

Paper: Multimedia Technologies

Code No.: ETCS 312

Lab Plan (Week wise)

Software used in the lab:

Adobe premium CS4 includes

1. Dreamweaver
2. Photoshop
3. Flash

Dreamweaver:

CREATING A WEBPAGE

To create a Web page, follow these guidelines:


1. Choose a page to be the homepage of your Web site. This will be the first page that users encounter when they visit your site. Save this file to your local root folder as home.html. Naming the homepage home.html tells the Web browser that this is the first page it should open when someone visits your site.
2. To add a new page go to File > New and choose a basic HTML page. Save this page by clicking File > Save As. Name the first page home.html
3. After your homepage is created, you can use this page as a template layout for all the other pages in your site. Simply hit Save As and name the file whatever you wish, but be sure to keep the name simple, for example CV.html, resume.html, pictures. etc. Remember not to use capital letters or spaces when naming files; this will make it easier for web browsers to find your files.
4. To save the pages of your site simply click File > Save for each page. Make sure your homepage is named home.html, and save all of your files in the folder you chose when you defined your site, i.e. in your local root folder.

HOW TO INSERT A TABLE

To insert a table, follow these steps:

1. In the main menu, click Insert > Table.
2. Insert the amount of Table Rows and Columns
3. Set Table width to between 600 and 800 pixels.

4. Set Border thickness. To have a visible border type in 1 or higher, to have no border type in 0.
5. Cell padding adds room inside of a cell. Enter 0 for no space or a number to Increase the space.
6. Cell spacing adds space between cells. Enter 0 for no space or a number to Increase the space.
7. Click OK.









The image shows a 'Table' properties dialog box with the following sections and controls:

- Table size**
 - Rows: 4
 - Columns: 6
 - Table width: 600 pixels
 - Border thickness: 0 pixels
 - Cell padding: 0
 - Cell spacing: 0
- Header**
 - None (selected)
 - Left
 - Top
 - Both
- Accessibility**
 - Caption: (empty text field)
 - Align caption: default
 - Summary: (empty text area)
- Buttons: Help, Cancel, OK

PROPERTIES OF TABLES

If you click on one of the table borders, you can view your table properties in the Properties window. You can set properties.

	Table Id	Rows	1	W	100	%	CellPad		Align	Default
		Cols	1	H		pixels	CellSpace		Border	0
		 		Bg Color			Bdr Color			
		 		Bg Image						

ADDING DESIGN ELEMENTS

A. ADDING TEXT

To insert text simply click inside a cell and type in your content. When you click ENTER, Dreamweaver automatically adds paragraph spacing. To add a line space, click SHIFT + ENTER.

B. INSERTING IMAGES

To insert an image, follow these steps:

1. Click in the cell where you want the image to appear.
2. Click Insert > Image.
3. Locate the image you want to insert.

NOTE: All of your images should be saved in the "images" folder that you established when you started.

4. Click Choose to insert the image.

C. IMAGE PROPERTIES INSPECTOR

The top half of the Image Properties Inspector allows you to:

- Name the image .
- Change the size of the image.
- See where the image file is located.
- Link the image to a file or a site.
- Edit the image.

PREVIEWING IN BROWSER

You can preview your Web pages in a browser in many ways:

1. Choose File > Preview in Browser.
2. Hit F12.
3. Click on the world icon located on the toolbar at the top of your page

CREATING HYPERLINKS

A hyperlink or link, is an object or text that, when clicked, takes the users to another webpage or opens a file. The various types of hyperlinks are explained below.

A. INTERNAL LINKS

Internal links are used to connect users to other pages within the same website. Before linking to other pages, you must make sure that the other pages are saved in your local root folder and contain the file extension .html.

To create an internal link, follow these steps:

1. Select the text or image you would like to make a hyperlink.
2. Click on the small folder next to the Link field in the Properties Inspector
3. Browse through the files, and select the page you would like to link.
4. Click OK.

B. EXTERNAL LINKS

External links are used to connect the users to pages from other websites.

To create an external link, do the following:

1. Select a text or an image you want to make a hyperlink.
2. Click the cursor inside of the link text field in the Properties Inspector.
3. Type the complete URL (web address) of the website you want to link (e.g., <http://www.google.com>).

C. BASIC EMAIL LINK

E-mail links are links that will automatically open the user's default email program with a blank e-mail addressed to the specified e-mail link. There are two ways to create an email link.

You can:

1. Click on the Insert menu at the top of the screen and select Email Link.
2. Type in text for the hyperlink name or label, for example: My Email or Click here to email me.
3. Type in your email address, i.e. where the email is to be sent.
4. Click OK.

Photoshop

Begin by opening Adobe Photoshop CS4.

On a PC, click **Start > Programs > Adobe > Photoshop CS4**, or click on the shortcut on the desktop.

SETTING UP THE DOCUMENT

Setting up your document correctly from the start will make your job much easier as you work through your project. This will require some advanced planning. For example, if your final output will be a brochure, you may need to set up your document to be horizontal and double-sided.

To create a new document, click **File > New**.



Here you will be able to name your file, set up the correct page size, and orientation for your document. Options include, but are not limited to:

Page Size and Orientation

Change the page size by typing in new values for width and height. Page size represents the final size you want after bleeds or trimming other marks outside the page. In the Preset dropdown menu you can find such common sizes as letter, legal, tabloid, etc. Typing in exact

values for Height and Width gives you more control over the size and orientation of your page.

Resolution

Resolution is a number of pixels on a printed area of an image. The higher the resolution, the more pixels there are on the page, the better is the quality of the image. **Color Mode**

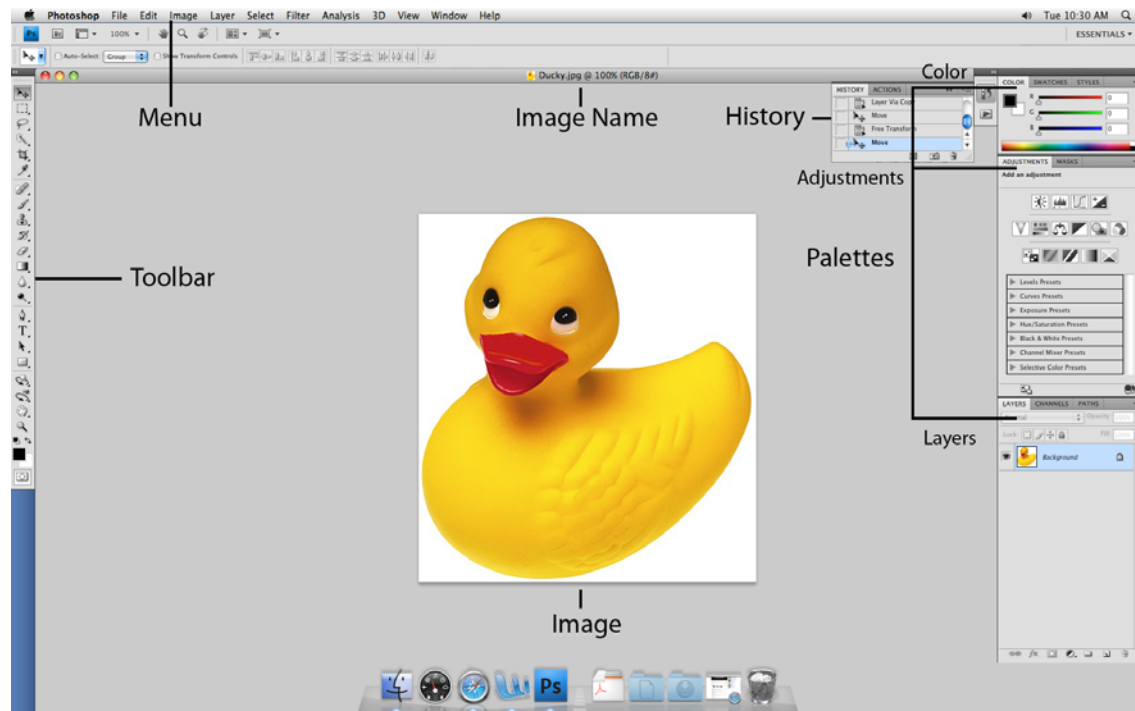
Choose a color mode that will best fit your project. For example, when making a graphic for a web site, choose RGB. When making an image for print, choose CMYK.

Background Contents

Choose the background: white, color, or transparent. When you have entered all of your document settings, click OK.

OPENING AN IMAGE FROM A DISK

If the image you have is saved on a disk, select **File > Open**, and then navigate to the disk drive where your image is saved. Choose the image file and click **Open**. At this point, you may want to save your image under a different name so that you can always have the original to fall back on in case of a mistake. To save your file, select **File > Save As** and type in the new name of the file in the dialogue box.



This is the layout of Adobe Photoshop interface.

Menu Bar

If you look at the top of the screen you will see the Menu bar which contains all the main functions of Photoshop, such as **File, Edit, Image, Layer, Select, Filter, View, Window,** and **Help.**

Tool Bar

Most of the major tools are located in the Tool bar for easy access.

The Image

The image will appear in its own window once you open a file.

Image Name

The name of any image that you open will be at the top of the image window as shown above.

Palettes

Palettes contain functions that help you monitor and modify images. By default, palettes are stacked together in groups. These are the palettes that are usually visible: **Color, Adjustments,** and **Layers.** If none of the palettes are visible, go to **Window** in the **Menu** bar and choose palettes you need to work with.

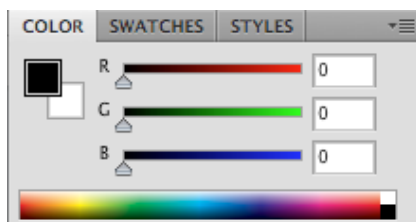
Palette

Below is the description of the most commonly used palettes in Adobe Photoshop CS4.

Palettes used for more advanced image editing will be covered in the Adobe Photoshop CS4 Tutorial -Intermediate.

COLOR, SWATCHES, STYLE

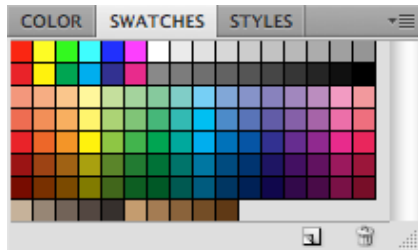
The Color palette displays the current foreground and background colors and RGB values for these colors. You can use the sliders to change the foreground and background colors in different color modes. You can also choose a color from the spectrum of colors displayed in the color ramp at the bottom of the palette.



Color palette



Swatches palette



Style palette

LAYERS

Layers let you organize your work into distinct levels that can be edited and viewed as individual units. Every Photoshop CS4 document contains at least one layer. Creating multiple layers lets you easily control how your artwork is printed, displayed, and edited. You will use the Layers palette (Fig. 6) often while creating a document, so it is crucial to understand what it does and how to use it.

A) **Layer Visibility** -The eye shows that the selected layer is visible. Click on or off to see or to hide a layer.

B) **Layer Locking Options** -Click the checkered square icon to lock Transparency; click the brush icon to lock the Image; click the arrow icon to lock the Position; click the lock icon to lock all options.

C) **Layer Blending Mode** -Defines how the layer's pixels blend with underlying pixels in the image. By choosing a particular blending mode from the dropdown menu you can create a variety of special effects.

D) **Fill** -By typing in a value or dragging the slider you can specify the transparency of the Fig. 6. Layers Palette color of the image or object.

E) **Opacity** -By typing in a value or dragging a slider you can specify the transparency of the entire layer.

F) **Layer Lock** -The icon shows when the layer is locked and disappears when it is unlocked. Double-click the icon to unlock the layer.

G) **Layer Options Menu** -Click the black triangle to see the following options: New Layer, Duplicate Layer, Delete Layer, Layer Properties, etc. Some of the options are presented as icons at the bottom of the Layers palette.

H) **Link Layers** – Can be used to link layers together.

I) **Layer Styles** -If a layer has a style, an “F” icon shows at the bottom of the Layers palette. Click the little black triangle to see style options.

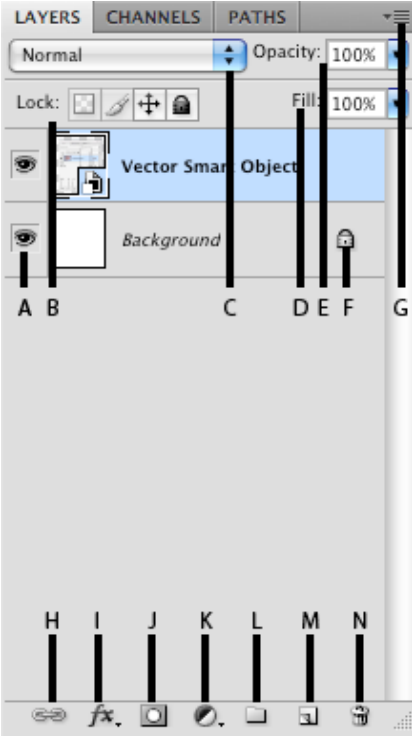
J) **Layer Mask** -A grayscale image, with parts painted in black hidden, parts painted in white showing, and parts painted in gray shades showing in various levels of transparency.

K) **Layer Set** -This option helps to organize images with multiple layers. Click the icon to create a folder for several layers.

L) **Create New Fill or Adjustment Layer** -Have the same opacity and blending mode options as image layers and can be rearranged, deleted, hidden, and duplicated in the same manner as image layers. Click the icon and select an option to create a new fill or adjustment layer.

M) **Create New Layer** -Click this icon to create a new layer.

N) **Delete Layer** -To delete a layer, select a layer in the Layers palette and drag it to the trash can icon; or, select a layer and click the icon.



Toolbox



Selection tools

Marquee

Selects an object by drawing a rectangle or an ellipse around it.



Click the tool button, choose a rectangular or an elliptical marquee. Drag the marquee over the area of the image you wish to select.

Move



Used to select and move objects on the page.

Click the tool button, then click on any object on the page you wish to move.

Lasso



Selects an object by drawing a freehand border around it.

Click the tool button, drag to draw a freehand border around the area of the image you wish to select.

Polygonal Lasso



Selects an object by drawing a straight-edge border around it.

Click the tool button, click on the starting point on the image, drag to draw a straight-edge border, click and drag again to select the area of the image you wish to select. Double-click to finish.

Magnetic Lasso



Selects an object by drawing a border that snaps to the edges of the defined area of the object.

Click on the starting point on the image, drag around the area of the image. The tool will make fastening points at the edges. To finish selecting, drag the border to the starting point and click precisely in the point.

Magic Wand



Selects all objects in a document with the same or similar fill color, stroke weight, stroke color, opacity, or blending mode. By specifying the color range, or tolerance, you can control what the Magic Wand tool selects.

Crop Tool



Click the tool button, then click on the area of the image you wish to select.

Selects and cuts parts of an image.

Click the tool button, then click and drag the tool over the part of the image that you want to keep.

Resize the selected area dragging the squares at the sides and corners. Click the RETURN key when your crop box is sized correctly.

Slice Tool



Used to cut images into slices, which can be exported to a web page.

Note: We have many other tools available in photoshop like alteration tools, drawing and selection tools and assisting tools

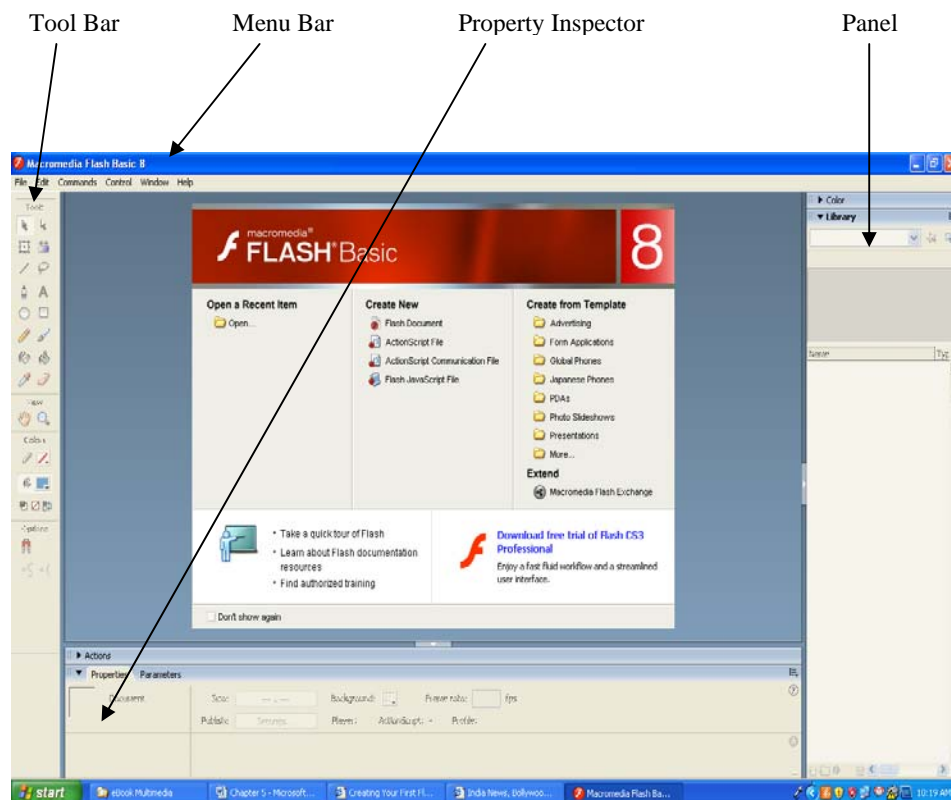
FLASH

Making animation using flash

Flash is a timeline based authoring tool with a broad set of features to create multimedia presentations, animations and movies. Before getting into how to make an animated object, let's get acquainted with **Flash** software.

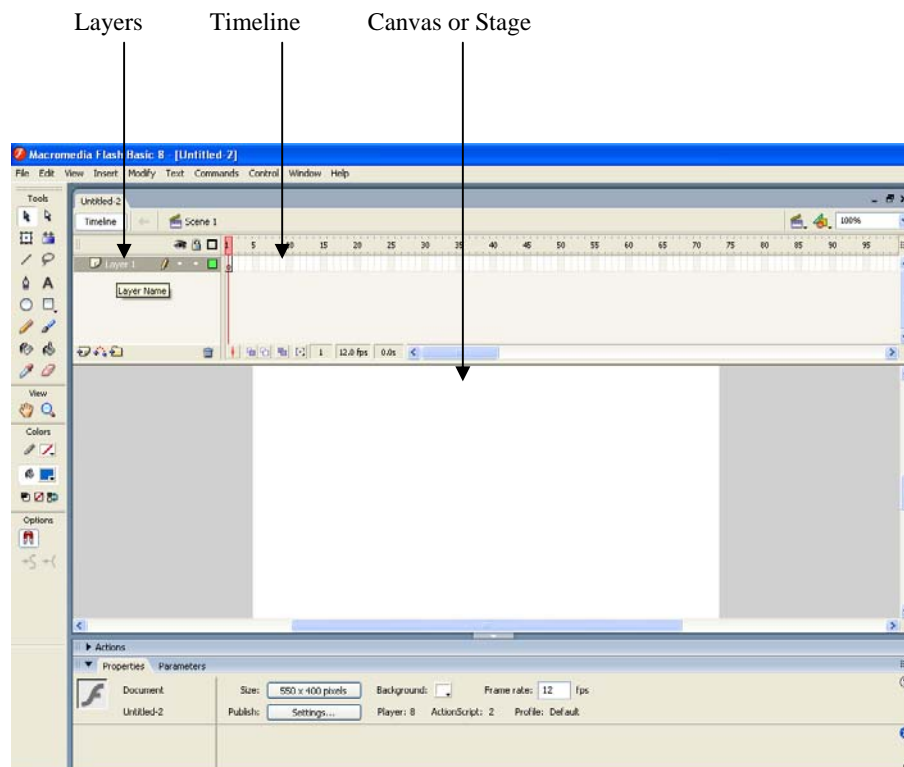
How to create a new document in flash?

When you open the Flash software for the first time, you'll be asked to choose Designer or Developer view. You should know all the panels and toolbars on this screen.



PROPERTY	DESCRIPTION AND USE
Size	Width and Height of the canvas. Differs for web production
Background Color	Choose the background color for the canvas
Frame Rate	The number of frames displayed sequentially per second of animation in order to create the illusion of motion. The higher the frame rate, the smoother the motion, because there are more frames per second to display the transition from one point to another.

- You can create a New Flash document by either clicking at **Flash Document** from the **Create New** category OR you click **File->New->General** from the menu bar.
- A blank canvas appears on the screen.
- Click on **Properties** tab located just below the canvas. A dialog box appears. Fill in the fields according to your requirement. Some of the fields are described later in this book.

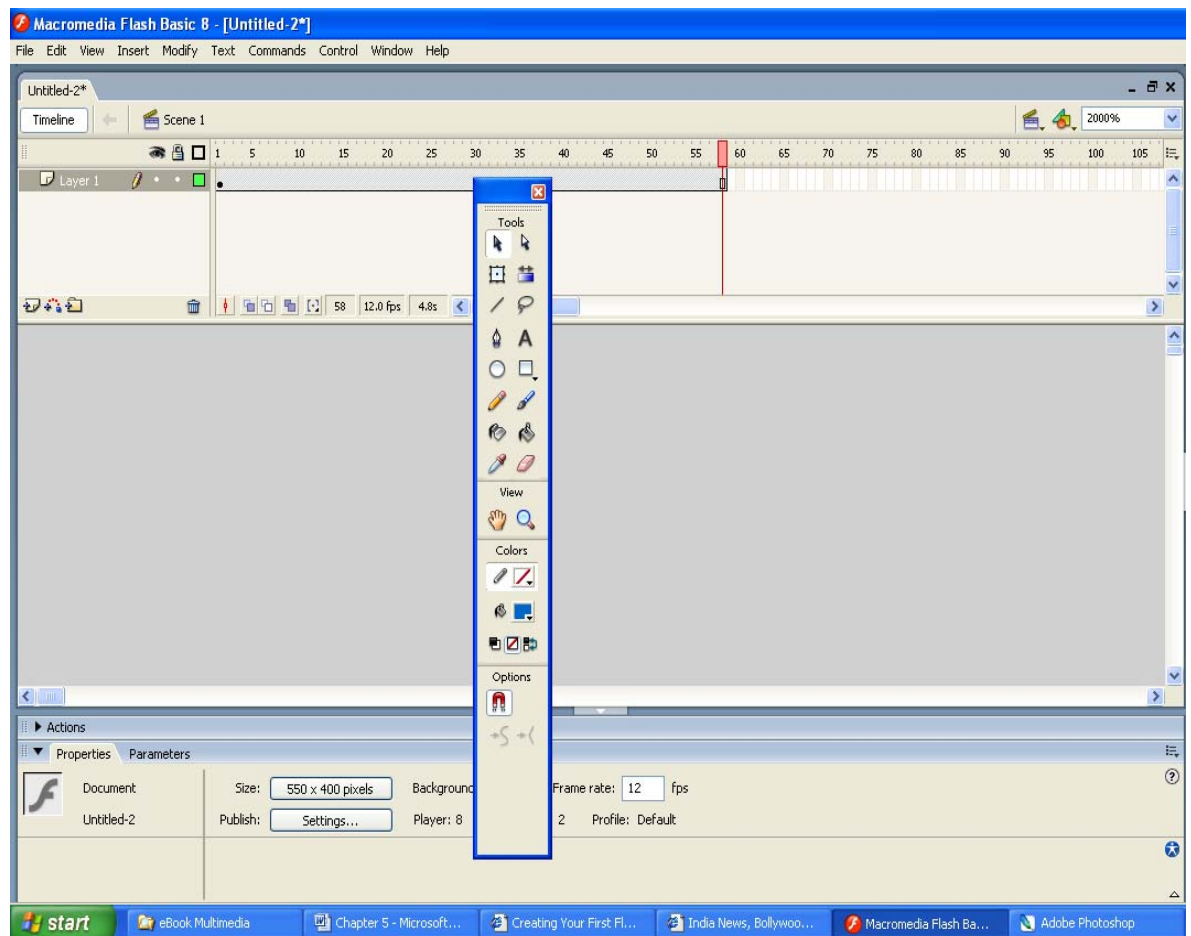


How to draw an object in the canvas?

Flash provides a Toolbar located on left side of the Flash window which is used to create objects and give them special effects. The various tools are described below.

Tool	Description and Use
Selection Tool	Helps select an entire object by clicking the object.
Subselection Tool	Helps to modify the shapes created with the Pen Tool.
Free Transform	Helps to scale, rotate, compress, stretch, or skew lines and shapes.
Gradient Transform	Helps to transform one color into another color in an area of a graphic.
Line	Helps to draw straight lines.
Lasso	Helps to create a freeform selection and round up objects
Pen	Helps to draw precise paths e.g. straight lines, smooth curves.

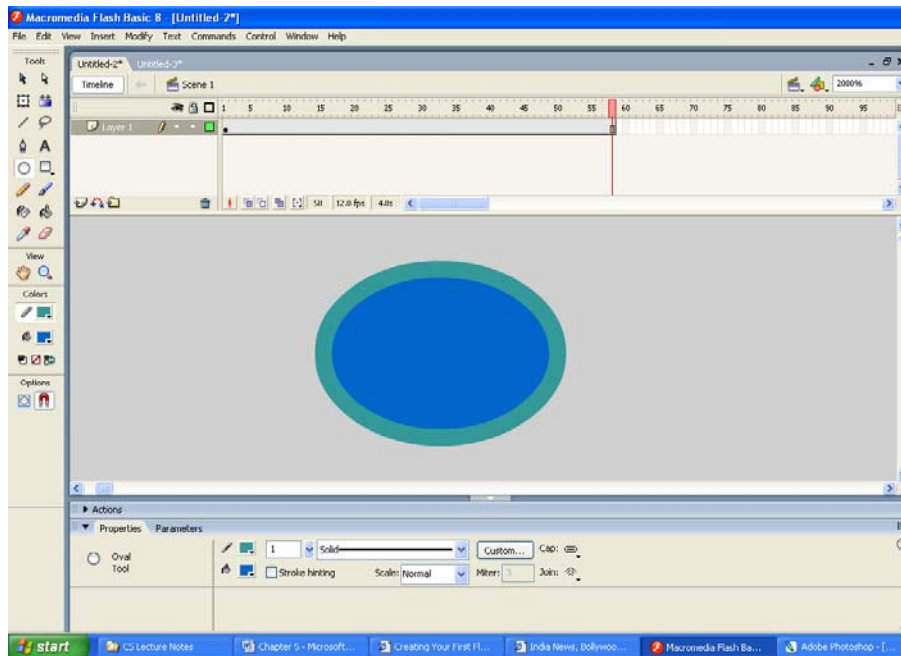
Text	Helps to write text.
Oval	Helps to draw oval and circle shapes.
Rectangle	Helps to draw rectangle and squares.
Pencil	Helps to draw lines and shapes.
Brush	Helps to draw brush like strokes, as if you are painting.
Ink Bottle	Helps to apply a stroke color to an object
Paint Bucket	Helps to apply or modify the fill (fill color) in an object
Eyedropper	Helps to sample colors (both fill and stroke colors) and apply the sample color to other objects in the movie.
Eraser	Helps to erase an object or part of it.
View	
Stroke Color	Outlines the object with the specified color.
Fill Color	Fills the object with the specified color.
Swap Colors	Swaps fill color and stroke color.
Snap to Objects	Helps to snap objects to other objects on the Stage, to set the alignment of objects.



Let's start with drawing a simple shape.

- Click on **Oval Tool** from the toolbar
- Select the Stroke Color (Boundary Color) and Fill Color from the toolbar (Paint color to fill inside the circle) from the toolbar.

- Draw a circle in the canvas.



What is timeline and how to use it?

Timeline can be considered as a scale where you can define timings for different objects of your documents. The timeline is divided into two columns: the Layers column, and the actual timeline itself, divided into individual frames; the sliding red line marks your current position in the timeline. It allows you to keep track of your various objects and shapes and which layer they're on, as well as keeping track of your animation key frames and their timing and placement. Most of the work of your animations will be done here.



As you can see, right now we have one layer (containing the circle drawn in the previous step) with one timeline associated with that layer. The first frame of the timeline is grayed out, with a small black dot marking it; what that means is that this frame is a key frame, created automatically when you drew the circle on that frame. In order to animate using tweening, you must define key frames; without them Flash has no beginning or ending points to animate in between.

How to create animation?

There are 8 steps to create and test an animation:

STEP1: Create a new document

STEP2: Draw an object in the canvas

STEP3: Frame 1 acts as the starting frame of animation.

STEP4: Insert Keyframe at the ending frame

STEP5: With the ending frame selected, move the object at different positions in the canvas

STEP6: Choose any frame between the starting frame and ending frame of the animation and Create Motion tween.

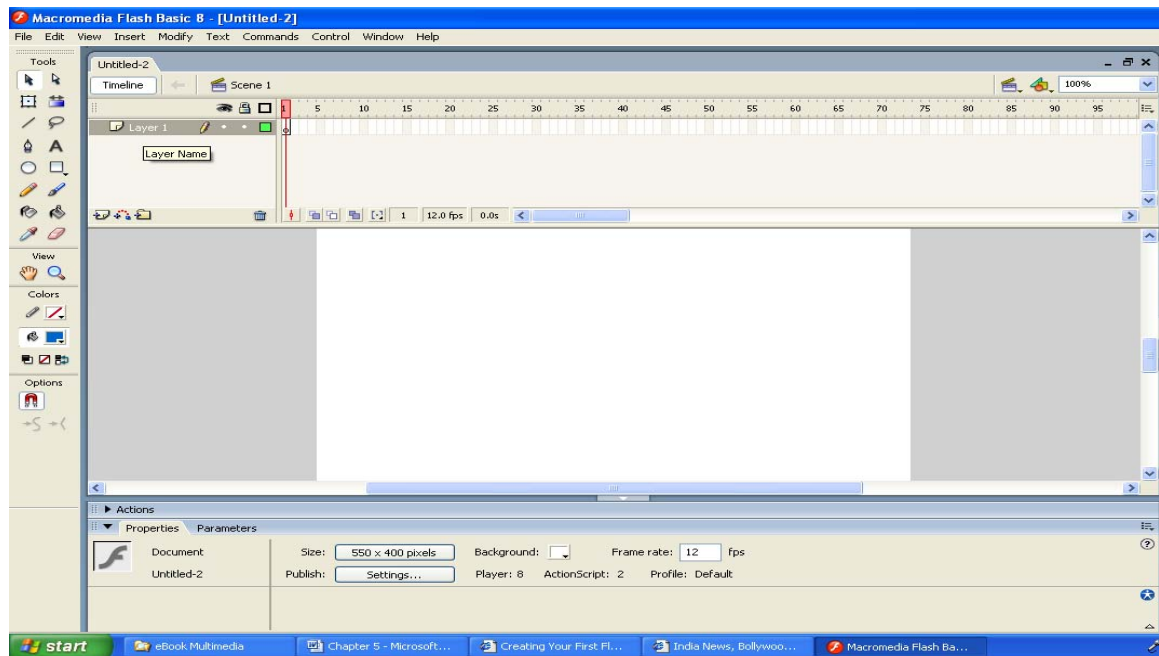
STEP7: Save the document.

STEP8: Test the animation you just created.

Let's discuss these steps in detail with illustration:

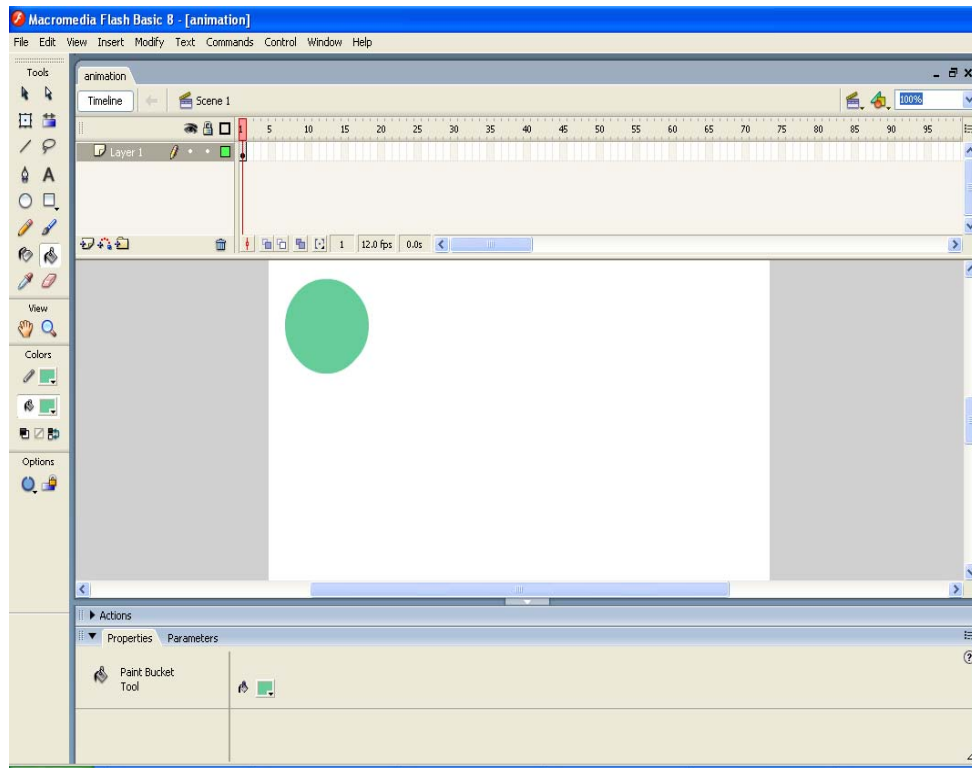
STEP 1: Create a new document

- Select File->New from the menu bar.
- A dialog box appears, as shown in Figure. Give an appropriate name to the file.



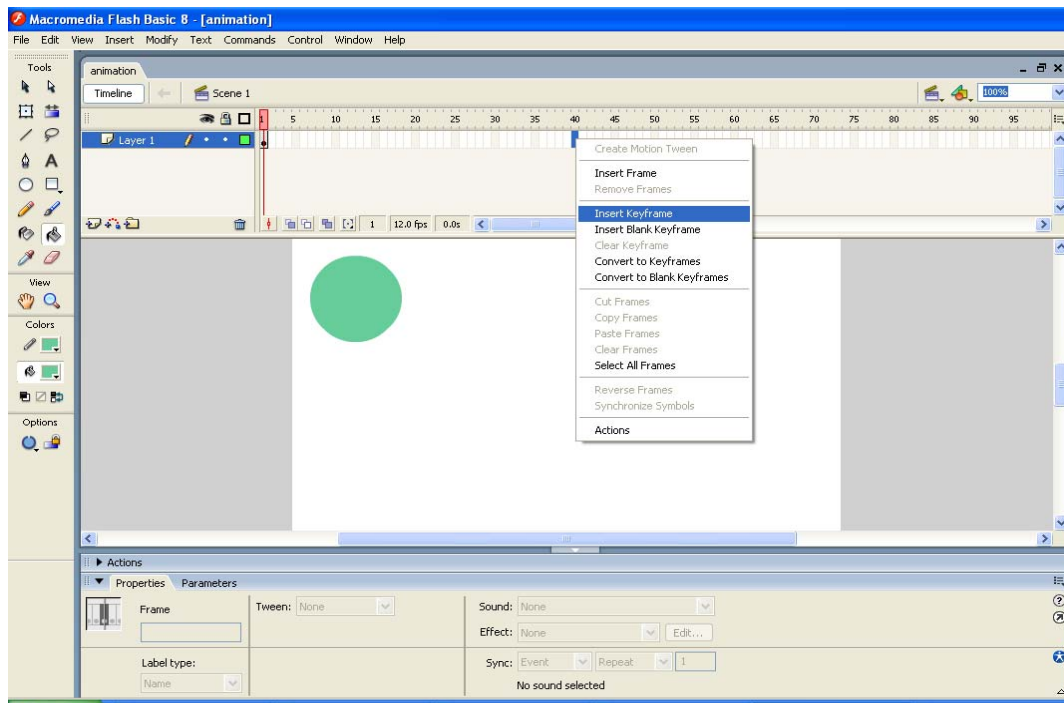
STEP 2: Draw an object in the canvas

- From the toolbar, select the **Oval** Tool, or any other shape that you want to draw.
- Draw the image on the Stage. Figure below shows a circle.

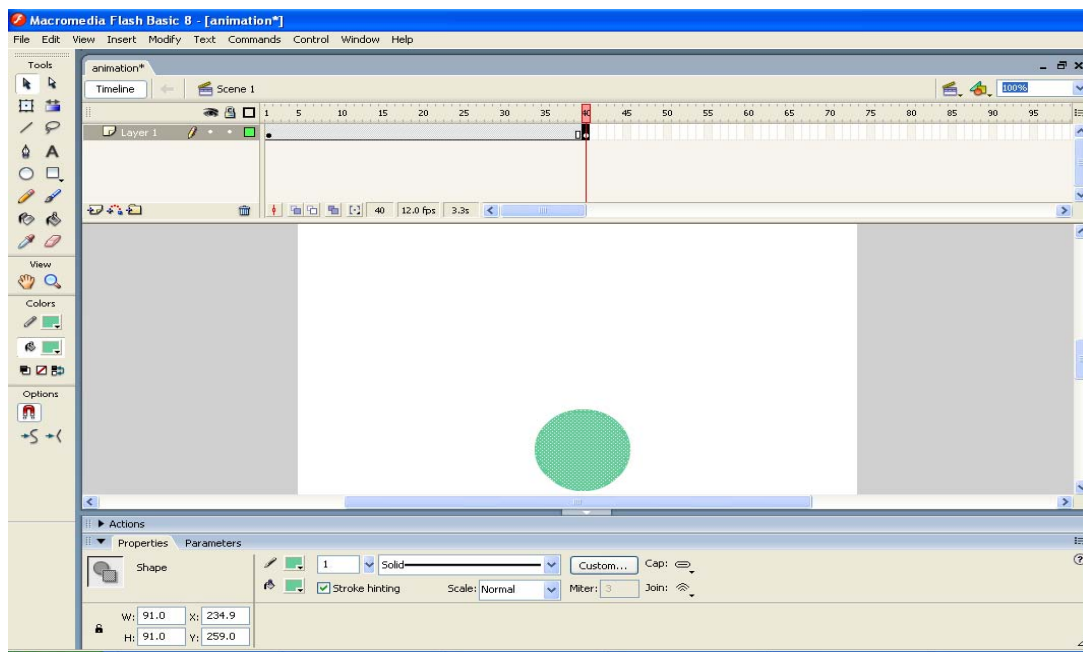


STEP3: Frame 1 on the timeline acts as the starting frame of animation.
Above Figure shows first keyframe.

STEP4: Select the ending frame. Insert Keyframe at the ending frame.
Figure below shows last keyframe.

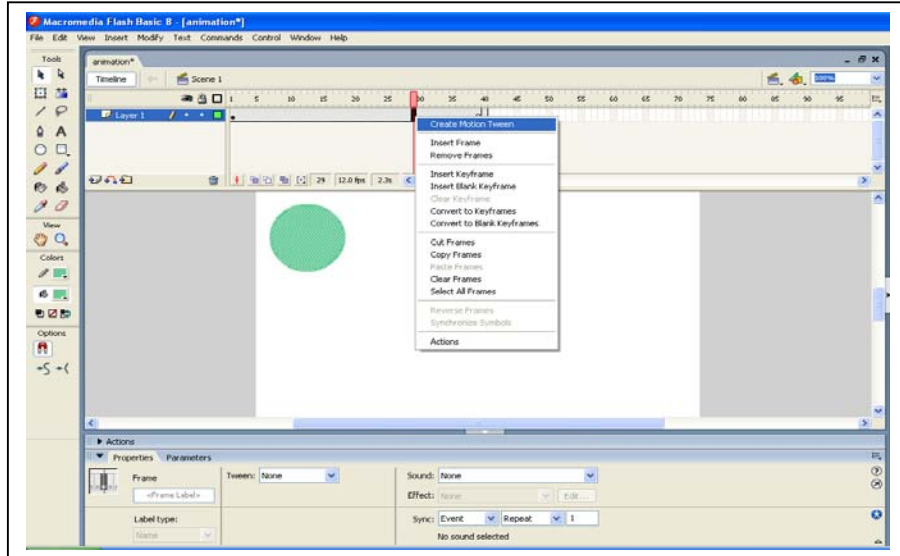


STEP5: With the ending frame selected, move the object at different positions in the canvas.

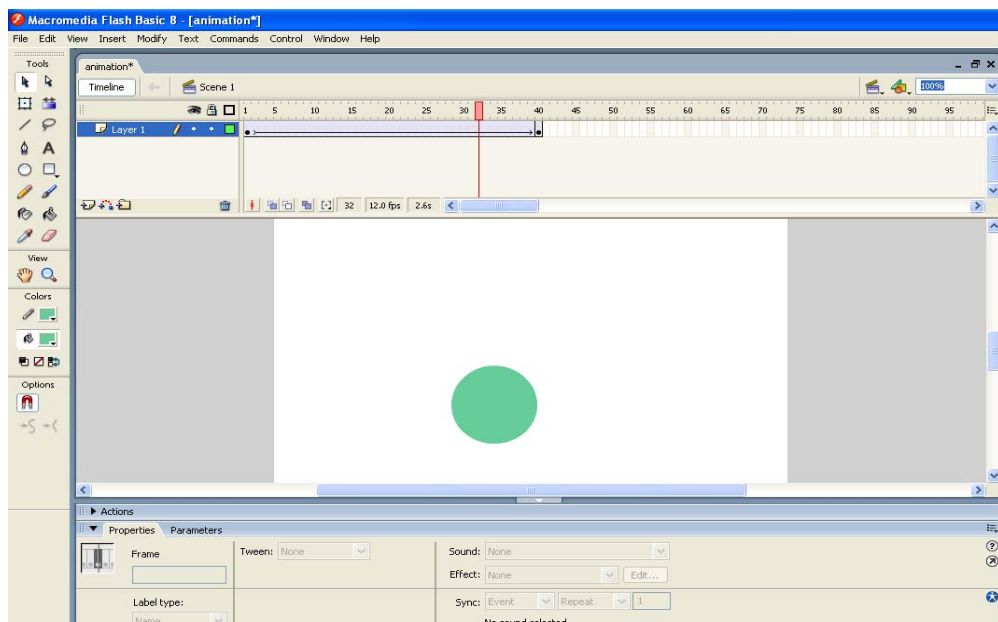


STEP 6: Choose any frame between the starting frame and ending frame of the animation and Create Motion tween.

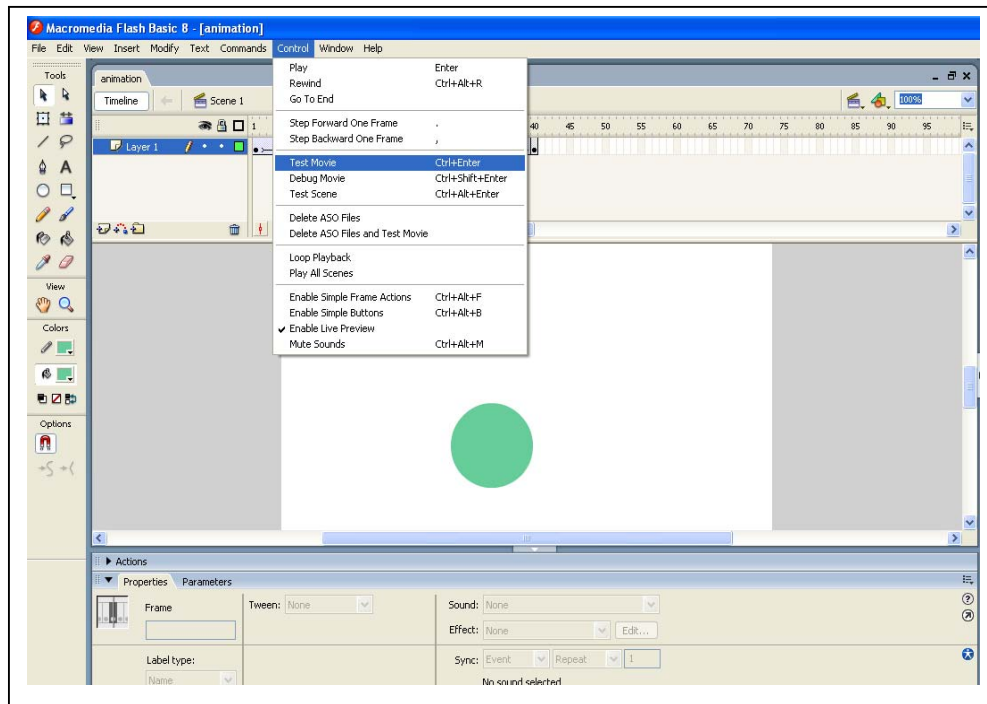
In Flash, "motion tweening" is used to describe the process where the program automatically creates the frames between first frame and last frame (i.e. keyframes) of the object's timeline to make a smooth animation depicting the object moving from one location to another.



STEP7: Save the document.



STEP8: Test the animation you just created. See figure given below.



Lab Plan (Week wise)

Week-1

1. Create a website using HTML

Week-2

2. Design a website using Dreamweaver

Week-3

3. Photoshop : various effects(reduce noise, desaturate, wave effect, gaussian blurr, color merging, mosaic files, posterise, water color etc)

Week-4

4. Photoshop: image morphing

Week-5

5. Introduction of Macromedia Flash tools to create “Basic Animations”

Week-6

6. Animation examples(Set 1)
 - Bouncing ball (using motion tween)
 - Blur effect/Fade in & Fade out
 - Zoom-in & zoom-out/Growing and shrinking (Object and text)

Week-7

6. Animation examples(Set 2)
 - Boncing ball (random or spiral motion using motion guide)
 - Shadow Effect(movement of the object with its shadow)

- Morphing (changing shape of one image into another)

Week-8

8. Animation examples(Set 3)

- Perspective Effect on Text (perspective projection of given text)
- Mirror effect (Mirror image of object/text in an animation)
- Text movement (with color and font variation)

Week-9

9. Animation examples(Set 4)

- Transparent Effect
- Text movement with mouse movement
- Masking on layers

Week-10

10. animation examples(Set 5)

- Ripple Effect
- Spotlight Effect (only portion of the stage will be visible)
- Steel Effect(metallic color variation)

Week-11

- Adding sound to animation

Week-12

- Adding video to animation

Multimedia Lab Assignment

1. Create a website using HTML
2. Design a website using Dreamweaver
3. Photoshop : various effects(reduce noise, desaturate, wave effect, gaussian blurr, color merging, mosaic files, posterise, water color etc)
4. Photoshop: image morphing
5. Introduction of Macromedia Flash tools to create “Basic Animations”
6. Animation examples(Set 1)
 - Bouncing ball (using motion tween)
 - Blur effect/Fade in & Fade out
 - Zoom-in & zoom-out/Growing and shrinking (Object and text)
7. Animation examples(Set 2)
 - Boncing ball (random or spiral motion using motion guide)
 - Shadow Effect(movement of the object with its shadow)
 - Morphing (changing shape of one image into another)
8. Animation examples(Set 3)
 - Perspective Effect on Text (perspective projection of given text)
 - Mirror effect (Mirror image of object/text in an animation)
 - Text movement (with color and font variation)
9. Animation examples(Set 4)
 - Transparent Effect

- Text movement with mouse movement
- Masking on layers

10. animation examples(Set 5)

- Ripple Effect
- Spotlight Effect (only portion of the stage will be visible)
- Steel Effect(metallic color variation)

11. Adding sound to animation

12. Adding video to animation

Paper: Multimedia Technologies

Code No.: ETCS 312

L	T	C
3	1	4

UNIT – I

Introductory Concepts: Multimedia – Definitions, CD-ROM and the Multimedia Highway, Uses of Multimedia, Introduction to making multimedia – The Stages of project, the requirements to make good multimedia, Multimedia skills and training, Training opportunities in Multimedia. Motivation for multimedia usage, Frequency domain analysis, Application Domain & ODA etc.

Multimedia-Hardware and Software: Multimedia Hardware – Macintosh and Windows production Platforms, Hardware peripherals – Connections, Memory and storage devices, Media software – Basic tools, making instant multimedia, Multimedia software and Authoring tools, Production Standards.
[No. of Hrs.: 11]

UNIT – II

Multimedia – making it work – multimedia building blocks – Text, Sound, Images, Animation and Video, Digitization of Audio and Video objects, Data Compression: Different Compression algorithms concern to text, audio, video and images etc., Working Exposure on Tools like Dream Weaver, 3D Effects, Flash Etc.,
[No. of Hrs.: 11]

UNIT – III

Multimedia and the Internet: History, Internet working, Connections, Internet Services, The World Wide Web, Tools for the WWW – Web Servers, Web Browsers, Web page makers and editors, Plug-Ins and Delivery Vehicles, HTML, VRML, Designing for the WWW – Working on the Web, Multimedia Applications – Media Communication, Media Consumption, Media Entertainment, Media games.
[No. of Hrs.: 11]

UNIT – IV

Multimedia-looking towards Future: Digital Communication and New Media, Interactive Television, Digital Broadcasting, Digital Radio, Multimedia Conferencing, Assembling and delivering a project-planning and costing, Designing and Producing, content and talent, Delivering, CD-ROM technology.
[No. of Hrs.: 11]

TEXT BOOKS:

1. Steve Heath, “Multimedia & Communication Systems”, Focal Press, UK, 1999.
2. Tay Vaughan, “Multimedia: Making it work”, TMH, 1999.
3. K. Andleigh and K. Thakkar, “Multimedia System Design”, PHI, PTR, 2000.

REFERENCES BOOKS:

1. Keyes, “Multimedia Handbook”, TMH, 2000.
2. Ralf Steinmetz and Klara Naharstedt, “Multimedia: Computing, Communications & Applications”, Pearson, 2001.
3. Steve Rimmer, “Advanced Multimedia Programming”, MHI, 2000.