





The University of Jordan

## MODERN DIGITAL SKILLS



King Abdullah II School of  
Information Technology

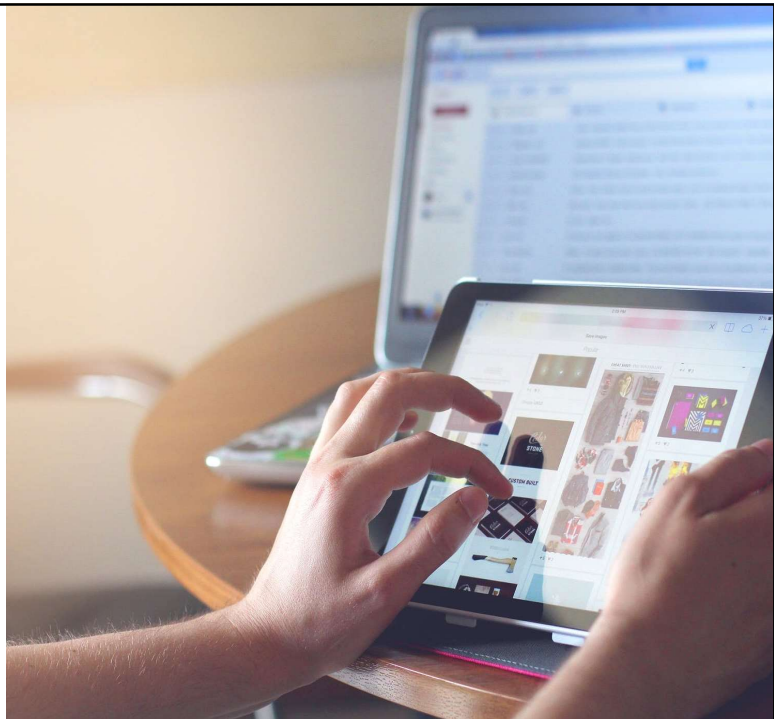
# CHAPTER 4 : KEY DIGITAL TECHNOLOGIES

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## TOPICS

1. **Gamification**
  - Applications
  - Benefits
  - Examples (Kahoot)
2. **3D printing**
3. **AI platforms:** Using Gen AI chatbots
  - *POE assistant (Anthropic),*
4. **Gen AI:** Using Gen AI to Generate Audios and Sounds
  - *Elevenlabs (Elevenlabs)*
5. **Gen AI:** Using Gen AI to Generate Videos from images



## Gamification



It is a strategy that integrates entertaining gaming elements into nongame contexts

It is when you add elements from games—like scores, levels, or prizes—to everyday activities to make them more interesting and motivating.



Successful gamification requires understanding the audiences and the context.

## Applications of Gamification



**Educational gamification**



**Business gamification**



**Gamification in social networks**



**Gamification in health and wellness**



## Applications of Gamification

### Educational Gamification

Using game-like elements to enhance learning experiences, making education more engaging, interactive, and motivating.

#### Examples:

- 1) H5P tasks in JUExams and Elearning
- 2) Learning languages using Duolingo for example.
- 3) Education games on tablets for kids and adults, like in Kahoot



## Applications of Gamification

### Business Gamification

The use of game-like elements (such as points, rewards, competition, and levels) in non-game business environments to motivate employees and engage customers.

#### Examples:

- 1) A company creates a sales leaderboard where sales representatives earn points for each sale. They can track their progress and compete with others to reach milestones or win prizes.
- 2) Getting reward points every time you make a purchase.
- 3) **Pizza Hero**: a gamified app that allowed users to virtually make pizzas in a fun, interactive way. The app used game-like elements to engage customers and raise pizza sales.



## Applications of Gamification

### Gamification in Social Networks

The integration of game-like elements—such as points, badges, challenges, rewards, or levels—into social media platforms to encourage user interaction and participation.

#### Example :LinkedIn Endorsement

Is a feature that allows users to recognize the skills of their connections on LinkedIn. When someone endorses you, they confirm that you have a particular skill or expertise, which can strengthen your professional profile and credibility.



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## Applications of Gamification

### Gamification in Health and Wellness

Applying game-like elements to encourage healthier behaviors and motivate individuals to engage in fitness activities, nutrition tracking, and overall well-being.

#### Examples :

- 1) Fitness Apps  
incorporate challenges, levels, and rewards. Users earn points for completing workouts or achieving milestones.
- 2) Nutrition Apps  
provide daily challenges to log your food and keep track of your meals. Users earn rewards and get reminders for regularly logging their meals and staying within their calorie or nutrient targets.



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## Benefits of Gamification

1

Encourage  
creativity

2

Develop skills  
and innovation

3

Improve  
motivation and  
make tasks  
more fun and  
enjoyable.

4

Improve  
productivity

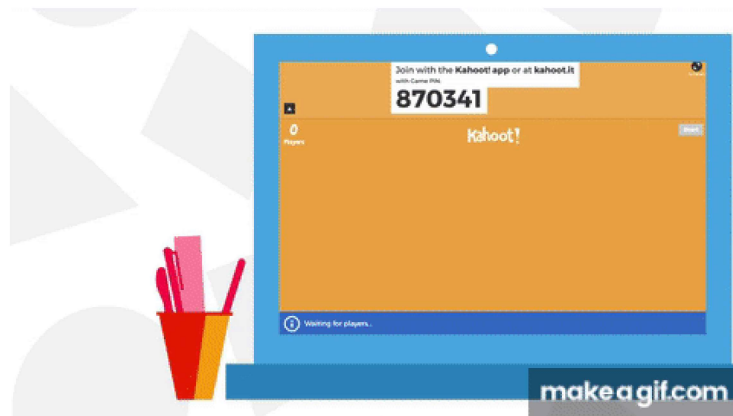
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Encourage  
active  
participation  
and  
communication

## Example of Gamification (Kahoot)

**Kahoot!** is an online game-based learning platform. It has learning games, which are user-generated multiple-choice quizzes that can be accessed via a web browser or the Kahoot! app.

<https://kahoot.com/>





# Kahoot Example

The screenshot shows the Kahoot! homepage. At the top, there is a navigation bar with various game categories like 'For all', 'At work', 'At school', and 'At home'. Below this is a main navigation bar with 'Contact sales', 'Play', 'Sign up FREE', and 'Log in'. The main content area features four promotional cards for different user groups: 'For Businesses & Professionals', 'Kahoot! for Teachers', 'Kahoot! for Students', and 'For family & friends'. Each card includes a description, a 'Buy now' button, and a 'Learn more' link. A callout box on the right side of the page highlights the 'Create a kahoot!' and 'Join game' buttons, which are located in the top right corner of the main navigation bar.

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# Kahoot Example

The screenshot shows the 'Create a new kahoot' dialog box. It features five main options: 'Kahoot Generator' (Generate a kahoot based on a PDF file), 'Kahoot Generator' (Generate a kahoot based on a topic), 'Blank canvas' (Create from scratch), 'Import slides' (Create a kahoot by syncing or uploading your slides), and 'Templates' (Pre-made kahoots). A callout box points to the 'Blank canvas' option with the text 'Click here'. At the bottom of the dialog box is a 'Close' button.

Click here

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## Kahoot Example

Start typing your question

Find and insert media

Upload file or drag here to upload

Add answer 1

Add answer 2

Add answer 3 (optional)

Add answer 4 (optional)

Add more answers

Themes

Your themes

Free

Standard Autumn Winter Spring Summer Support Ukraine

Start typing your questions and answers

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## Kahoot Example

Create a Kahoot Named **Let's Play** that contains the following questions :

**Question 1 :** The Color of the Apple in the following Picture is :

- a. Yellow   b. Green   c. White   d. Red



**Question 2 :** The Maximum number is:

- a. 30   b. -60   c. 20   d. -120

**Question 3 :** The Cat in the Picture is taller than the Dog

- a. True   b. False



**Question 4 :** When we Mix Red Color with Blue Color we make :

- a. Green   b. Yellow   c. Orange   d. Purple

# Kahoot Example

## Question1:

The Color of the Apple in the following Picture is :

Yellow Green  
White Red

# Kahoot Example

## Question2:

The Maximum number is:

30 -60  
20 -120



# Kahoot Example

## Question3:

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# Kahoot Example

## Question4:

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## Kahoot Example

The following dialog box appears  
Write a title for your Kahoot in the box. (i.e. **Lets Play**)  
then click **continue**

**Add the finishing touches!**

Enter a title and a description for your kahoot.

**Title**  
Enter a title for your kahoot.

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A descriptive title will give players an indication of what the kahoot is about.

**Description (Optional)**  
A good description will help other users find your kahoot.



Click **Done**

**Your kahoot is ready**

Launch a trial session for this kahoot

Host a live kahoot now

Allow other hosts to use this kahoot

Team play

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## Kahoot Example

The following picture shows the kahoots you have created , click the ( **Lets Play** ) kahoot to see all the questions and answers you wrote

**Kahoot!**

Search public content

Upgrade Create

**Your folders** Sort by: Most recent New folder

Kahoot Name	Questions	Created By	Plays	Options
Lets Play	4 Questions	user1	0 plays	Host live Play solo
Game1	4 Questions	user1	1 plays	Host live Play solo
Test1	4 Questions	user1	1 plays	Host live Play solo

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# Kahoot Example

Click **Assign** then choose the date then click **create**

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# Kahoot Example

Copy the **Game PIN** (0666628)

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## Kahoot Example

Use the QR:



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## Kahoot Example

To check the players : click **players**

The screenshot shows the Kahoot! interface for a report. On the left is a navigation menu with options like Home, Discover, AccessPass, Library, Reports (selected), Groups, and Marketplace. Below this are channels for 'The Kahoot!', 'Middle School', 'English', 'IB Biology', and 'Time & Money'. The main content area is titled 'Report' and 'Lets Play'. It shows 'Report options' with an 'Upgrade' button and a 'Create' button. Below that, it lists 'Assigned kahoot' with a 'Ends in 7 days' indicator, 'Start date: Oct 23, 2024, 10:24 PM', 'End date: Oct 30, 2024, 12:00 PM', and 'Hosted by Aseel\_Aseel123'. The 'Players' tab is selected, showing a table with columns for Nickname, Rank, Correct answers, Unanswered, and Final score. The table currently shows 'All (0)' players.

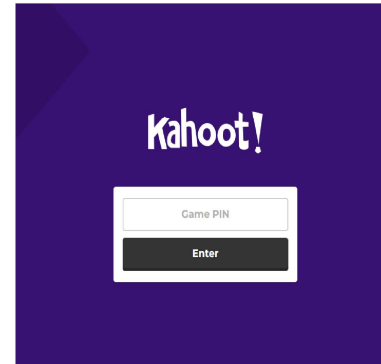
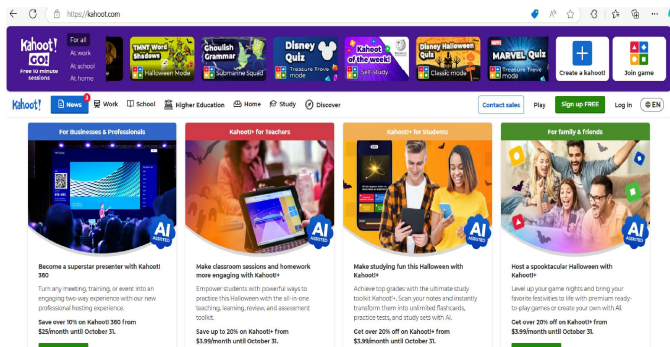
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## Kahoot Example

Now we are going to start the game:  
Use the link: [Kahoot.com](https://kahoot.com) then click **Join game**  
Enter the pin code

Copy the **Game PIN** (0666628)



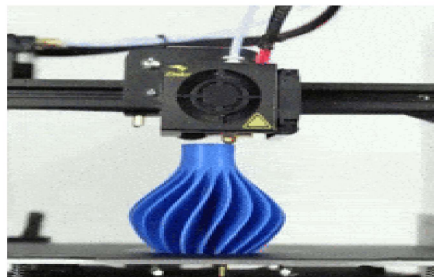
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## 3D Printing



**Three-dimensional (3D) printing** is a process that builds objects layer by layer using materials like plastic, metal, or even food, based on a digital design



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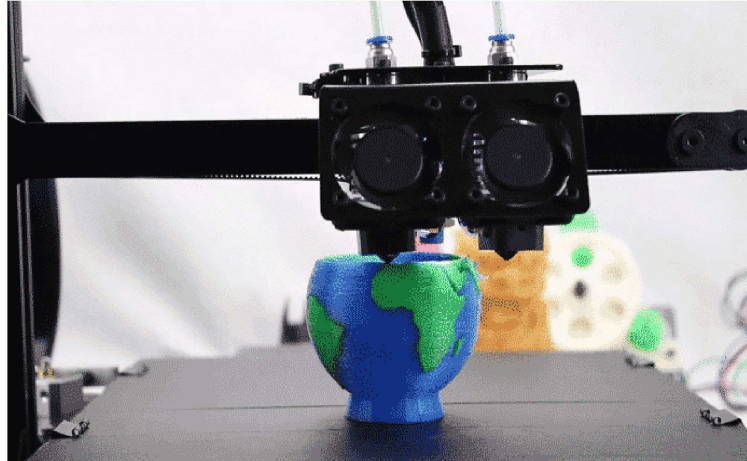
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## Examples - 3D Printing



**Toys:** A 3D printer can make custom toy figures or puzzle pieces.



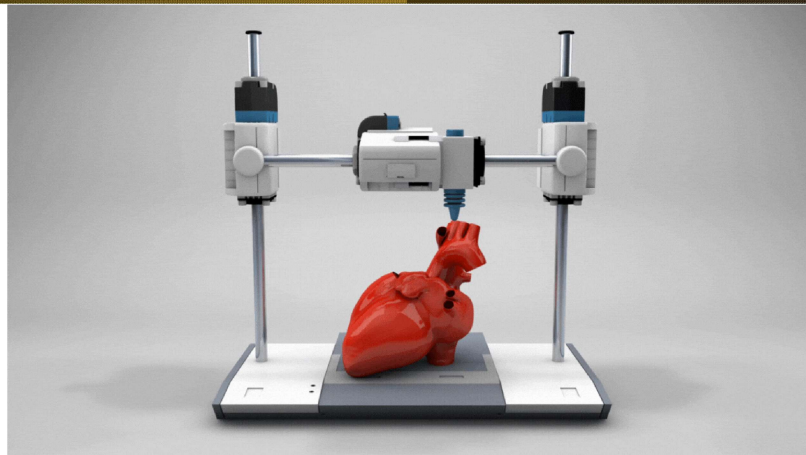
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## Examples- 3D Printing



**Medical Uses:** Doctors can print prosthetic limbs or models of organs for surgeries.



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## Examples - 3D Printing



**Cake:** Special 3D printers can create cake designs or print with chocolate.



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## Examples - 3D Printing



**House:** large 3D printers can Fastly print houses by layering concrete



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## AI platforms: Using Gen AI chatbots

### POE assistant (Anthropic)



**POE** is an AI platform from Anthropic (a hub for various AI models and chatbots), <https://poe.com/>

*Let's try to use it with the following examples (prompts) :*

1. Text to image (Image generation bots): "create an image of four children playing in the backyard of their school (**Using Playground** ).
2. Create diagrams : Visualize water cycle in nature (**Using Playground** ).

•Both POE (Anthropic)and Playground(Open AI) are platforms that allow users to interact with AI models (e.g., OpenAI's GPT series) for generating responses.

## Gen AI: Using Gen AI to Generate Audios and Sounds

### Elevenlabs (Elevenlabs)

**Elevenlabs:** a generative AI application that generates audio and sounds

- Developed by Elevenlabs.
- Founded in 2022
- creates Sounds, sound effects, voices.
- Text → audio

<https://elevenlabs.io/>



## Elevenlabs Example: (Text to Speech )

Let's try to use it with the following examples (prompts) :

1. **Text to speech:** "Deep learning is a subset of machine learning that uses neural networks with many layers (hence "deep") to model and understand complex patterns in large datasets."

CREATE

**Text to Speech**

Voice Changer

Voices

Sound Effects

WORKFLOWS

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## Elevenlabs Example: (Text to Speech )

The screenshot shows the Elevenlabs Speech Synthesis interface. It includes a text input field, a voice selection dropdown, a 'Regenerate speech' button, and a playback player. Four numbered annotations are present:

- 1** Type your Text Here: Points to the text input field containing the prompt: "Deep learning is a subset of machine learning that uses neural networks with many layers (hence "deep") to model and understand complex patterns in large datasets."
- 2** You can change the Voice: Points to the voice selection dropdown menu showing 'Amelia'.
- 3** Click Here to generate the Speech: Points to the 'Regenerate speech' button.
- 4** You can download the generated Speech: Points to the download icon in the playback player.

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
## Elevenlabs Example: (Sound Effects )


**2- Sound Effects** : you describe the sound you want to hear ,and you will have multiple uniquely generated samples to choose from in seconds .


1. Open ElevenLabs ,then go to the **Sound effects** Tab.
2. Write down the Description of the sound effects such as any of the following :


a sound of people chatting in the bus stop  
 a sound of students working in a lab  
 a sound of babies laughing  
 a lion roaring

CREATE

 Text to Speech

 Voice Changer

 Voices

 **Sound Effects**

WORKFLOWS

3. Click on Generate Sound Effects

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## Elevenlabs Example: (Sound effects)

### Sound Effects

Imagine a sound and bring it to life, or explore a selection of the best sound effects generated by the community

GENERATE EXPLORE HISTORY

1

Type the sound effect description

a lion roaring

2

Settings

320 / 6,879

Generate Sound Effects

Click Here to generate the Sound effects

4

Play the Sound effect

3

The generated Sound effects

 Generation 1

 Generation 2

 Generation 3

 Generation 4











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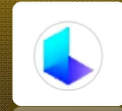
You can download as MP3 sound file

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## Gen AI : Using Gen AI to Generate Videos from images

### Luma Dream machine(Luma)



**Luma dream machine** is a Video Generator.

It is an AI model that makes high quality, realistic videos and 3D images from text and images

<https://lumalabs.ai/dream-machine>

*Let's try to use it with the following examples (prompts) :*

1. **(Luma dream machine)** : Animate an image of the baby to smile and clap his hands ( you have to give it an image of a baby)