



[Question Bank-1 \(Based on Database/Open source/Flash/Networking/HTML\)](#)

[Database](#)

1) Define the following term with example:

Tuple	A record in a relation /Table is called tuple
Relation	Table in a database is called relation where data is organized in rows and columns
Cardinality	No of records /Rows in a Relation is called Cardinality
Degree	No of Fields /Attribute in a Relation is called Degree
Primary Key	The PRIMARY KEY constraint uniquely identifies each record in a table. Primary keys must contain unique values. A primary key column cannot contain NULL values. Each table can have only ONE primary key.
Foreign Key	A foreign key is a field in a relational table that matches the primary key column of another table. The foreign key can be used to cross- reference tables
Alternate Key	An alternate key is similar to a primary key. It accepts null values; where as the primary key does not.
Candidate Key	A candidate key is a combination of attributes that can be uniquely used to identify a database record. Each table may have one or more candidate keys. One of these candidate keys is selected as the table primary key.
Composite Key	A composite key is any database key that consists of two or more columns/attributes.
relationship	Relationship is association between relations/tables of Database which is done through foreign key
DBMS	Database Management System A collection of <u>programs</u> that enables you to <u>store</u> , <u>modify</u> , and <u>extract</u> information from a <u>database</u> .
RDBMS	RDBMS stands for Relational Database Management System. RDBMS store the data into collection of tables, which might be related by common fields (database table columns). RDBMS also provide relational operators to manipulate the data stored into the database tables.

Question Based on Multimedia

- 1) Write a short note on how multimedia is being used in healthcare.
- 2) Write a short note on Virtual Reality
Computer Generated Environment which stimulate the real world situation with the use of Multimedia. It is used in Video Gaming / Flight Simulation
- 3) Write a short note on Video Conferencing
Video Conferencing is live interaction of people sitting far from each other using Computer System/ Webcam /Speaker /Headphone and conferencing software using network(internet /Intranet)
- 4) Write a short note on how multimedia is being used in Education
- 5) What is Digital Library
Digital Library is a collection of Electronically /Digitized text /audio and video material available for use in the form of CD/DVD/Online on internet.
- 6) .What is Information Kiosk
Information Kiosk is a Interactive Screen which provide information
- 7) What is Video on Demand(VOD)
Video on Demand is a Interactive process to select video to watch over network on demand by paying.
- 8) Write a short note on Different File formats:
 i) GIF : ii)MPEG iii)AVI iv) JPEG v) BMP vi) MIDI vi) WAV vii) SWF viii) PSD ix) DAT x) PDF

#	Format	Full Form	
1	GIF	Graphics Interchange Format	It does not support high resolution and can take 8 bits color combination yielding only 255 colors.
2	JPEG/ JPG	Joint Photographic Expert Group	It supports high resolution and can take 24 bits color combinations yielding millions of colors.
3	BMP	BITMAP Image File	BMP files are Windows Bitmap files. They are usually 8-bit color images (256 colors) and can be viewed by many programs including Windows Paintbrush. BMP files can be used as backgrounds for the Windows desktop.
	MPEG	Motion Picture Expert Group	is another type of file format formed by ISO for the storing and transmission of audio and video contents.
4	AVI	Audio Video Interleave	AVI is supported by all computers running Windows, and by the most popular web browsers. It is a very common format on the Internet, but not always possible to play on non-Windows computers
5	PSD	Photoshop Standard Document	PSD signifies an Adobe Photoshop graphic file. They are open able on Pentium and Macintosh systems by Adobe Photoshop.
6	AIFF	Audio Input File Format	Its Audio file Format
7	MIDI	Musical Instrument Digital Interface	MIDI files can be played with the Windows MIDI sequencer. They are music files that conform to the MIDI standard. Play them with Media Player on the Pentium computers, or load them into MusicProse or Finale on a Macintosh.

8	WAV	Waveform Audio File Format	WAV (wave) files are Microsoft's native audio sound format. WAV files can include 8-bit or 16-bit sound, in mono or stereo. They can be played on Pentium computers with Media Player and wplany.
9	ASF	Advanced Systems Format	Formerly called Advanced Streaming Format, ASF is a proprietary digital audio/video container format from Microsoft, created for streaming media as part of the Windows Media framework
10	TIFF	Tagged Image File Format	These files are uncompressed true color images. Most graphics programs allow you to store TIFFs with compression. These files can be opened by many graphics programs including xv, Lview, and Photoshon
11	PDF	Portable Document Format	It is created by Adobe Acrobat. An Enhancement of the Postscript language, PDF files contain all the same text and page layout information but can include many WWW features such as images, links, and heading references. PDF files can be viewed using Adobe Acrobat software.
12	FLA		The Adobe Flash animation source file that is used during development before being saved typically as an .SWF file. Flash video however, usually has the FLV of F4V extension and is considered it's own format separate from FLA.
	MP3		MP3 (MPEG-1 Audio Layer III) Part of the MPEG-1 video encoding format, able to store good quality audio into small files, by filtering out audio that most humans cannot hear. MP3 has become one of the most popular formats for buying and sharing digital music,
	SWF	Small Web Format	SWF (Small Web Format) Previously standing as an abbreviation for Shockwave Flash, SWF is a file format of a compiled FLA used by Adobe Flash. A SWF may contain vector graphics and rich media including images, audio, and video. It is widely adopted plugin for many desktop Internet browsers, although availability is more limited on mobile devices. It is more common for modern Flash video to have the FLV extension, however.
	WMV	Windows Media Video	WMV (Windows Media Video) A video compression format for several codecs by Microsoft, designed originally for streaming applications on the Internet. It has also become adopted as a video format compatible with Blu-Ray discs. It is often compared to MPEG-4 and H.264 in terms of video quality.

Question Bank

9) Define the following :

FLOSS	Free/Libre/Open Source Software	software that is liberally licensed to grant the right of users to study, change, and improve its design through the availability of its source code
OSS	Open Source Software	Open Source Software are distributed under License that meets the Open Source Definition or that is in the public domain license This permits users to use, change, and improve the software, and to redistribute it in modified or unmodified forms. It is very often developed in a public, collaborative manner.
FSF	Free Software Foundation	is a non-profit corporation founded by Richard Stallman to support the free software movement, a copy left-based movement which aims to promote the universal freedom to distribute and modify computer software.
OSI	Open Source Initiative	It is an organization dedicated to promoting open source software. is a development method for software that harnesses the power of distributed peer review and transparency of process.
W3C	World Wide Web Custodian	The World Wide Web Consortium (W3C) is the main international standards organization for the World Wide Web (abbreviated WWW or W3)
GNU		GNU is a computer operating system composed entirely of free software

10) Explain the following with example : I) Freeware II) Shareware III) Proprietary Software

		Example
Freeware	Freeware (free software) is computer software that is available for use at no cost or for an optional fee. Software classified as freeware is normally fully functional for an unlimited time with no cost, monetary or otherwise. Freeware can be proprietary software available at no price.	Open Office
Shareware	term shareware refers to proprietary software that is provided to users without payment on a trial basis and is often limited by any combination of functionality, availability or convenience.	Winzip, System Mechanic 8.0, Easy Movie Splitter 2.5.3
Proprietary Software	The term "proprietary software" are copyright software by owner who can exercise control over what users can do with the software, in contrast to public domain. It is neither free nor open source.	MS Office Adobe Photoshop

Difference Between Freeware and Shareware

Freeware	Shareware
Freeware is copyrighted computer software which is made available for use free of charge, for an unlimited time.	The term shareware refers to commercial software that is copyrighted, made available for free of charge for limited period of time
All the features are free.	all features are not available, or have limited use.
Freeware programs can be distributed free of cost.	Shareware may or may not be distributed freely. In many cases, author's permission is needed, to distribute the shareware.
Example MSN Messenger Yahoo Messenger Google Talk,	Winzip, Cuteftp, Getright

11) What is localization of software

Localization of Software means translating user interface of software in regional language for easy understanding of people living in that area.

12) Give the full Form of following : a) PHP b) JSP c)ASP, D)ASCII
e)ISCII

PHP	Personal Home Page	Hypertext Preprocessor, is a widely used, general-purpose scripting language that was originally designed for web development, to produce dynamic web pages.
JSP	Java Server Page	is a server side Java technology that allows software developers to create dynamically generated web pages, with HTML, XML, or other document types, in response to a Web client request to a Java Web Application container (server).
ASP	Active Server Page	is a server side Scripting technology that allows software developers to create dynamically generated web pages, with HTML, XML, or other document types, in response to a Web client request to a Web Server (IIS)
ASCII	American Standard Code of Information Interchange	
ISCII	Indian Standard Code of Information Interchange	
Unicode	It is an industry standard whose goal is to provide means by which text of all forms and languages can be encoded for use by computers	

13) Write short note on a)MYSQL b) Tomcat c) Linux d)Open Office e) Python

MYSQL	MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation.
Tomcat	It is an open Source web server Software. Tomcat is an application server from the Apache Software Foundation that executes Java servlets and renders Web pages that include Java Server Page coding.
Linux	Linux is an <i>operating system</i> , software that manages a computer. It is similar to Microsoft Windows, but it is entirely free . The accurate name is <i>GNU/Linux</i> but "Linux" is used more often.
Open Office	open office is Open source Application software suit which is available free of cost . It is an alternative to Microsoft office
Python	Python is an interpreted, object-oriented, high-level programming language with dynamic semantics

14) What is Open Source Software Name three Website which promotes open source software

Open-source software is computer software with its source code made available in which the copyright holder provides the rights to study change and distribute the software to anyone and for any purpose.

www.opensource.org:

www.sourceforge.net

www.osalt.com

www.fsf.org The Free Software Foundation (FSF) is a nonprofit with a worldwide mission to promote computer user freedom and to defend the rights of all free software users.

www.gnu.org

Networking

- 1) What is Network Give three Advantages of Network
1) Sharing hardware 2) Sharing data and information 3) Sharing software 4) Facilitating communications

- 2) Give 3 difference Between LAN/MAN/WAN

LAN / MAN	MAN	WAN
Area covered is restricted to room/Building	Area covered is around the city (10-20 KM)	Area covered has no limitation
Very faster – speed in Gbps	Relatively low – speed in Mbps	Relatively low – speed in Mbps
Owned by a single organization	Owned by multiple organization	Owned by multiple
School or Hospital Network	Cable TV network	Weather Forecasting /Railway/ Airways Reservation Network

- 3) Give Two Difference Between LAN & WLAN

LAN is Wired Network

WLAN is Wireless Network

LAN Area is Building (1-2 Km)

WLAN Are is Smaller than LAN restricted to room

- 4) Define the following Term a)Hub b)Switch c)Router d) Gateway e)bridge f)Repeater g)MODEM


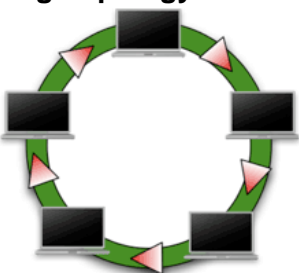
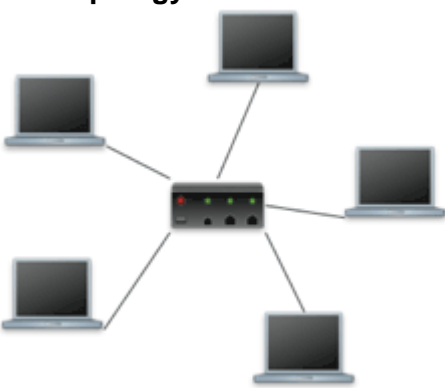
Hub	A hub is a device for connecting multiple twisted pair or fibre optic devices together and making them act as a single network segment.
Switch	A network switch is a small hardware device that joins multiple computers together within one local area network. Network switches are capable of inspecting data packets as they are received, determining the source and destination device of each packet
Router	A router is an electronic device that interconnects two or more dissimilar computer networks
Gateway	A gateway is a network point that acts as an entrance to another network It is used to connect heterogeneous networks that use different protocols and have different network.
Bridge	Bridging is a forwarding technique used in packet-switched computer networks. It is device generally used to connect two or more similar network
Repeater	A network device used to regenerate or replicate a signal if the distance is more than 90m.
Modem	Modem (modulator-demodulator) is a device that modulates an analogue carrier signal to encode digital information, and also demodulates such a carrier signal to decode the transmitted information.

- 5) Give the Full Form of Following a) FTP b) IMAP c)PPP d)HHTTP e)SMTP

FTP	File Transfer protocol- It is a primary method to transfer files over the Internet. FTP transfers files to and from a remote server
IMAP	Internet Message Access Protocol is an Application Layer Internet protocol that allows an e-mail client to access e-mail on a remote mail server.
SMTP	Simple Mail Transfer Protocol (SMTP) is an Internet standard for electronic mail (e-mail) transmission across Internet Protocol (IP) networks
VOIP	Voice over Internet Protocol (Voice over IP, VoIP) is a communication protocols and transmission technologies for delivery of voice communications and multimedia sessions over Internet

HHTP	Hypertext Transfer Protocol (HTTP) is a networking protocol for distributed, collaborative, hypermedia information systems. HTTP functions as a request-response protocol in the client-server computing model.
PPP	PPP (Point-to-Point Protocol) :In networking, the Point-to-Point Protocol, or PPP, is a data link protocol commonly used in establishing a direct connection between two networking node

6) What is topology? Difference Between Star / BUS /Ring topology

<p>Bus Topology</p> 	<p>All of the computers are linked to a <i>single central cable</i>.</p> <ul style="list-style-type: none"> ★ All data passes through one central cable ★ this means that the network has a <i>single point of failure</i> ★ Not <i>fault tolerant</i>, if the central cable breaks the entire network fails ★ Cheap and simple to set-up
<p>Ring Topology</p> 	<p>Each networked computer is connected to two others in a closed ring. Sometimes two rings are used to increase the <i>fault tolerance</i></p> <ul style="list-style-type: none"> ★ Ring topologies are more expensive than bus ★ Hardware to control data transmission is more expensive ★ the actual ring shape is often not immediately obvious ★ The ring can be within a central box with each computer connected the same as in a star topology
<p>Star Topology</p> 	<p>This is a very common topology.</p> <ul style="list-style-type: none"> ★ Each computer is connected to a single central hub ★ When a computer sends data the hub transmits it to all of the computers on the network ★ A break in a cable only affects the computer it connects to all others remain unaffected ★ More fault tolerant ★ High cabling costs compared to bus topology

7) Name the following :

- i) the transmission media that can be used in
 - a) Sparsely populated areas **Radio Link/ b) Unidirectional Fiber optics**
- i) A general purpose client-server internet facility that facilitates remote login. **Telnet**
- ii) Software categories that has restriction on using and copying software and enforces a license fee. **Proprietary Software**
- iii) Name the transmission media that use electromagnetic waves ranging in frequencies between 3 KHz and 1 GHz **Radio Frequency** ii) 1 GHz and 300 GHz **Microwave**

8) Explain the following :

Firewall	A system designed to prevent unauthorized access to or from a private network. Firewalls can be implemented in both hardware and software, or a combination of both
Cracker	The people who break and enter a computer/network without having authorised access and with malicious intent like steal data, delete files, corrupt files, phishing and farming
Hacker	The people who break and enter a computer/network without having authorised access and with no malicious intent
GSM	GSM (Global System For Mbile Communication) GSM is a digital mobile telephony system that digitizes and compresses data, then sends it down a channel with two other streams of user data, each in its own time slot.
CDMA	CDMA (Code Division Multiple Access) :CDMA refers to any of several protocols used in so-called second-generation (2G) and third-generation (3G) wireless communications.
GRPS	GPRS General packet radio service (GPRS) is a packet oriented mobile data service on the 2G and 3G cellular communication systems global system for mobile communications (GSM).
intranet	It is a local collection of interconnected network of computer device, govern by the local authority. A privately owned network is termed as intranet
Interspace	It is a vision of what the internet will become, where users correlates information in multiple ways from multiple sources
SMS	SMS(Short Message Service) is type messaging service meant for exchanging short text messages on phone, web or mobile Communication system
Computer Virus:	The type of Malware which destroys a targeted program on a computer devices like personal Computer, Laptop etc. Sometimes, it destroys the whole device itself once it transmits to it from another infected host.
Malware	The program or scripts which are harmful to the computing devices and can destroy the communication and computing devices are called Malware
Spyware	It tracks the different types of activities like user activities, scheduled tasks, operating system health check activities etc .It can be scripts, programs, cookies etc.
Cyber Law:	The Information Acts and Rules articulated to regulate and control the illegal practices on Internet or in any 'electronic devices' connected through internet are called Cyber Laws

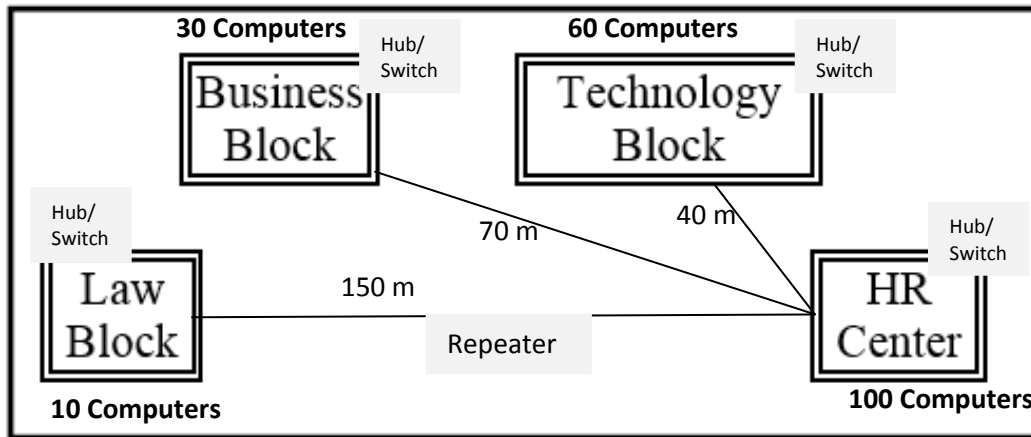
9) Difference between Twisted pair /Co-axial / Fiber-Optics cable

Twisted pair	Co-axial	Fiber-Optics
it has adequate performance It is one of the cheapest media of transmission It is more prone to pick up noise signals	It has more system performance than twisted pair It is expensive than Twisted Pair It is less prone to noise signals	High System Performance It is Expensive Low Signal Loss More fragile than electrical cable Immune to Noise

10) Name three wireless channel of communication
Radio Wave Satellite Infrared Bluetooth

Point to remember for 4 Marks Networking Question

Layout – Diagrammatically show Bus Topology & Star Topology



Location of Server

The most suitable place / block to house the server of this organisation would be the **Block that contains the maximum number of computers**

Justification:

As it decreases the cabling cost for most of the computers as well as increasing the efficiency of the maximum computers in the network.

Location of Repeater

Repeater will be placed where the distance between two blocks 90 meters or more

Justification

As the signal loss will take place after 90 meters, Repeater would ideally be needed along their path to avoid loss of signals during the course of data flow in these routes.

Location of Hub/Switch

Hub/Switch will be placed in **every block**

Justification

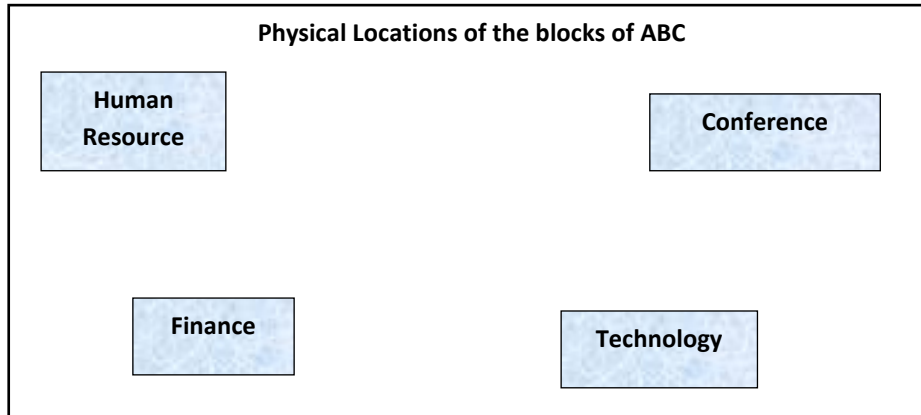
To interconnect the group of cables from the different computers in each block

Radio wave transmission as it is the most **economic** option with to connect it with a reasonable **high speed**

TCP/IP Dial Up as it is the most **economic** option with a **reasonable speed. Non Economic where Cost is not in consideration**

Fiber Optics /Satellite

- c) ABC Corporation (TTC) is a professional consultancy company. The company is planning to set up their new offices in India with its hub at Hyderabad. As a network adviser, you have to understand their requirement and suggest them the best available solutions. Their queries are mentioned in i) to iv).



Block to Block distances (in Meters)

Number of computers in each block/center

FROM	TO	Distance	Block / Center	Computers
Human Resource	Conference	110	Human Resource	25
Human Resource	Finance	40	Finance	120
Conference	Finance	80	Conference	90
Technology	Finance	95	Technology	75

- i) What will be the most appropriate block, where TTC should plan to install the server?
- ii) Draw a cable layout connecting the blocks for most efficient communication. Also suggest a topology for the network.
- iii) What will be the best possible connectivity (out of **Satellite Link, Infrared, Ethernet cable**) you will suggest to connect the new offices in Bangalore with its London based office?
- iv) Which of the devices (**Switch, Modem, Gateway**) will be suggested by you to connect each computer in each of the buildings.
- c) Which type of network (out of **LAN, PAN, MAN**) is formed
- i) When four computers are networked using twisted pair cable?
- ii) Using mobile's Bluetooth to share files among friends inside a room?

MAC	IP
Media Access Control Address.	Internet Protocol Address.
It is 48 bits (6 bytes) hexadecimal address.	IPv4 is a 32-bit (4 bytes) address
MAC address is assigned by the manufacturer of NIC card.	IP address is assigned by the network administrator or Internet Service Provider.
Physical Address cannot be changed	Can be changed or assigned new IP Address to device

Flash

1. What is a Layer? Give three properties of a Layer.

It is a type of frame that is placed one after another to create the animation or a movie. It's the important component of Timeline. The properties of a Layer are:

1. Layer Name
2. Show and Lock
3. Type

2. What are Symbols? How is it different from instance

The Symbols are the reusable media elements such as graphics, buttons, movie clips etc. that can be used in a movie. They are saved inside the library file and remain accessible as the global resources.

Instance It is a copy of master Symbol but any change we make in instance will not be updated or reflected in symbol in the library.

3. What is a Frame? What are Frame Buffer and Frame Rate?

It is a segment of a movie that is mainly used for creating and storing the objects. It is one of the important components of Timeline in Flash.

4. What is a Frame Buffer? What FPS?

The way of storing a movie or animation before displaying it is called **Frame Buffer**.

Frame per Second or Frame rate is the number of animation frames displayed per second. It increases or decreases the speed with which the movie is displayed on the screen

5. What is publishing? What are two formats which support movie files?

Publishing means delivering a complete movie or a animation to the viewers. The two formats in which a movie can be published are .SWF and .AVI.

6. What is a Key frame? What is the use of Stage?

It is a frame in flash that allows the users to define a change for an animation or to include the frame actions to modify a movie.

Stage is the actual canvas in flash where all the objects to be included in a movie or animation are placed. It allows to the draw the graphics and preview the movie in design time.

7. What is Timeline?

The Timeline is used to organize and control the contents of a movie over time in the layers and frames so that each movie instance can occur at the correct time. The major components of the Timeline are layers, frames and the play-head.

8. What is Tweening? Name any two types of Tweening?

The Tweening is the way of creating the effects on a movie or an animation. The two types of Tweening are:-

1. Shape Tweening
2. Motion Tweening

9. Explain the steps to create a Tweening(Shape Tweening).

The following are the steps for Shape Tweening:-

1. Draw a shape, let's say Sun on the first frame in Flash Studio/Photoshop.
2. Place the Playhead at the 40th frame and insert a Keyframe.
3. Drag the object by using the Selection Tool, select both stroke and the fill options.
4. Place it on the right hand side of the Stage.
5. At the 40th frame, delete the Sun shape and draw another shape, let's say Cloudy Rain.
6. Place the Playhead at the first frame and right click over it.
7. Select Panels and then Frame. In Tween Option, select the shape and in blend option select "Distributive"
8. Publish it to preview the animation or the movie.

10 Hiding a Layer & Locking A Layer

Hiding a layer means that the contents of that layer are not visible done using Eye icon on Layer

Locking a layer means that the contents of that layer cannot be edited done by using Ped lock icon on Layer

11. What is Publishing. Name different format on which the flash movie can be published

Publishing a Flash Movie means delivering a completed movie to an audience by converting the Flash .FLA file to another format for playback. 2

File formats in which a Flash movie can be published are: .SWF, .HTML, .GIF, .JPEG,.PNG, .EXE, .HQX, .MOV, .SMIL.

12. Explain the concept of Scenes in Flash

A scene is a clip of a movie which can be treated as an entire single unit all on its own and arranged around other clips. The advantage of breaking the movie into scenes is that every scene can be accessed individually and thus the sequence or order of scenes can be changed.

13. Differentiate between

.FLA file	.SWF file
.FLA is the extension of the flash source file.	.SWF is the extension of the flash publish file.
.FLA file can be opened and edited at any point of time	.SWF file cannot be edited, it can only be viewed.
TIFF	MPEG
Tagged Image File Format	Moving Picture Experts Group
It is type of file format meant for storing images, including photographs and other line arts.	is another type of file format formed by ISO for the storing and transmission of audio and video contents.
JPEG	GIF
Its full form is Joint Photographic Engineering Group.	Its full form is Graphics Interchange Format.
It supports high resolution and can take 24 bits color combinations yielding millions of colors.	It does not support high resolution and can take 8 bits color combination yielding only 8 colors.
Graphic Symbol	Movie Clip Symbol
Graphic symbol is a still or static image/Object	Movie Clip Symbol is an Animated Image or motion object
Graphic symbol operate in sync with the main time line	Movie clip is independent of the main timeline
Graphic symbol don't have its own time line	Movie Clip have its own time line for its animation
Symbol	Instance
Reusable Object that can be used in flash movies	It is occurrence of Symbol placed on stage
Stored in Library	Instance is placed on stage
Change in Symbol will change all instance of symbol	Any change in Instance will not change in Symbol

Guide layer	Mask layer
Guide layer is used to assign an animation path that links to an object on another layer during motion tweening, we can use the drawing tools in the toolbox to draw the guide path.	Mask layer is used to create a hole through which the contents of one or more underlying layers are visible.
Key frame	Blank Key frame
A key frame is a frame in which the user can define a change in an animation or include frame actions to modify a movie.	1. A blank key frame is one which is empty and is waiting to be filled.
Key Frame is denoted by Dark filled black circle	Blank frame is denoted by hollow circle
Shape tweening	Motion tweening
Shape tweening refers to making one shape appear to change into another shape over time.	Motion tweening refers to changing the position of an object over time.
It is not done on Symbol	It can be done on Symbol Only
Denoted by Light Green Color on Time line	Denoted by Purple color on Timeline

14. How to Add sound in Flash timeline

Choose *File > Import > Import to Library* from the menu. Open file dialogue box appear Find and select sound file and click Open. The file now appears in the Library.

Drag the required file from Library and place it on frame form where you want sound to start

15. What is the use of the onion skinning feature?

The onion-skinning feature allows the designer to see multiple frames and how their movements relate to the current frame. When creating an animation, this feature can be a great help to see what the objects in the preceding and succeeding frames look like.

16. What is the use of the Publish Preview option?

The Publish Preview option allows one to preview the movie in a browser before publishing to see if the movie is appearing fine.

17. How Graphic symbol is different from Button Symbol

Graphic Symbol are used for static image and to create reusable piece of animation that are tied up with main timeline.

Button Symbols are used to create interactive buttons that respond to mouse clicks, rollover or other action

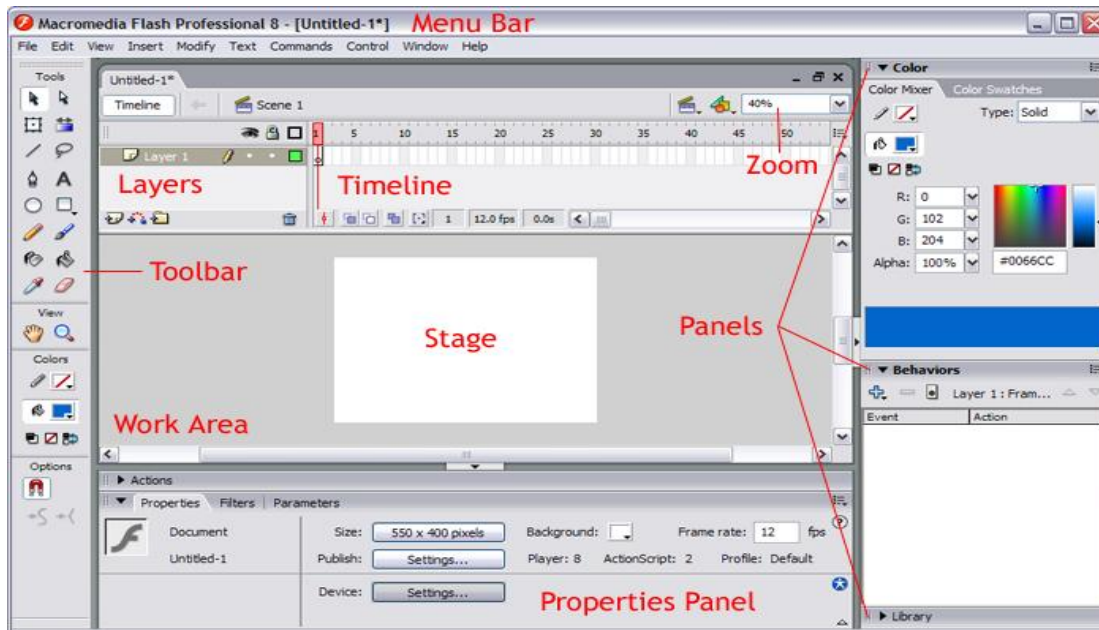
18. What do you understand by alpha value?

Alpha Value determine the transparency of color or layer

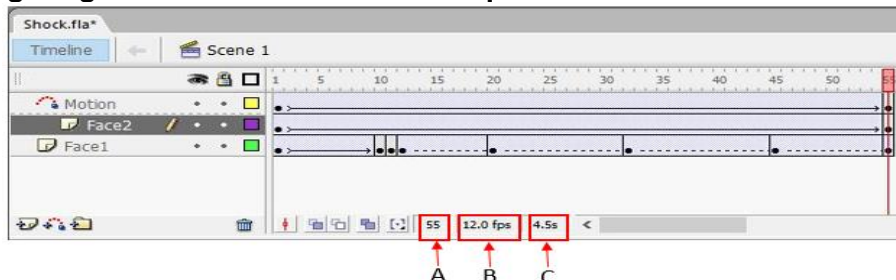
19. Explain the usage onion skin feature

Onion Skin feature display frame by frame movement of animation with reference to current frame

20. Identify the different Part of Flash Interface



21. Study the figure given below and answer the questions that follow:



- (i) Name the guide layer in the above scenario. Ans Motion
- (ii) Given the above settings, will the contents of the layer Motion be displayed in the final movie? Justify. ANs Yes
- (iii) Given the above settings, name the active layer. Ans Face 2
- (iv) What does the number 55 in the area labelled as A signify in the above scenario?
Ans Current Active Frame where Play head is positioned
- (v) What does the number 12.0 fps in the area labelled as B signify in the above scenario? Ans Frame rate
- (vi) What does the number 4.5 s in the area labelled as C signify in the above scenario?
Ans: Time of animation already played

22. Observe the figure given bellow and do as directed :



- The text “learn flash 5.0 in three days” shows the position and size in frame 1.
- The solid circle image shows the position and size of the image for mask layer.

Write the procedure and property settings for animating the above scenario.

Steps for Masking

1. At Frame 1 of layer 1, draw a text box and write “learn flash 5.0 in 3 days” in it using text tool.
2. Go to Frame 50 and insert a keyframe.
3. Insert a new layer and convert it to mask layer and right clicking on Layer and choosing Mask Layer.
4. At Frame 1 of Mask layer, draw a circle and keep it at its initial position in the animation (at the start of text box).
5. Insert a keyframe at Frame 50 of Mask layer and place the circle at its final position in the animation (at the end of text box).
6. Select any frame from frame 1 to frame 50.
7. Select Create Motion Tween.

23. Consider the figure given below and do as directed:



- The circle on the left hand side shows the position and size of the image for frame 1. The colour of the image is red.
- The circle on the right hand side shows the position and size of the image for frame 20. The colour of the image is yellow.
- The circle on frame 1 moves and transforms into a semicircle on frame 20.

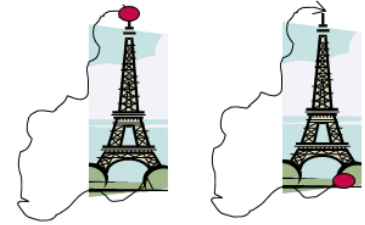
Write the procedure and property settings for animating the above scenario.

The **following** steps have to be followed to animate the given scenario:

- (i) Select frame 1 from the timeline and select Insert → New Symbol → Graphic
- (ii) Create the red coloured figure given on the left hand side.
- (iii) Insert an instance of this symbol in frame 1 by dragging it from the library window.
- (iv) Select frame 20 from the timeline and Select Insert → Keyframe
- (v) Change the size and shape of the image using Free Transform tool
- (vi) Change the colour of the object by selecting Tint option from the Effect palette and selecting the new colour.
- (vii) Select any frame between 1 and 20
- (viii) Select Create motion tween .

24. Observe the figure given below and do as directed:

- The first image shows the position and size of the image for frame 1.
- The second image shows the position and size of the image for frame 40.
- The curved line shows the path of motion of the ball.



Write the procedure and property settings for animating the above scenario.

The **following** steps have to be followed to animate the given scenario:

- Select frame 1 from the timeline and drag the image of tower from the library to the stage.
- Select Frame 40 from the Timeline and select Insert Keyframe.
- Insert a new layer, name it circle.
- On the Circle layer, and draw the desired circle using the Oval tool and then convert it into a Graphic symbol by selecting 'Convert to Symbol'.
- Select frame 40 on circle layer and select Insert Keyframe.
- Select any frame between 1 and 40 on the circle layer and select Create Motion Tween.
- Click on Insert and select Guide layer.
- Draw the required path on the Guide layer using the Pencil tool.
- Click on Circle layer and align the circle with the path at both ends.
- Run the movie.

25. Observe the figure given below and do as directed:



- The graphic on the left hand side shows the position and size for frame 1.
- The graphic on the right hand side shows the position and size for frame 30.
- The triangle graphic used in the animation is saved in the flash library.

Write the procedure and property settings for animating the above scenario assuming that the color of the object remains the same.

The **following** steps have to be followed to animate the given scenario:

- Select frame 1 from the Timeline and drag an instance of the oval graphic from the oval from the library on the stage.
- Using the selection tool select the image and place it on the left hand side and make its colour as orange.
- Select frame 30 from the Timeline and select Insert→Keyframe.
- Using the selection tool, select the image and position it to the right hand side of the stage at the desired location.
- Using the Free Transform tool, select the image and then resize it and rotate it as given.
- Using the Selection tool, select the image and change its colour to green.
- Select any frame from 1 to 29.
- Right click the mouse button and select Create Motion Tween.

HTML

1. What is HTML

Hyper Text Markup Language is a computer based language used to create WebPages.

2. What is the use of HEAD element?

It is used to provide information about the page.

3. Explain <BASEFONT>.

It is a non-container tag used to specify the font and its features for the entire webpage.

4. What is the use of Title tag?

It is used to provide the name of the webpage as can be seen on the title bar of the browser or tab header.

5. Name three Attributes used with <BODY> tag.

They are:

Bgcolor : Background colour

Link: Specifies colour of all links that appear on the page

Alink: Specifies colour of links when clicked

Vlink: Specifies colour of links after it is visited by clicking

Background: Location of picture to be used as background for the page

Text : Default color of Webpage text

6. How can we give comments in HTML?

Using <!--.....-->

Where represents the comment to be entered.

7. What is the use of tag in HTML and give three attributes which we use with it?

The tag is the formatting of a specified word or sentence.

Three attributes are:

Face: Decides type of font e.g. Arial

Size: Decides the size of the font

Color: Decides the colour of the font

8. What are the purpose of <h1> ...</h1>,.....,<h6>...</h6>?

They are used to specify headings of pre-determined sizes.

<h1>...</h1> is the largest and <h6>...</h6> is the smallest.

9. How
 tag is different from <P> tag?

 	<P>
It is a non-container tag.	It is a container tag.
It creates a line break for every time it is repeated.	It doesn't creates a line break for every time it is repeated.
It creates one line break.	It creates a link break before and after the entered text.

10. How
 tag is different from <HR> tag?

 	<HR>
It creates a line break.	It creates a line.
It does not have attribute	It has Attribute like color, size, width

11. What is the purpose of Type attribute used in List?

It helps in the formatting of the list item marker.

For e.g. :

```
<ol type="I">
```

.....

```
</ol>
```

The above would result in a list where the item markers are Roman Numerals.

12. What is the purpose of Start attribute with the List?

It helps in deciding the starting position of the list which can only be used in Ordered lists.

For e.g.:

```
<ol start="5" type="a">
```

.....

```
</ol>
```

This would result in a list where the first list marker is 'e.'

13. Which HTML tag is used to insert image in HTML?

The tag used is the tag.

Which attribute is used to show text instead of Image if browser do not support image?

The attribute used is display text instead of image if browser does not support image

```

```

This would result in a blank box with 'Imagname' written inside it if the image doesn't load.

14. How can we create a link to image?

By using the following code:

```
<a href="a"></a>
```

Where a is the URL and b is the image location.

15. What is the use of <CAPTION> tag?

It is the tag used to give a caption for a table.

16. What do you understand by COLSPAN & ROWSPAN?

They are both attributes used in the <TD> & <TH> tag.

COLSPAN: Specifies the no. of columns that the table data covers

ROWSPAN: Specifies the no. of rows that the table data covers

17. What is Cell padding and Cell spacing?

They are both attributes used in the <TABLE> tag.

Cell padding: It is used to decide the space between the table data and the walls of the cell.

Cell spacing: It is used to decide the space between neighboring cells and the space between the cell and the table borders.

18. Differentiate between <input type="Text"> & <textarea>.

<input type="text">	<textarea>
Used for information of usually one line	Used for information of usually more than one line
It is a non-container tag.	It is a container tag.
Eg. <html> <body> <form name="f1"> Name: <input type="text" name="t1" value=""> </form> </body> </html>	Eg. <html> <body> <form name="f1"> Describe yourself: <textarea name="txt1" cols="5" rows="10" value=""></textarea> </form> </body> </html>

19. How is External linking is different from Internal linking?

External	Internal
Linking done between 2 different websites.	Linking done between 2 different webpages of the same site or between 2 different parts.
Eg. <html> <body> Wikipedia </body> </html>	Eg. <html> <body> Wikipedia </body> </html>

20. Explain with an example how interlinking is done.

Eg.
 <html>
 <body>

 Wikipedia

 </body>
 </html>

21. What are the two Attributes used for Bookmarking (Intralinking)

```
<html>
<body>
<a name="top">
Wikipedia
</a>
<br>.....<br>
<a href="#top">Go to Top</a>
</body>
</html>
```

Therefore the 2 attributes used in the <A> are **name** and **href**.

22. How to align Image to Center/Right/Left?

```
<html>
<body>

</body>
</html>
```

Where position refers to center or right or left.

23. What is radio button how is it different from checkbox?

Radio	Checkbox
It used in the case of selection of one option out of possible many.	It used in the case of selection of one or more options out of possible many.
Eg. <html> <body> <form name="f1"> Choose sport: Football <input type="radio" name="r1" value=""> Basketball <input type="radio" name="r1" value=""> </form> </body> </html>	Eg. <html> <body> <form name="f1"> Choose favourite sport/sports: Football <input type="checkbox" name="r1" value=""> Basketball <input type="checkbox" name="r1" value=""> </form> </body> </html>

24. Name the tag which is used to set checkbox as selected by default.

It is checked.

```
<html>
<body>
<form name="f1">
Choose favourite sport/sports:
Football :<input type="checkbox" name="r1" checked>
Basketball: <input type="checkbox" name="r1">
</form>
</body>
</html>
```

25. What is the use of Action attribute in form?

The action attribute decides where the form data goes.

26. Differentiate between Text & password interface elements of form.

Text	Password
It is a textbox which allows viewing of the entered data.	It is a textbox which allows viewing of the entered data in the form of a common character such as *
<form name="f1"> Name: <input type="text" name="t1" value=""> </form>	<form name="f1"> Password: <input type="password" name="p1" value=""> </form>

27. What is the use of Maxlength attributes with <input> tag?

The maxlength attribute decides the maximum number of characters that can entered.

28. What is the difference between Submit & Reset Button?

Submit	Reset
It submits the form data to give a pre-specified location.	It resets the form allowing for the re-entering of data.
Eg. <html> <body> <form name="f1"> <input type="submit" name="b1" value="Submit"> </form> </body> </html>	Eg. <html> <body> <form name="f1"> <input type="reset" name="b2" value="Cancel"> </form> </body> </html>

29. Write the name of tag and attribute used to have 3 pixels thick horizontal line centralized across 50%

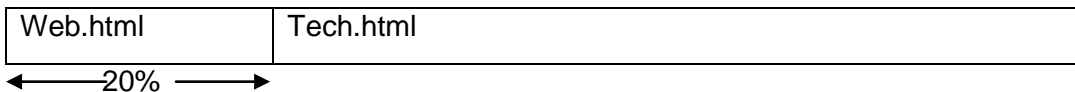
```
<Hr Align= Center Width =50% Size=3px>
```

30. Insert an email link to image (MapleLeaf.jpg) with the width and height both set to 400 px Specify the tag and attributes to Send a form to the email address mymail@emailaccount.com.

```
<A Href= "mailto: mymail@emailaccount.com" ><img src= "MapleLeaf.jpg" width =400 height=400></A>
```

31. Write the HTML code to generate a Web Page in the format given below :

- i) Write a HTML code to create a framed webpage in the following
 - The Page is divided into two frame vertically
 - The left frame is 20% of the page width and display file " Web.html"
 - The right frame is 80% of the page width and displays file "tech.html"



```

<HTML>
<Frameset cols= "20%,80%"
<Frame Src= "Web.html">
<frame src= "tech.html">
</Frameset>
</Html>

```

32. Name the TAG and ATTRIBUTE to be used in the following situation

i) To give the color of the border of a frame

```
<frame src="headercolor.htm" bordercolor="blue">
```

ii) To display the cell content at the bottom of the cell of a table

```
<td valign="bottom">
```

iii) To sets the top/bottom margin of the web page.

```
<body topmargin=2 bottommargin=0>
```

iv) Text colour of main heading on the page should be "Red".

```
<h1 color="red">Heading </h1>
```

v) Background colour of the page should be "black", text color should be "white" and link colour should be "Green".

```
<body bgcolor="black" text="white" link="green">
```

vi) Font face of text in the page should be "Arial".

```
<font face="arial">
```

vii) Image used in the page is the file "earth.jpg" of size 200 x 200 right aligned on page.

```

```

viii) The table should have a border of 3 pixels and the background color "Yellow"

```
<table border=3 bgcolor="yellow">
```

ix) first row of table should be "Aqua" in color

```
<tr bgcolor="aqua">
```

x) The bottom message should be of size 2 and the text "mail to us" is an E-mail link to the e-mail address saveEarth@who.info .

```
<font size=2><A href=mailto:saveEarth@who.info>E-Mail</A></font>
```

xi) Image used at the bottom is notice1.jpg and it acts as a link to notice.html

```
<A href="Notice.html"> <img src=notice1.jpg></A>
```

xii) To create a textbox which can accept maximum of 20 characters with a *default value* "Enter Name"

```
<input type="Text" Maxlength=20,value="Enter Name">.
```

xiii) Specify the *tag* and *attributes* to create a *TextArea* with 5 rows and 20 columns.

```
<TextArea rows=5 cols=20></TextArea>
```

33. What is the purpose of select tag . or how to create list box/drop down list

Select Tag is used to create drop down list

```
<select name="cars">
```

```
<option value="volvo">Volvo</option>
```

```
<option value="saab">Saab</option>
```

```
<option value="opel">Opel</option>
```

```
<option value="audi">Audi</option>
```

```
</select>
```

34. Name the tag and attribute used to set a target frame in HTML.

Base Target Tag is used inside the head tag to set the target frame in HTML

It will make the html page to open in selected frame only.

```
<head>
```

```
<base target="frame_name">
```

```
</head>
```

35. What is the use of the ALT attribute of an tag?

Specifies an alternate text for an image, it will be displayed if browser does not support image << ``

36. What is the use of <EMBED> tag? Write any three attributes of <EMBED> tag.

The <embed> tag defines a container for an external application or interactive content (a plug-in). We can use this tag to add sound movies or flash file
Attribute are **src, height, width & type**

37. Write a HTML code line to print the following chemical formulae Na_2SO_4
`Na₂SO₄⁻²`

38. What is the use of # sign in intra file linking in HTML?

is used to provide reference to Anchor Name in Bookmark

``

` Top`

39. Name the tag and attribute used to set a checkbox as selected by default.

<Input Type= "Checkbox" value="Car" Checked>

Code	Output
<pre><form action="demo_form.asp" method="get"> <input type="checkbox" name="Ch1" >Bike
 <input type="checkbox" name="Ch2" checked>Car
 <input type="submit" value="Submit"> </form></pre>	<p><input type="checkbox"/> Bike</p> <p><input checked="" type="checkbox"/> Car</p> <p><input type="submit" value="Submit"/></p>

40. Explain the Definition List with a suitable example

Definition lists create a list with two parts to each entry: the name or term to be defined and the definition. This creates lists similar to a dictionary or glossary. There are three tags associated with the definition list: 1) `<dl>` to define the list 2) `<dt>` to define the definition term 3 `<dd>` to define the definition of the term

Code	Output
<pre><dl> <dt>Coffee</dt> <dd>Black hot drink</dd> <dt>Milk</dt> <dd>White cold drink</dd> </dl></pre>	<p>Coffee</p> <p>Black hot drink</p> <p>Milk</p> <p>White cold drink</p>

41 Write a code to create table given in fig
 Table border is red cell of first two rows should have different color use spacing and padding accordingly shown in fig

Class	Section	Marks	
		English	Maths
XII	A	90	80
XII	B	80	90

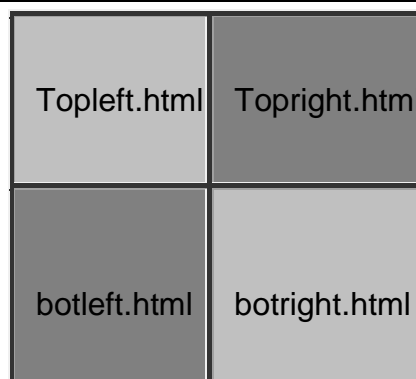
```
Code
<html>
<body>
<table cellspacing=5 cellpadding =5 border=2 bordercolor="red">
<tr>
<td bgcolor="yellow" rowspan=2>Class</td>
<td bgcolor="pink" rowspan=2>Section</td>
<td colspan=2 bgcolor="Green"> Marks</td> </tr>
<tr>
<td colspan="1" bgcolor="purple">English</td><td colspan="1" bgcolor="blue">Maths</td> </tr>
<tr>
<td> XII </td><td> A </td><td> 90</td><td> 80 </td> </tr>
<tr>
<td> XII </td><td>B</td><td> 80</td><td> 90 </td> </tr>
</Table>
</Body>
</Html>
```

Code	Display
<pre><frameset rows="16%,84%"> <frame src="top.htm" name="top"> <frame src="bottom.htm" name="bottom"> </frameset></pre>	
<pre><frameset rows="16%,84%"> <frameset cols="50%,50%"> <frame src="topleft.html" name="tl"> <frame src="topright.html" name="tr"> </frameset> <frame src="bottom.html" name="bottom"> </frameset></pre>	
<pre><frameset rows="16%,84%"> <frame src="top.htm" name="top"> <frameset cols="50%,50%"> <frame src="left.htm" name="left"> <frame src="right.htm" name="right"> </frameset> </frameset></pre>	


```

<frameset rows="50%,50%"
cols="50%,50%">
<frame src="topleft.htm" name="topleft">
<frame src="topright.htm"
name="topright">
<frame src="botleft.htm" name="botleft">
<frame src="botright.htm"
name="botright">
</frameset>

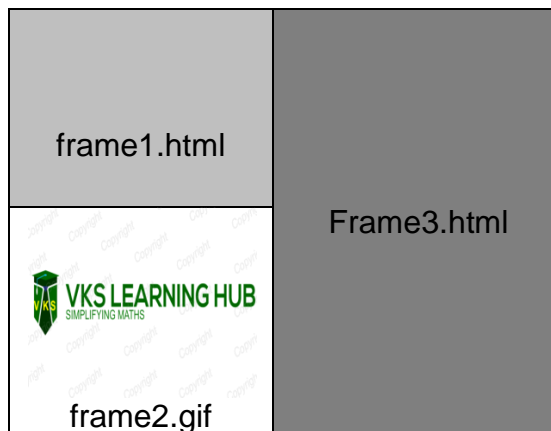
```



```

<FRAMESET cols="20%, 80%">
  <FRAMESET rows="100, 200">
    <FRAME src=" frame1.html">
    <FRAME src=" frame2.gif">
  </FRAMESET>
  <FRAME src=" frame3.html">
  <NOFRAMES>
    <P>This frameset document contains:
    <UL>
      <LI><A href="frame1.html">
        Some neat contents</A>
      <LI><IMG src=" frame2.gif" alt="A
neat image">
      <LI><A href="frame3.html">
        Some other neat contents</A>
    </UL>
  </NOFRAMES>
</FRAMESET>

```



<NOFRAME> Tag contain the html content which will be displayed if browser does not support frame document. It's a container tag. Closed by </noframe>

If we don't use <NoFrame> Tag and Browser does not support Frames, in that case Error page will be displayed by the browser

<NOFRAME> TAG basically helps stopping the error page instead displayed the content which is basically a link to a non frame page

<Base Target= " Target Frame name"> Tag is used to link a frame/Window where the hyperlinked webpage of other frame will be displayed . **<Base target = "">** is used to open all link document to be open in particular frame of frameset/ Window.

<Base Target= " Target Frame name"> is always declared in <head > tag of HTML Webpage Page



Prime Minister on 26 October 2011 declared the birthday of the great mathematician Srinivasa Ramanujan, 22 December as National Mathematics Day. PM also declared 2012 as the national mathematical year.

The Ramanujan Mathematical Society will hold a series of activities in 2012 to mark the 125th birth anniversary of the mathematician.

The activities involve different sections like:

- School goers
- College students
- Research Fellows

Programme Details

Event	Details
Opening Ceremony	Prime Minister inaugurates the year long celebrations at the Madras University Auditorium
Activities	Talks and activities would focus on helping students get rid of their fear of the subject and improve their skills
Closing ceremony	International Conference of Mathematicians in New Delhi in december 2012

For enquiries mail us at RMS@xyz.com

Consider the following points while writing the HTML code:

1. The title of the web page is Mathematics Year.
2. The style of the page is Trebuchet MS.
3. The image used is Maths1.jpg
4. The table has a red colored border that is 5 pixels thick.
5. The space between cells is 5 pixels.
6. Use the concept of lists to create the given lists.
7. The link at the bottom is an e_mail link to the address RMS@xyz.com

1.

```
<html>
<head> <title>Mathematics Year</title> </head>
<body>
<font face = "Trebuchet MS">
<center></center>
<P>
Prime Minister on 26 October 2011 declared the birthday of the great mathematician Srinivasa Ramanujan, 22 December as National Mathematics Day. PM also declared 2012 as the national mathematical year.
<p>
The Ramanujan Mathematical Society will hold a series of activities in 2012 to mark the 125th birth anniversary of the mathematician.
```

```
<P>
<ul>The activities involve different scetions like:
<li>School goers
<li>Colege students
<li>Research Fellows
</ul>
<hr>
<table border=5 bordercolor=red cellspacing=5>
<caption>Programme Details</caption>
<tr>
<th>Event
<th>Details
</tr>
<tr>
<td>Opening Ceremony
<td>Prime Minister inaugurates the yearlong celebrations at the Madras University Auditorium
</tr>
<tr>
<td>Activities
<td>Talks and activities would focus on helping students get rid of their fear of the subject and
improve their skills
</tr>
<tr>
<td>Closing ceremony
<td>International Conference of Mathematicians in New Delhi in December 2012
</tr>
</table>
<font size = 2>For enquiries mail us at
<a href = "mailto:RMS@xyz.com">RMS@xyz.com</a>
</body>
</html>
```

Save girl child, educate girl child

Save girl child, educate girl child (Beti Bachao, Beti Padhao) is a Government of India scheme that aims to generate awareness and improving the efficiency of welfare services meant for women.



Project Implementation

1. [At the National level](#)
2. [At the State level](#)
3. [At the District level](#)

The objectives of this initiative are:

Prevention of gender biased sex selective elimination	Ensuring survival & protection of the girl child	Ensuring education and participation of the girl child
-------------------------------------------------------	--------------------------------------------------	--------------------------------------------------------

[For Further Enquiries](#)

Consider the following while writing the HTML code

1. Title of the page should be "Save Girl Child"
2. Link colour should be "Maroon", visited link colour should be "Red".
3. Heading of page is "violet"
4. Picture used in the page is the file "savegirl.jpg"
5. Table should have a border of width 1, border of table should be "green".
6. Background of first row is "yellow" and of second row is "cyan"
7. Pages linked to :
 - At the National level as "national.html"
 - At the State level as "state.html"
 - At the District level as "district.html"
8. Bottom message is of size 2 is linked to email-id savegirl@abc.com

```
2. <html>
<head> <title>Save Girl Child</title> </head>
<body LINK="maroon" VLINK="red" >
<h1 align="center">Save girl child, educate girl child</h1>
<hr>

<strong>Save girl child, educate girl child (BetiBachao, Beti Padhao) </strong>is a Government of
India scheme that aims to generate awareness and improving the efficiency of welfare services
meant for women.</p>
Project Implementation
<ol>
<li><a href="national.html">At the National level</a></li>
<li> <a href="state.html">At the State level</a></li>
<li> <a href="district.html">At the District level</a></li>
</ol>
```

```

<table width="300" border="1" bordercolor="green" >
<tr bgcolor=yellow>
<td colspan=3><center>The objectives of this initiative are:
</center></td>
</tr>
<tr bgcolor=cyan >
<td width="100">Prevention of gender biased sex selective
elimination</td>
<td width="100">Ensuring survival protection of the girl
child</td>
<td width="100">Ensuring education and participation of the girl
child</td>
</tr>
</table>
<hr>
<FONT SIZE=2 > <p align="center"><a href="mailto:savegirl@abc.com">For Further
Enquiries</a></p></font>
</body>
</html>

```

How to Add Audio/Sound file in HTML

```

<embed src="example.wav" autostart="false" loop="3" hidden="false"
volume="50" width="180" height="40">

```

Attribute	Value	Explanation
<u>src</u> =" "	URL	the URL of the object data
<u>autostart</u> =" "	true	sets the auto start
	false	true : the sound starts automatically false : the sound doesn't start automatically
<u>loop</u> =" "	true	sets the repeat
	false	true : repeats infinitely false : only once
	number	number : the number of repeats
<u>hidden</u> =" "	true	sets the hidden
	false	true : the control bar is not displayed false : the control bar is displayed
<u>volume</u> =" "	0 - 100	sets the volume (a number from 0 to 100)
<u>width</u> =" "	pixels or %	the width of the control bar
<u>height</u> =" "	pixels or %	the height of the control bar

Working with MySQL

SQL (Structured Query Language): It is the language used to manipulate and manage databases using an RDBMS.

Different SQL commands which will be of our use are given below:

SNo	Command, Syntax, and Purpose
1.	<p>Command: CREATE DATABASE</p> <p>Syntax: CREATE DATABASE <databasename>;</p> <p>Purpose: Creates a database with the specified name.</p>
2.	<p>Command: CREATE TABLE</p> <p>Syntax: CREATE TABLE <tablename> (<column name1> <data type1>, <column name2> <data type2>, . . <column nameN> <data typeN>);</p> <p>Purpose: Creates a table with the specified name.</p>
3.	<p>Command: INSERT</p> <p>Syntax: INSERT INTO <tablename> [<column1>, <column2>, ..., <columnn>] VALUES (<value1>, <value2>, ... <value n>);</p> <p>Purpose: Inserts data into a table</p>
4.	<p>Command: SELECT</p> <p>Syntax: SELECT <* / column name / expression> , [<column name/Expression list>] FROM <table name> [WHERE <condition>] [ORDER BY <column name / expression> [ASC/DESC]];</p> <p>There are multiple ways to use SELECT. These will be explained with the help of examples in this lesson.</p> <p>Purpose: Retrieves data from a table</p>
5.	<p>Command: UPDATE</p> <p>Syntax: UPDATE <tablename> SET <column name> = <value>, [<column name> = <value>, ...] [WHERE <condn>];</p> <p>Purpose: Updates/Modifies data in a table</p>
6.	<p>Command: DELETE</p> <p>Syntax: DELETE FROM <tablename> [Where <condition>];</p> <p>Purpose: Deletes data from a table</p>

Following are the clauses which can be used with SELECT command:

a.	DISTINCT	Used to display distinct values from a column of a table.
b.	WHERE	Used to specify the condition based on which rows of a table are displayed.
c.	BETWEEN	Used to define the range of values within which the column values must fall to make a condition true. Range includes both the upper and the lower values.

d.	IN	Used to select values that match any value in a given list of values.
e.	LIKE	Used for pattern matching of string data using wildcard characters % and _ .
f.	IS NULL / IS NOT NULL	Used to select rows in which the specified column is NULL (or is not NULL)
g.	ORDER BY	Used to display the selected rows in ascending or in descending order of the specified column.

Now, let us revise these commands with the help of **Library** database discussed above.

After starting MySQL, our first job is to create a database in which all the tables will be stored. For this we give the statement:

CREATE DATABASE Library;

This statement will create a database with the name Library.

After creating the database, we have to create tables. Before we create a table, we should very carefully plan columns that we want to have in the table and their data types. There are many data types available in MySQL, but a few which are used most often are:

Class	Data Type	Format
Text	CHAR(size)	CHAR(size)
	VARCHAR(size)	VARCHAR(size)
NUMERIC	DECIMAL(p,s)	DECIMAL(p,s)
	INT Or INTEGER	INT
date	DATE	YYYY-MM-DD

After planning, we arrive at the following data types for columns of our tables in the Library database:

BOOKS

Column	Data Type	Reason
AccNo	INTEGER(5)	Accession no of book is a number in the range 1 to 99999.
Title	VARCHAR(30)	Title of a book may be maximum upto 30 characters long
Author	VARCHAR(30)	An author name may be maximum upto 30 characters
Publisher	VARCHAR(10)	May have maximum 10 characters.
Edition	INTEGER(4)	Year of edition of the book
Price	DECIMAL(7, 2)	We assume that the price of a book will not exceed Rs.99999.99

STUDENTS

Column	Data Type	Reason
AdmNo	VARCHAR(7)	Here we assume that admission number consists of 4 digit year of admission followed by 3 digit admission serial number. Therefore, AdmNo 2009012 means that the students was admitted in the school in the year 2009 and he/she was the 12th student (in sequence) to take admission in that year.
LibCardNo	INTEGER(4)	Library card number is a number in the range 1 to 9999.
AccNo	INTEGER(5)	Accession number of a book is a number in the range 1 to 99999.

IssueDate	DATE	IssueDate is the date of issue of the book.
ReturnDate	DATE	ReturnDate is the date on which the book is returned.

STAFF

Column	Data Type	Reason
EmpNo	INTEGER(3)	Employee number is a number in the range 1 to 999.
AccNo	INTEGER(5)	Accession number of a book is a number in the range 1 to 99999.
IssueDate	DATE	It is the date of issue of the book.
ReturnDate	DATE	It is the date on which the book is returned.

Now we are ready to create the tables. The statements to create these tables are as follows:

- To create the BOOKS table:
CREATE TABLE Books(AccNo INTEGER(5) primary key, Title VARCHAR(30), Author VARCHAR(30), Publisher VARCHAR(10), Edition INTEGER(4), Price DECIMAL(7,2));
- To create the STUDENTS table:
CREATE TABLE Students(AdmNo VARCHAR(7), LibCardNo INTEGER(4), AccNo INTEGER(5), IssueDate DATE, ReturnDate DATE);
- To create the STAFF table:
CREATE TABLE Staff (EmpNo INTEGER(3), AccNo INTEGER(5), IssueDate DATE, ReturnDate DATE);
- Once the tables are as per the required specifications, we can populate these tables with the given sample data as follows:
 - For Books table:
INSERT INTO Books VALUES (1001, 'Basic Economics', 'J.P.Mudgil', APH', 2009, 125);

INSERT INTO Books VALUES (1002, 'Micro Economics', 'Kavi Prakash', 'KPH', 2009, 175);
 - For Students table:
INSERT INTO Students VALUES ('2010001', 101, 1002, '2009-12-02', '2009-12-08');
INSERT INTO Students VALUES ('2009012', 102, 1050,'2010-02-16', NULL);
 - For Staff table:
INSERT INTO Staff VALUE (1, 1001,'2009-04-13', NULL);
INSERT INTO Staff (EmpNO) VALUE (2);
- Now we can check whether the data has been entered into the tables correctly or not by entering the statements:
SELECT * FROM Books;
SELECT * FROM Students;
SELECT * FROM Staff;

We can use various clauses with SELECT command to display the data. Examples are shown below:

- To check the names (without repetition) of various publishers whose books are present in the library, we enter the statement:

```
SELECT DISTINCT Publisher FROM Books;
```

- To check the books of publisher 'APH' present in the library, we enter the statement:

```
SELECT * from Books WHERE Publisher = 'APH';
```

- To display the books list for which the price is between Rs.250 and Rs.500, we enter the statement:

```
SELECT * FROM Books WHERE Price > 250 and Price < 500;
```

- To display the books list for which the price is from Rs.250 to Rs.500, we enter the statement:

```
SELECT * FROM Books WHERE Price >= 250 and Price <= 500;
```

OR

```
SELECT * FROM Books WHERE Price BETWEEN 250 and 500;
```

- To display the details of books from the publishers 'APH' 'JPH', or 'ABD', we enter the statement:

```
SELECT * from Books  
WHERE Publisher = 'APH' OR Publisher = 'JPH' OR Publisher = 'ABD';
```

OR

```
SELECT * from Books  
WHERE Publisher IN ('APH', 'JPH', 'ABD');
```

- To list the AccNo, Title, and Price of all the books whose Title contains the word 'History', we can enter the statement:

```
SELECT AccNo, Title, Publisher from Books  
WHERE Title LIKE '%History%';
```

- To display the AccNo of all the books which have been issued to students but not returned by them, we enter the statement:

```
SELECT AccNo FROM Students  
WHERE IssueDate IS NOT NULL and ReturnDate IS NULL;
```

- To Display a List of all the Books in the alphabetical ascending order of Titles, we enter the statement:

```
SELECT * FROM Books ORDER BY Title;
```

- To get the same list in descending order of Titles, we enter the statement:

```
SELECT * FROM Books ORDER BY Title DESC;
```

- Now suppose a student returns a Book with AccNo 1245 on 12 August 2010, then this information can be recorded in the Students table as follows:

```
UPDATE Students  
SET ReturnDate = '2010-08-12'  
WHERE AccNo = 1245;
```

- If we want to delete the records of all the books by the Publisher 'PPP' with edition year earlier than 1990, we can enter the statement:

```
DELETE FROM Books  
WHERE Publisher = 'PPP' AND Edition < 1990
```