL, UL, DL), then click OK

vii. vii. Positioning: Provide the style, Visibility, Z-index, Placement (Top, Left, Right & Bottom), click OK

After providing the details, select the style from the CSS style window. Choose where to

apply this style (body, p, layer etc), by clicking on Apply button in the CSS style window.

## ADDING A XML FILE TO YOUR PAGE

Step 1: Choose File -> Import XML into Template

Step 2: Select the XML file & click Open

When an XML file is imported, Dreamweaver merges the XML content into the template, which is being specified in the XML file and shows the result in the document

window of Dreamweaver. If that specified template is not found then Dreamweaver

prompts to select another template for use.

The XML file should contain the name of the template and editable region as XML tags.

EXAMPLE:

```
<doctitle>
```

```
<![CDATA[<title>newtemplate</title>]]>
```

```
</doctitle>
<Edit-Region>
<![CDATA[{Edit-
Region}]]> </Edit-Region>
```

Here doctitle identifies the title of the template and edit-region identifies the editable region.

But in a standard Dreamweaver file XML tags use the “item name”. The above example

(XML tags) is given below in standard Dreamweaver file: <item name="doctitle">

```
<![CDATA[ <title>newtemplate</title>]]>
</item>
<item name="Edit-Region">
<![CDATA[{Edit-Region}]]></item>
</item>
```

Here “item name=doctitle” identifies the title of the template and “item name=edit region” identifies the editable region.

#### TO EXPORT A DREAMWEAVER DOCUMENT AS XML FILE

Step 1: Choose File -> Open,

Step 2: Select the document that uses a template (and has editable regions) Step 3: Click Open

Step 4: Choose File -> Export -> Export Editable Regions as XML. Step

5: In the XML dialog box, choose a tag notation

Step 6: Click OK.

Step 7: Enter a name for the XML file

Step 8: Click Save.

When the document is exported, the generated XML file contains the name of the template the document is using and all editable region names.

**Experiment No.: -10**

**Aim:- Write a program to of java script.**

**Source code:**

```
<html>
<body>

<h1>My First JavaScript</h1>

<p id="demo">JavaScript can change the style of an
HTML element.</p>

<script>
function myFunction() {
    document.getElementById("demo").style.fontSize = "25px";
}
</script>

<button type="button" onclick="myFunction()">Click Me!</button>

</body>
</html>
```

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