



Multimedia Programming

Multimedia
Software

Level 3

Lecture 5

Dr.Ghada Ouf



Video in Multimedia



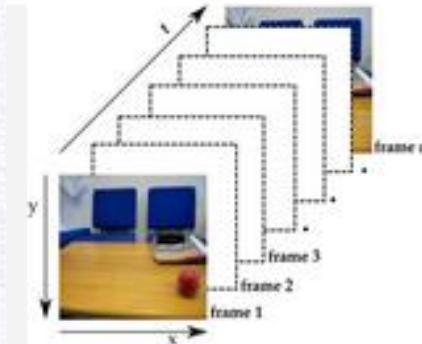
Video in Multimedia

Video in multimedia is one of the most important elements used to combine sound, images, and motion into an integrated interactive experience, making the message more impactful and engaging. It is a powerful means of communicating information, emotions, and ideas in an engaging and realistic way.

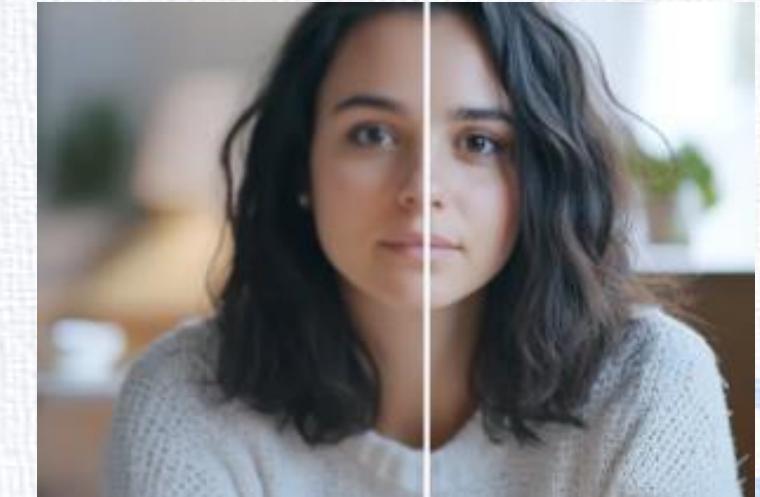
- 01 Use relevant images
- 02 Embed videos or GIFs
- 03 Include audio elements
- 04 Create interactive visuals



Video Quality Features:



Video is a sequence of still frames shown at a specific speed, usually between 24 and 30 frames per second, creating the illusion of continuous and natural motion.





Video Quality Features:

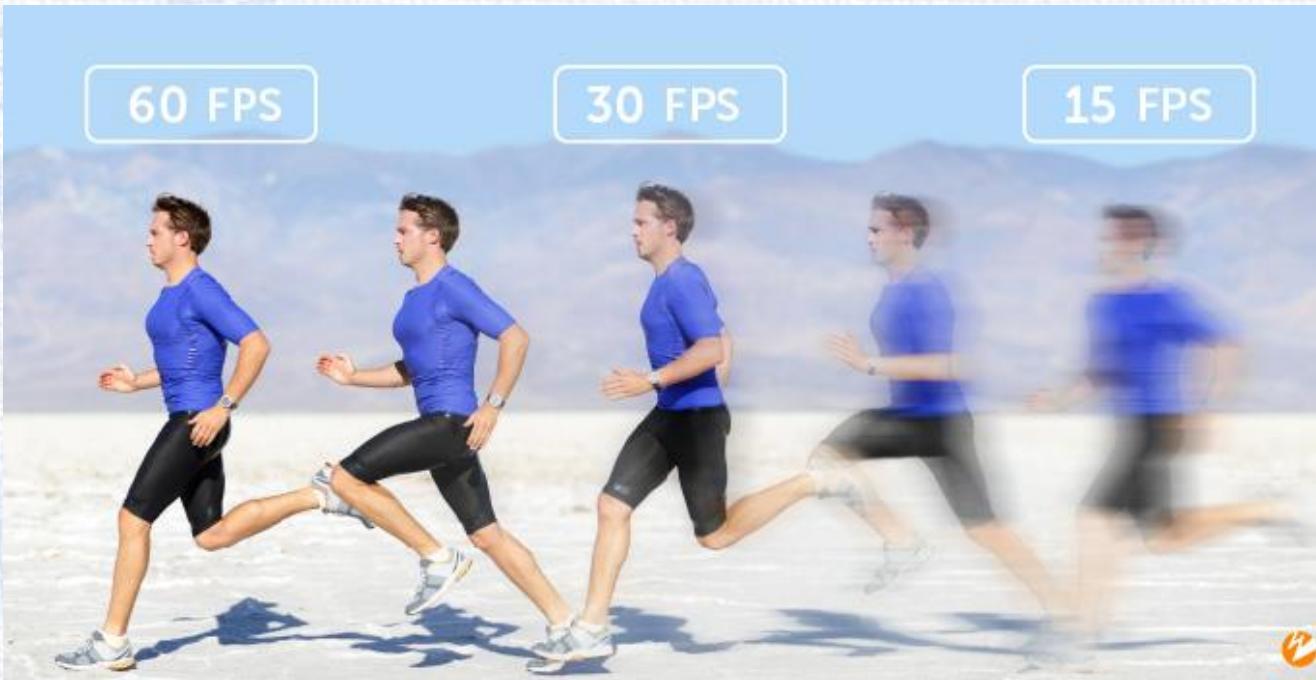
Difference Between 24 fps and 25 fps

fps 25	fps 24	Aspect
frames per second 25	frames per second 24	Meaning
TV broadcasting in Europe and the Middle East (PAL system)	Cinema and films	Common Use
Slightly smoother, suitable for <i>television</i> playback	Gives a more <i>cinematic</i> and natural motion	Visual Effect
images per second (about 4% faster) 25	images per second 24	Timing Difference



Video Quality Features:

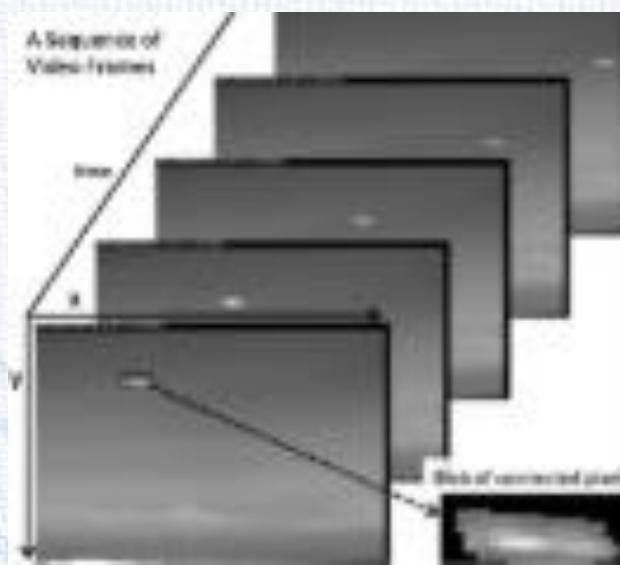
Difference Between 15 fps, 24 fps , 30 fps and 60 fps

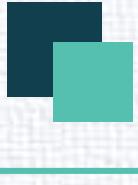




Definition of Video:

It is a series of sequential images displayed at a specific speed (usually 24 or 30 frames per second) to create a sense of natural movement, often accompanied by sound , music, or commentary, creating a sense of natural movement.

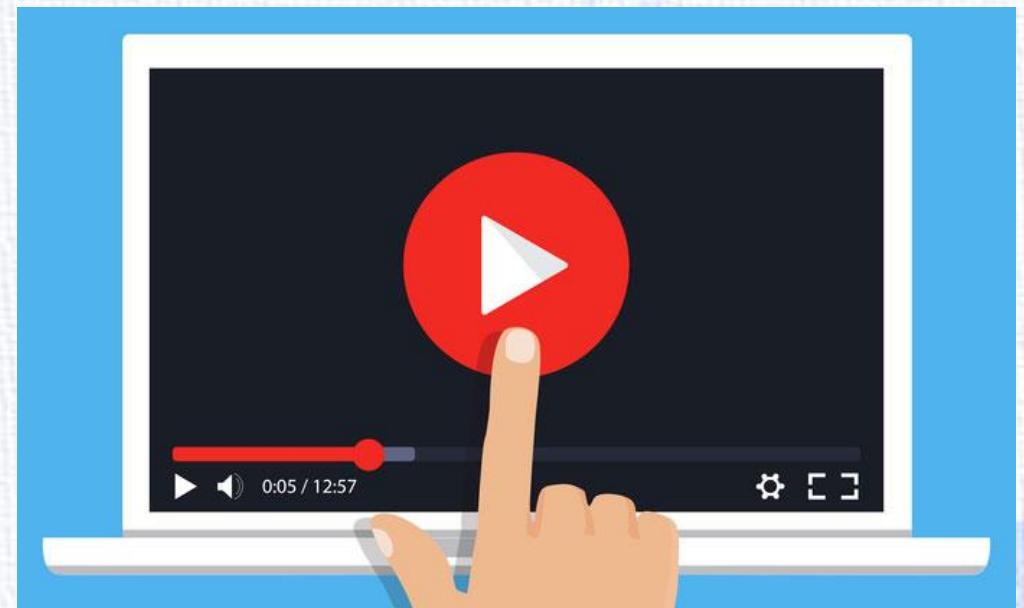




Video Components in Media :

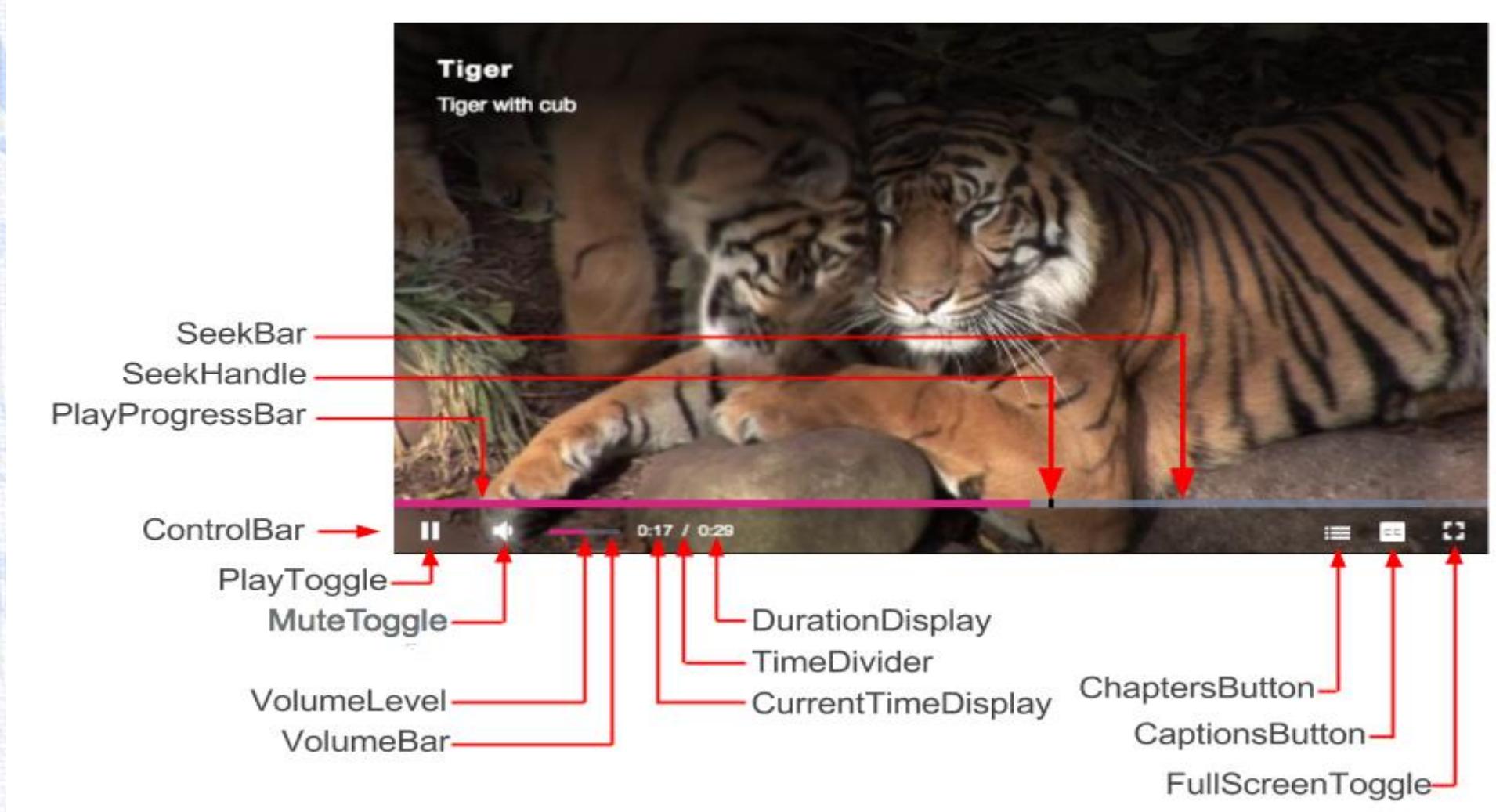
The elements that make up any video:

- Image (Sequential frames).
- Audio (dialogue, music, and actors).
- Texts and titles (titles and subtitles).
- Visual effects (transitions and effects).
- Speed , pacing, and movement .





Video Components in Media :





The Role of Video in Multimedia:

- 1. An Effective Communication Tool:** Video is more capable of capturing the user's attention than text or static images. It appeals to more than one sense—sight and hearing—thus increasing interaction and understanding.
- 2. An Educational and Training Tool:** It is used in explanations and simulations to simplify difficult concepts, such as scientific experiments or technical processes.
- 3. An Artistic and Marketing Element:** Video is incorporated into the design of advertisements, websites, and presentations, making them more dynamic and compelling.
- 4. An Interaction Supporter:** Through interactive videos, the user can choose the path or outcome, adding a new dimension to the educational or marketing experience.



The Role of Video in Multimedia:

The Role of Video in Multimedia:

1. An Effective Communication Tool: Video is more capable of capturing the user's attention than text or static images. It appeals to more than one sense—sight and hearing—thus increasing interaction and understanding.

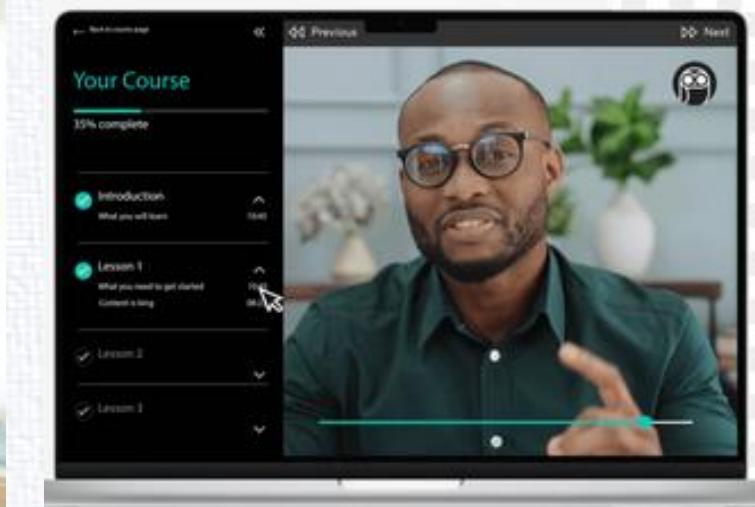




The Role of Video in Multimedia:

The Role of Video in Multimedia:

2. An Educational and Training Tool: It is used in explanations and simulations to simplify difficult concepts, such as scientific experiments or technical processes.





The Role of Video in Multimedia:

The Role of Video in Multimedia:

3. An Artistic and Marketing Element: Video is incorporated into the design of advertisements, websites, and presentations, making them more dynamic and compelling.





The Role of Video in Multimedia:

The Role of Video in Multimedia:

4. An Interaction Supporter: Through interactive videos, the user can choose the path or outcome, adding a new dimension to the educational or marketing experience.





Importance of Video in Multimedia:

- It captures the viewer's attention more than text and still images.
- It helps communicate information clearly and quickly.
- It is used in training and e-learning.
- It enhances the user experience on websites and applications.





Types of Video in Multimedia:

- **Real Video:** Clips filmed by a camera.
- **Animated Video:** Relies on animation and motion graphics.
- **Interactive Video:** Allows the user to control the display or select a path.





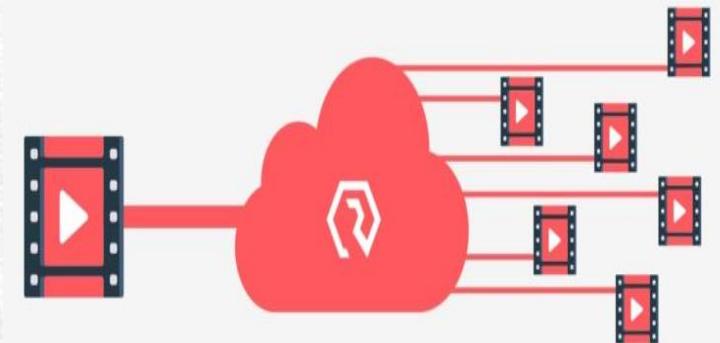
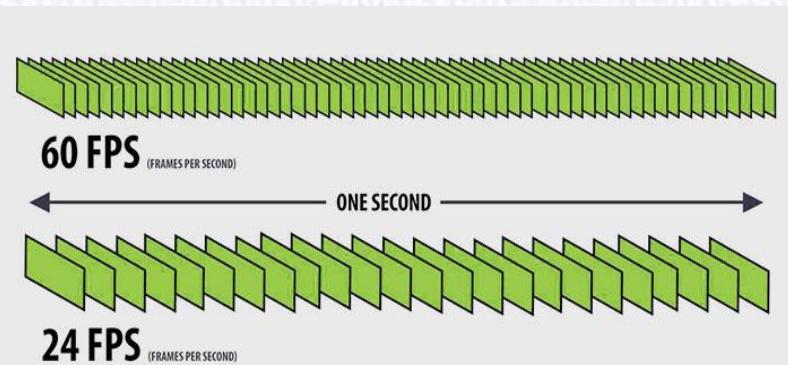
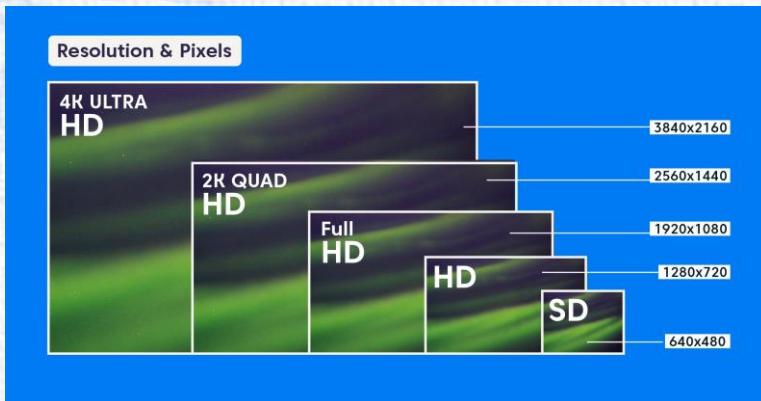
Video Quality Features:



Resolution: such as 720p, 1080p, 4K.

Frame Rate: The speed at which images are displayed.

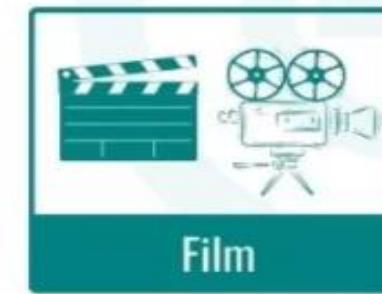
Video Compression: To reduce the size of files such as MP4, AVI, and MOV.





Video in Multimedia

Video in multimedia is one of the most important elements used to combine sound, images, and motion into an integrated interactive experience, making the message more impactful and engaging. It is a powerful means of communicating information, emotions, and ideas in an engaging and realistic way.





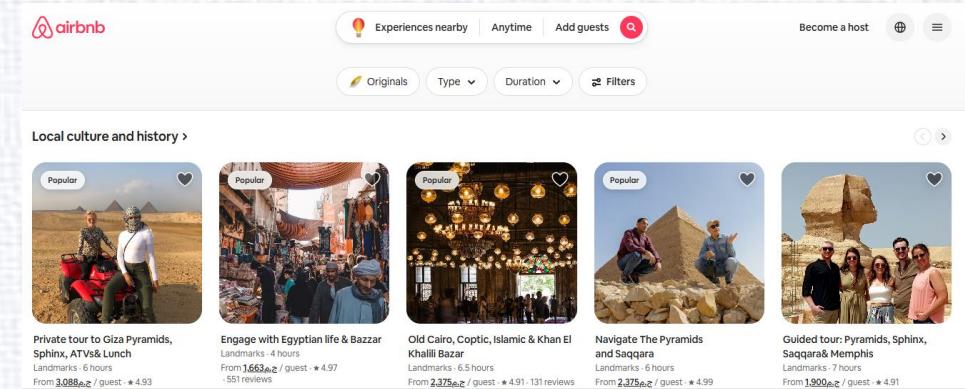
Examples of using video in multimedia

1. Interactive Websites

Interactive websites combine text, audio, video, graphics, and animation. Users engage with multimedia content through clicking, swiping, and typing. Interactive elements create two-way communication between sites and visitors.

Examples:

- Google Earth Web
- Spotify Wrapped
- Patatap
- Airbnb – Storytelling Experience
- Species in Pieces



<https://patatap.com>

<https://www.airbnb.com/s/experiences>

<http://species-in-pieces.com>



Examples of using video in multimedia

2. Online Videos

Online videos use moving visual imagery, often with accompanying audio. Streaming platforms allow instant access to films, shows, music videos, tutorials, and more.

Video-sharing sites like YouTube exemplify multimedia delivery over the internet.

Examples:

- Educational Videos
- Marketing / Promotional Videos
- Awareness / Campaign Videos
- Interactive Videos
- Entertainment Videos
- Explainer Videos





Examples of Multimedia

3. Television

Television delivers live or pre-recorded audiovisual content. TV programming uses moving images, sounds, text, and graphics to inform and entertain viewers. Television combines multiple mediums to create engaging content.

Examples:

- Educational TV Programs
- TV Commercials
- Entertainment & Interactive Shows
- News & Infographics
- Documentaries
- Smart / Interactive TV





Examples of Multimedia

4. Video Games

Video games integrate interactive gameplay with visual, auditory, and textual elements.

Contemporary games feature 3D graphics, cinematic cutscenes, ambient music, and complex interfaces. This digital medium powers multimedia technology for immersive user experiences.

Examples:

- **Educational Games:** Minecraft: Education Edition • *Brain Age* • Kahoot
- **(Action & Adventure Games:** • Call of Duty • Tomb Raider
- **Racing & Sports Games:** • Need for Speed • *FIFA / eFootball*
- **Fantasy & Role-Playing Games – RPG:** • Final Fantasy • Genshin Impact



Examples of Multimedia

5. Film

Motion pictures use camera work, acting, audio, visual effects, and musical scores to tell stories. As an audio-visual medium, movies strategically employ sight, sound, imagery, and language. Theatrical releases represent multimedia presentations on the big screen.

Examples:

In Education:

Premium educational films are used to explain complex concepts in a visual way.

Educational science films, such as the BBC's "Inside the Human Body," use 3D animation to explain body parts.

Corporate films to demonstrate how to use hardware or software.

In Marketing Advertisements

Promotional tourism films such as "This is Egypt."



Examples of Multimedia

5. Film

Motion pictures use camera work, acting, audio, visual effects, and musical scores to tell stories. As an audio-visual medium, movies strategically employ sight, sound, imagery, and language. Theatrical releases represent multimedia presentations on the big screen.

Examples:



Examples of Multimedia

6. .Radio

Radio broadcasting transmits audio programming over radio frequencies. While mostly known for sound content. Radio shows also use voice acting, sound effects, music, and scripted dialogue. Radio creatively employs multiple mediums to connect with listeners.

Examples:

- Radio France Education
- University radio stations
- Audio awareness programs



Examples of Multimedia

7. . E-Learning Platforms

Online education integrates digital text, graphics, video lectures, quizzes, simulations, and more. Multimedia courseware maximizes student engagement and retention through dynamic content. It is a good combined medium for efficient remote learning.

Examples:

Video- and Audio-Based E-Learning Platforms:

Coursera – Moodle - Edmodo - Khan Academy



Examples of Multimedia

8 .digital Art

Digital artwork contains any creations designed on computers. Articles integrate graphical elements, typography, animated components, and interactive features. As an artistic medium, digital art uses multiple formats to establish novel forms of multimedia expression.

Examples:

- Design & Advertising: Digital Billboard - Brand Visual Identity – logos
 - UI/UX Design
 - Digital Games
 - Movies & Animation
 - E-Learning Multimedia



Examples of Multimedia

9. .Social Media Posts

Social platforms allow users to post multimedia content. Images, animated GIFs, embedded video and audio, and written captions in single updates. Social media enables direct multimedia publication to many audiences.

Examples:

- **Marketing & Advertising:**
Interactive Instagram and Facebook ads - Nike campaigns - Coca-Cola ads
- Reels and TikTok short ads
- **Educational & Awareness Posts**
- **Digital Journalism:**
BBC and Al Jazeera AJ+ Posts - Interactive Stories on Instagram and Twitter- Explainer Videos
- **Corporate & Institutional Use:**
University and company profiles - Behind the Scenes" videos- Interactive Instagram or LinkedIn stories



Examples of Multimedia

10. Advertising and Marketing

Ads use combinations of text, visuals, and audio to promote brands, products, and services. Commercial multimedia powers video, images, animation, print design, and radio to influence consumer behaviour. Marketing campaigns integrate different mediums to promote organizational messaging.

Examples:

- TV Commercials
- Social Media Ads
- Digital Billboards: LED screen -
- Content Marketing
- Digital Billboards
- **Online & Web Ads:** Landing Pages - Animated Banners -
- **Interactive Marketing:** AR Ads – Advergames -

Thank you