

- **Multimedia**:- Multimedia is as described above, woven combination of text, graphic art, sound, animation, and video element.
When you allow and user the viewer of a multimedia project to control what and which the element are delivered it interactive multimedia.
- Use of multimedia office, airport, railway stations, journalism, creative and entertainment industry such as TV films radio etc.
- Combining Content from Various media
There are various components that make up a multimedia production. In a program, more than one media element is necessary to call it multimedia.
Some example of media are given below:
 - Text and typography
 - Coloured pictorial graphic background.

- > image and graphics such as photographs,
 - illustration, cartoon, diagram, shapes
 - arrows, lines etc.
 - > 2D and 3D animation.
 - > Audio files such as a song, sound effects, music, etc.
 - > video files such as a short movie clip, advertisement, etc.
 - > Buttons and menu for easy navigation in a program.
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- Categories of multimedia

Multimedia can be divided into two forms -

linear and non-linear

linear:- In linear multimedia, information is read or viewed in a continuous sequence.

non-linear:- non-linear multimedia information is presented in sequential or chronological manner. Non-linear multimedia programs are usually interactive and require audience interaction.

- Features of multimedia:-
Digital and computer based image, text, animation, audio, and video that can be turned from one form to another are two fundamental features of multimedia.
They can be transmitted, projected and played on a projector using a media player such as computer.

- Application of multimedia:
Multimedia can be used in a variety of ways in myriad fields. A multimedia presentation can be put together in varied formats.
Some of the most common applications are given below:
- Business:- multimedia is used for advertising and selling products on the internet. Some businesses use multimedia tools such as CD-Roms, DVD's or online tutorials for training or educating staff members about their employer and them to learn or know.

- Research and medicine :-
multimedia is increasingly used in research in the fields of science, medicine and mathematics. It is mostly used for modeling and simulation.
- Public access notes: public access is an area of application where several multimedia application will be available very soon.
- Entertainment :- Multimedia is used to special in films, tv serials, video, games and animation. multimedia game are popular software programs that available online as well as on DVDs and CD - ROMS.

Industry :- In the Industrial sector, multimedia is used to present information to all people related to the industry such as stakeholders, shareholders, senior level managers and co - workers.

- **Commercial:-** Creative presentations are used to grab the attention of the masses in advertising. Industrial, business to business and interoffice communication.
- **Education:-** Multimedia is used as a source of information in the field of education.
- **Multimedia in public place:-**
In railway stations, hotels, museums, grocery stores and shopping malls multimedia will become available at stand-alone terminals to provide information and help.
- **Engineering:** Software engineering may use multimedia in computer simulations for anything from entertainment to training such as military or industrial training.

Stage of multimedia project:-

1. Pre Production :- The process before producing multimedia project.
2. Production :- The process in which multimedia project is produced.
3. Post - Production :- The process after the production of multimedia project.

• Pre - Production

- Idea or motivation

During the initial why phase of production the first question the production team asks is "why" you want to develop a multimedia project.

- > Is the idea marketable and profitable?
- > Is multimedia the best option, or would a print product being more effective?

- Project concept and project goals
- Target audience
- Delivery medium and authoring tools
- Planning

* Production:- In the production stage all components of planning come into effect. If pre production was done properly, all individuals will carry out the assigned work according to the plan.

Given below are some of the things that people involved in production have to do

- Scriptwriting
- Art
- 3D modelling and animation:-
The 3D artwork is created, rendered and the prepared for use in the authoring tools.
- Authoring
- shooting and Recording, Digitizing video

Quality Control.

(3) Post - Production:- After the production of the multimedia project - Post Production technicalities should be addressed to produce a perfect and error free project.

The stage of production involves:

- Testing
- Archiving and Duplication
- Marketing and distribution
- multimedia still required a team.
A multimedia team members consist of the following:

- > Project manager
- > multimedia designer
- > Interface designer
- > multimedia programme
- > Computer programme writer

Subject matter expert
audio specialist
video specialist

Producer for the web
Permission specialist

- Multimedia can be transmission

com
hell

- Evolution of multimedia and its objects.

Multimedia is a representation of information in an attractive and interactive manner with the use of a combination of text, audio, video, graphs and animation.

- Formative Evaluation:-

There are three major stages or steps that occur in the formative evaluation of multimedia hardware and software : the development of a prototype, the pilot test and the field test.

- Summative Evaluation:- In summative evaluation the worth of a program or the overall effectiveness of the finished multimedia product is judged.

Scope of multimedia in Business work -

Multimedia such as mobile marketing, live-casting and podcasting, photo

video and file sharing, can spread the word about your company and help build brand awareness in a very unique and powerful way.

- Multimedia for business marketing:- several online communities exist for the purpose of uploading and sharing photos over the web, and many small businesses have learned to take advantage of these services to market their products.
- ~~Production & Planning of multimedia applications~~
V.IMP

Multimedia projects are complex: they often involve the skills and efforts of multiple teams or people. During the development process, a project moves through the specialized parts of the team, from story creation to technical editing, with regular collective review sessions. Each stage is designed to refine the project with attention to the client's needs, technical requirements, and audience preferences.

- planning meeting to start the process.

A planning meeting is a crucial part of the multimedia development process; it creates a shared vision for everyone working on the project.

- creative brief and script writing:-
Most multimedia have a story behind them. after initial meeting the people in charge of the background story write a script, creative brief outline.

- Story Boarding to tie the Elements together:-

A multimedia project usually includes multiple pieces: audio, video, imagery, text for voiceovers and on screen. includes a sketch of the visual elements, the voiceover or title text and any production notes.

and effective. It includes digital textbooks, educational videos and online course.

Ques: 3 Explain:-

- 1) Multimedia Hardware
- 2) multimedia S/w
- 3) storage device used in multimedia

Ans:- Multimedia Hardware:-

Multimedia hardware refers to the physical component and device that are used for creating, processing, storing and transmitting multimedia content such as audio, video, image and text. Examples of multimedia Hardware include cameras, microphones, speakers, projector and storage device. These device work together to enable the creation and consumption of multimedia content in various form, including entertainment, education, communication

and advertising.

2) Multimedia Software:-

Multimedia software refers to computer program and application that are designed for creating, editing, organizing and presenting multimedia content, such as audio, video, image and text. Ex:- include video editor software, graphic design software and media player. These software enable user to create and manipulate multimedia content often with user-friendly interfaces that require little technical expertise. Multimedia is used to variety of industries, including entertainment, education, marketing and journalism and has greatly impacted the way we consume and interact with media.

3) Storage device:- Multimedia content involves large files that require a significant amount of storage device. Here are some commonly used storage device in multimedia.

1. Hard Disk Drive:- These are most common storage devices used in multimedia. Storage device used in multimedia, they offer high storage capacity and are relatively inexpensive. However, they are not as fast as other storage device such as solid state device.

2. Solid State Drives:-(SSD) These storage device are faster than HDDs because they faster than HDDs because they used flash memory instead of spinning disk. They are more expensive than HDDs, but they offer faster read and write speeds which makes them ideal for storing multimedia files.

Optical Disk:- These storage device include CD, DVD, and Blu-ray disc. They offer a high storage capacity but they are not as much capacity but are not as convenient for storing multimedia files because they require a disc drive to access the data.

USB Flash Drive:- These small portable storage device offer high capacity in a compact form factor. They are ideal for transporting multimedia files between devices but they ^{not} be the best choice for long-term storage.

-4 what do you mean by authoring tools explain card, page & icon based authoring tools?
 List advantages & disadvantages of page, icon, card based authoring systems.

Ans:- In multimedia an authoring tool is a software application that enables the creation of multimedia content such as interactive presentation, animation, video and other type of digital media. Authoring tools allows user to combine various type of media including text, image, audio, video, to create a complete multimedia experience.

Ex :- ADOBE CAPTIVE.

CARD BASED AUTHORIZING TOOLS

A Card based Authoring tools is a type of authoring tools that organizes content into individual card or title each card representation, such as a text snippet, and image a video or an interactive element.

Page Based Authoring tools:- A Page based authoring tool is a type of authoring tools it follows a traditional page - based approach to content creation. user create and design individual page or screen that are meant to be displayed sequentially at

~~user~~ navigated through in a library
various multimedia element such as
text video audio.

Icon Based Authoring tools:- An icon based authoring tool is a type of authoring tool that uses visual icons and symbols to represent actions, functions or programming logic these icons are typically connected together interface to define the behaviour and interaction of multi media element.

ADVANTAGES AND DISADVANTAGES:-
CARD BASED AUTHORING TOOLS

Advantages:-

- 1) Flexibility and reusability.
- 2) visual Apper.
- 3) user friendly.

Disadvantages:-

- 1) Limited content capacity.
- 2) Limited control over layout.
- 3) lack of consistency.

ICON Based Authoring Tools:

Advantages:-

- 1) Easy to use.
- 2) Rapid prototyping.
- 3) Improved Collaboration.

Disadvantages:-

- 1) Limited customization.
- 2) Steep Learning Curve.
- 3) Lack of portability.

Page Based Authoring Tools:

Advantages:-

- 1) Structured Approach.
- 2) User-friendly.
- 3) Linear Navigation.

Disadvantages:-

- 1) Limited interactivity.
- 2) Time Consuming.
- 3) Limited portability.

Some loss of original file is inevitable.
Example of lossy compression algorithm
commonly used in include MP3, AAC.

-WMA.

Ques:- Explain :-

(i) JPEG

(2) MPEG

Ans:- MPEG1 and JPEG1 are both standarized compression format used for digital video and image respectively.

MPEG1:- MPEG1 stand for moving picture expert group. and it is a set of standard development by the international organization for standardization (ISO) for the compression and transmission of digital video - the MPEG1 format is widely used for video file including DVDs.

Blu-rays and streaming video use MPEG compression work by analyzing the video content and removing redundancy and redundancies and non essential information.

(2) JPEG:- JPEG stand for joint photo graphics expert group and it is a standardized compression format used for digital image. JPEG is widely used for photograph and other complex images such as digital artwork. the JPEG format works reducing the amount of information stored in the file while preserving the visual quality of the image.

Text:- Text has become a part of our life. It consists of characters, punctuation, symbols, etc. to convey a message. We record text in newspapers, magazines, pamphlets, billboard, books, websites, etc. Text is one of the imperative components of multimedia and an essential source of presenting information to wide range of people.

Fonts and Faces:-

Text is one the easiest of all multimedia element to use. Most computer users are familiar with word processing and know the processes of entering and editing and editing text and working with fonts and font sizes.

Factors affecting legibility of text are as follows:-

- Size and style

- Background and foreground colours
- Leading.

Font size is measured in point and it does not describe the height or width of its character.

Font are very useful as they help in gaining attention of the reader by highlighting headings increasing readability and project an image.

Installation of Fonts:-

Fonts can be installed on the computer by opening the fonts folder through windows Explorer. Go to C:\WINDOWS\Fonts or C:\WINNT\FONTS. When the folder opens, select the fonts you want to install from an alternate folder and copy and paste them into the font folder. The second option is go to start > setting > control panel > fonts, then go to file > Install New Font.

Selecting Text Fonts:-

- Choose a font that is legible and easy to read.
- The different effects and colours of a font can be chosen to make the text look distinctive.
- Try to use few different colours within the same presentation.
- Try to use few typefaces within the same presentation. Play with the style and size to match up to the purpose and importance of the text.
 - For instance, use large font size for headings.
- Drop caps and initial caps can be used to accent the words.
- Anti-aliased can be used to make a text look gentle and blurred.
- To attract instant attention to the text the word can be wrapped onto a sphere or bent like a wave.
- In case of text links on web pages the messages can be highlighted.

Meaningful word and phrases can be used for links and menu items. Overcrowding of text on single page should be avoided. Do not use decorative passages for longer paragraphs.

Using text in Multimedia

The basic elements of multimedia is the text. However, the text should be kept minimum to avoid overusing unless the application contains a lot of reference material.

From design point of view, text should fill less than half the screen. There are following ways in which a text can be used in multimedia.

- In text message
- In advertisements
- in a website
- in films such as titles and credits as subtitles in a film or documentary that provide a translation.

- Using Text Element in multimedia presentation.

The text elements used in multimedia are given below:

- (1) Menus for Navigation
- (2) Interactive Buttons
- (3) Fields for Reading

HTML Document

- HTML document for Hypertext Markup Language which is Standard document format used Web Pages.

HTML documents are marked using tags.

An advanced form of HTML is DHTML that stands for Dynamic Hypertext markup language. It uses cascading style sheets. Some of the commonly used tags are

- The tag for making text bold face.
- The tag for creating an ordered list.
- The tag for inserting image.

Symbol and Icon:- symbols are concentrated text in the form of stand-alone graphics constructs and are used to convey meaningful messages and human emotion.

Type of Multimedia

- 1) Hypermedia
- 2) Interactive media.

(1) Hypermedia :- Hypermedia is used of text, data, graphics, audio and video as element of an extended hypertext system in which all elements are linked, where the content is accessible via hyperlink.

Hypertext is a subset of hypermedia, and the term was first used by Ted Nelson in 1965.

Hypermedia content can be developed using specified SW such as Adobe Flash, Adobe Director and Macromedia Authorware.

Ex:- world wide web.

Interactive multimedia:-

Any - computer delivered electronic that allows the user to control

combine and manipulate different type of multimedia such as text, sound, video, computer graphics and animation.