



Projet Erasmus EduGAME



Kaunas Workshop, 2025

Advanced Gamification, AI, and Teaching Innovations

Play to Learn : Designing Gamified Activities for Creative Education

علم الأطفال وهم يلعبون

Presented by

Maha HARZALLAH

Associate Professor Technologist

CIPEN Member



Maha HARZALLAH TRIKI | Maître Technologue Informatique

Référent Com Université de Sousse

Responsable COM & Radio ISITCOM





Day 1: Deep Dive into Game-Based Learning and Gamification Education Academy

Donelaicio str. 52, Room 503, Kaunas

Monday, May 5, 2025

Plan

Gamification

Syllabus Updated Processus

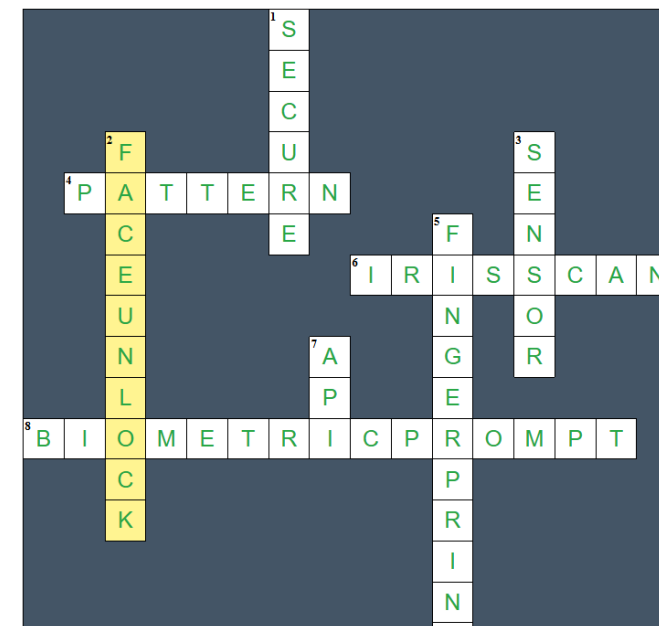
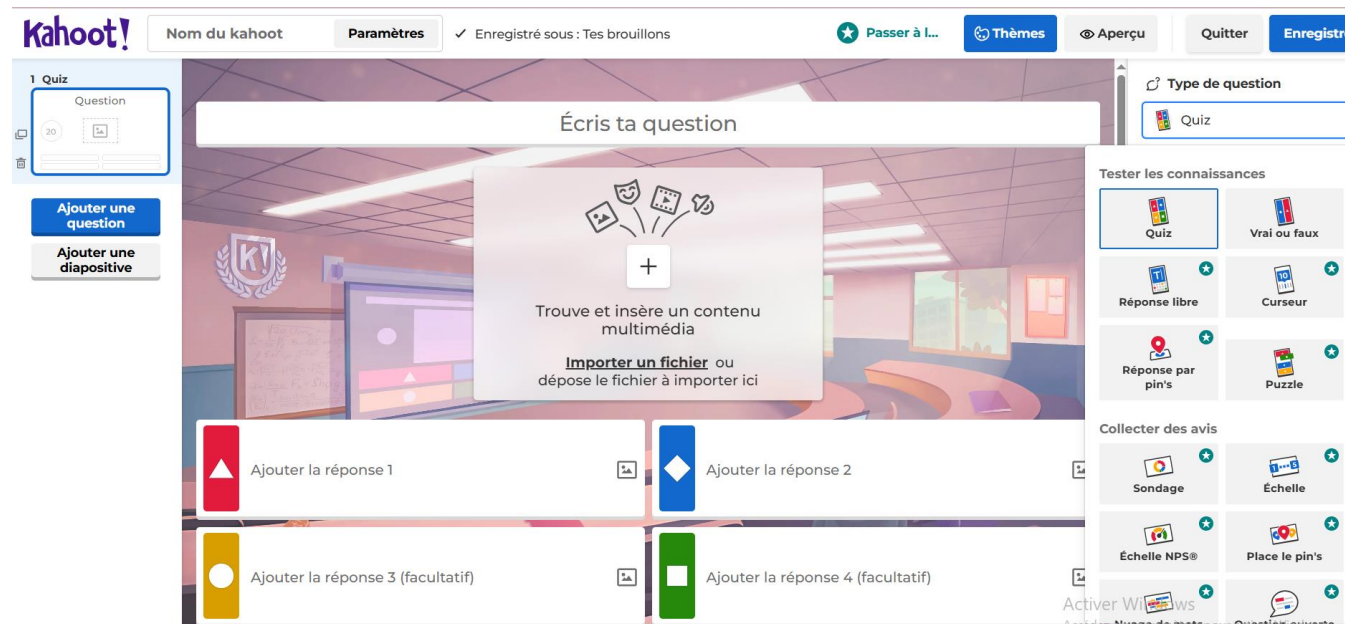
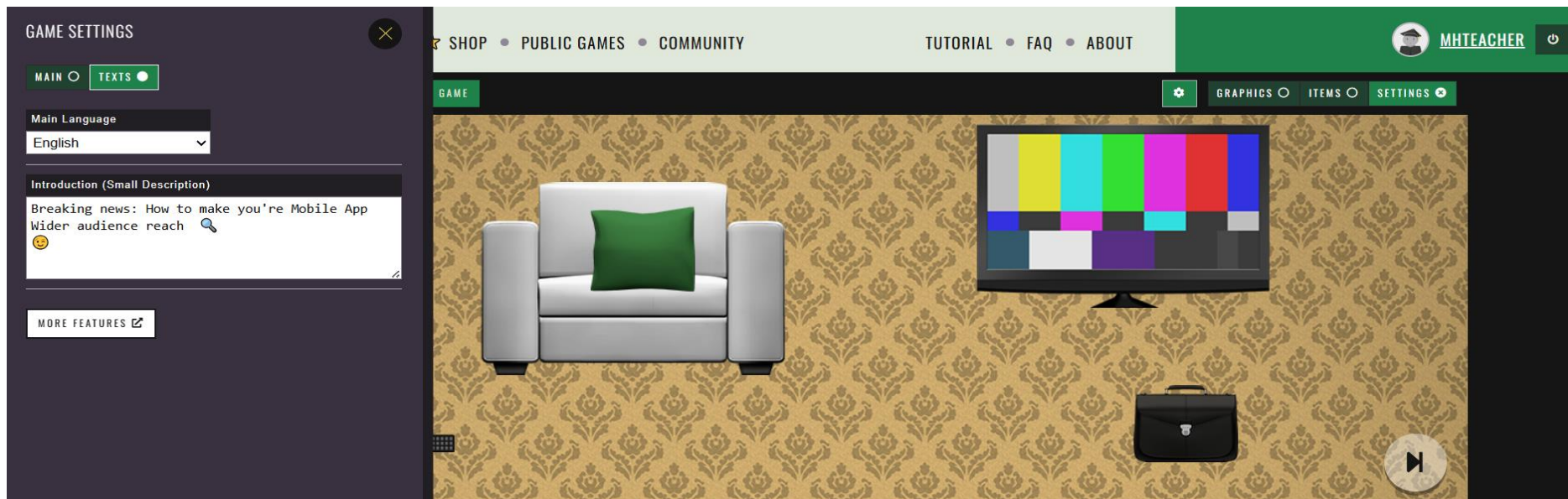
Edugame LAB

Gamification Tools Tutorial (Crossword puzzle ,
Quizalize)

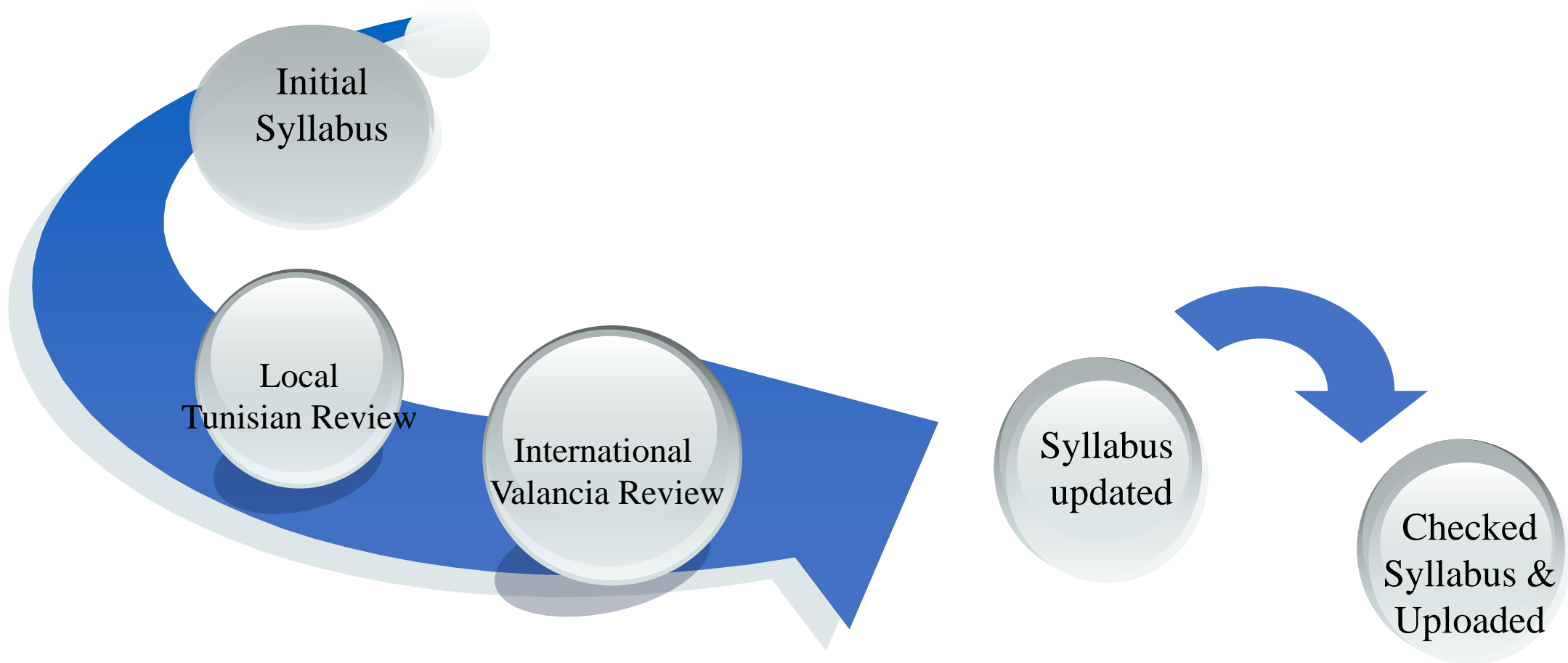
Gamification

- Use game mechanics
 - points, **badges**, **leaderboards**, **challenges**
 - in non-game contexts to increase engagement and intrinsic motivation.
- Facilitate **learning** and **innovation**, **encourage** positive behavioral changes through immediate and personalized feedback.
- Collect valuable user data and can improve collaboration
- Transform tasks into **interactive** and stimulating experiences, making **objectives** more **accessible** and enjoyable.





Syllabus Update Process



Syllabus Update Process

- My contribution to the project Content author in WP2 "Curriculum"
 - Creation of the Hybrid Mobile App Syllabus in master degree MPSWM
 - Integrate gamified objectives into my Syllabus
- Processus review local & international
 - Tunisian Review
 - VALANCIA Review
- Finalisation
 - Syllabus checked et uploaded
 - Teaching next semester WP3 « Teaching and learning Ressources"

Tunisian Review

Question	Evaluation	Comments
Inclusion of Gamification and/or Serious Games	<input checked="" type="checkbox"/> Fully Included <input type="checkbox"/> Partially Included <input type="checkbox"/> Not Included	Gamification activities are included <u>into</u> this curriculum.
Specificity of Learning Outcomes Related to Serious Games	<input type="checkbox"/> Highly Specific and Relevant <input checked="" type="checkbox"/> Moderately Specific and Relevant <input type="checkbox"/> Not Specific or Relevant	It is not clear how the crossword puzzle activity is aligned with the CLOs. It is mentioned that the objective of the other activities is to enhance motivation, not clear how they help <u>achieving</u> the CLOs. Additionally, the MLOs are not mentioned.
Teaching and Learning Strategies: Effectiveness and Innovation Using Serious Games and Gamification as Teaching Tools	<input type="checkbox"/> Highly Effective and Innovative. (Serious games significantly enhance learning outcomes with innovative and novel teaching methods that uniquely engage students and foster deeper understanding) <input checked="" type="checkbox"/> Moderately Effective and Innovative. (Gamification contributes to learning outcomes and introduces new	The course used the <u>learner centered</u> approach with <u>focus</u> on collaborative learning. The inclusion of gamification <u>enhance</u> <u>students</u> motivation however it is not clear how these activities are

Question	Evaluation	Comments
	teaching strategies, though improvements could be made to fully capitalize on their potential.) <input type="checkbox"/> Not Effective or Innovative. (The implementation of serious games and gamification techniques falls short in enhancing learning or introducing innovation to the educational process.)	aligned with the learning outcomes.
Assessment and Evaluation		
Alignment of Assessment Methods with Game-Based Learning Objectives	<input type="checkbox"/> Well Aligned <input checked="" type="checkbox"/> Reasonably Aligned <input type="checkbox"/> Poorly Aligned	Click or tap here to enter text.
Evaluation of Interactive and Participatory Learning Components	<input type="checkbox"/> Effectively Evaluated <input checked="" type="checkbox"/> Adequately Evaluated <input type="checkbox"/> Inadequately Evaluated	Click or tap here to enter text.

Valencia Reviewer

Universitat Politècnica de València

Question	Evaluation	Comments
Inclusion of Gamification and/or Serious Games	<input type="checkbox"/> Fully Included <input checked="" type="checkbox"/> Partially Included <input type="checkbox"/> Not Included	Click or tap here to enter text.
Specificity of Learning Outcomes Related to Serious Games	<input checked="" type="checkbox"/> Highly Specific and Relevant <input type="checkbox"/> Moderately Specific and Relevant <input type="checkbox"/> Not Specific or Relevant	Click or tap here to enter text.
Teaching and Learning Strategies: Effectiveness and Innovation Using Serious Games and Gamification as Teaching Tools	<input checked="" type="checkbox"/> Highly Effective and Innovative. (Serious games significantly enhance learning outcomes with innovative and novel teaching methods that uniquely engage students and foster deeper understanding) <input type="checkbox"/> Moderately Effective and Innovative. (Gamification contributes to learning outcomes and introduces new teaching strategies, though improvements could be made to fully capitalize on their potential.)	Click or tap here to enter text.

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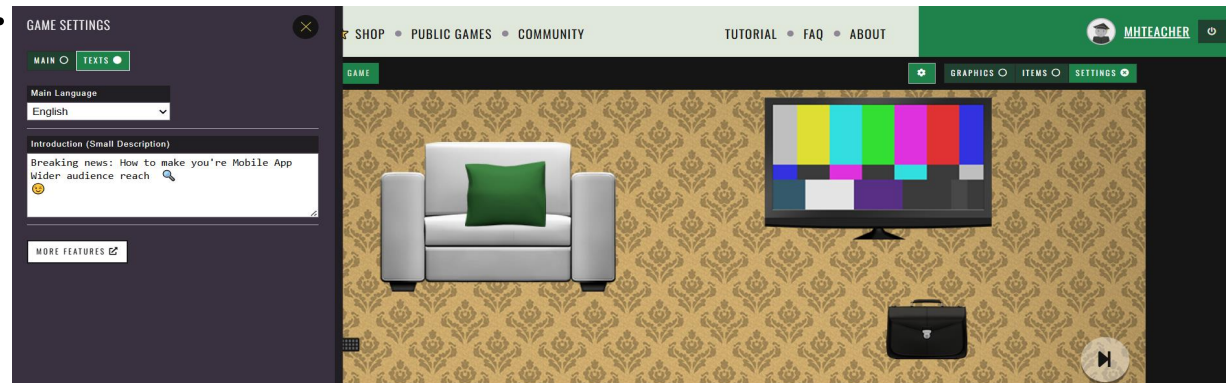
Syllabus updated



Game-Based Learning Elements

The Framework Challenge:

- **Concept:** A virtual "escape room" type game where students must solve puzzles and programming challenges to "escape" from a scenario related to hybrid mobile development.
- **Learning Objectives:**
 - Master the syntax and basic concepts of React Native, Flutter, or Ionic.
 - Understand the architecture of a hybrid mobile application.
 - Solve common coding problems.



2. Perfect App Race:



- **Concept:** A racing game where students compete to develop the highest-performing and most user-friendly hybrid mobile application in a limited time.
- **Learning Objectives:**
 - Develop high-performance hybrid mobile applications.
 - Optimize code for a smooth user experience.
 - Work effectively under pressure.
- **Quest Example:** Students must develop a to-do list application with advanced features (data synchronization, notifications) using Flutter, and deploy it to a mobile device in record time.

3. The Feature Integration Adventure:



- **Concept:** A text-based or graphic adventure game where students play developers who must explore different mobile device APIs and features (GPS, camera, etc.) to complete a mission.
- **Learning Objectives:**
 - Integrate native mobile device features into hybrid applications.
 - Understand how mobile APIs work.
 - Manage data permissions and security.
- **Quest Example:** Students are secret agents who must use Ionic and a phone's GPS to locate targets and collect information by building a secure geolocation application.



4. The User Interface Design Challenge

- **Concept:** A "design challenge" type game where students must create attractive and intuitive user interfaces for hybrid mobile applications using specific UI components and libraries.
- **Learning Objectives:**
 - Design user-friendly and aesthetically pleasing interfaces.
 - Use reusable UI components.
 - Apply UX/UI design principles.
- **Quest Example:** Students must design the user interface for an e-commerce application using React Native and a pre-defined UI component library, with an emphasis on accessibility and responsiveness.

- The **EduGame** laboratory is intended for:
 - teaching purposes,
 - familiarizing students with equipment and devices,
 - carrying out practical work,
 - as well as other activities defined in the project proposal
- **Scientific Director** of the lab:
 - Mrs. **Maha HARZALLAH**, Professor Technologist in Computer Science
 - Ensure that the lab's plan and scheduling are respected throughout the project.
- Maintenance and management of the laboratory are provided by
 - Mr. **Mongi Essaies**, computer **technician** employed by ISITCom.

Ministère de l'Enseignement Supérieur et de la recherche scientifique		وزارة التعليم العالي و البحث العلمي
Université de Sousse	UNIVERSITY OF SOUSSE جامعة سوسة Socially Responsible University	جامعة سوسة
Institut Supérieur d'Informatique et des Technologies de Communication Sousse		المعهد العالي للإعلامية و تكنولوجيايات الاتصال سوسة

EduGame LAB PLAN

The **EduGame Lab** is intended to be used for teaching, familiarizing students with equipment and devices, completing laboratory work, and other activities outlined in the project proposal. A specialist has been appointed to maintain the laboratory: **Mr. Mongi Essaies**, a technician in Computer Science employed by ISITCom, and **Mrs. Maha Harzallah**, Associate Technological Professor (*Maitre Technologue*) in Computer Science.



Workshop University of Sousse : Infoday EduGame

• 28-04-2025



Projet Erasmus EduGAME: Infoday & Mini Workshop "Gamification & IA pour l'enseignement et l'apprentissage"

Lundi 28 Avril 2025

Ecole Nationale des Ingénieurs
de Sousse



Dans le cadre du Projet Erasmus EduGame " **Serious Games for Creativity and Social Cohesion in Teacher Education**", l'Université de Sousse à travers sa Cellule d'Innovation Pédagogique et Numérique (CIPEN) et le club d'étudiants innovateurs organise un Infoday et Mini Workshop "Gamification et Intelligence artificielle".

Objectifs :

- Présenter le Projet Erasmus EduGame ses objectifs et ses principales activités.
- Sensibiliser à l'utilisation de la gamification et l'Intelligence Artificielle (IA) dans l'enseignement et l'apprentissage.
- Fournir des outils pratiques pour intégrer la gamification dans les pratiques pédagogiques.

Public Cible : Enseignants et doctorants relevant de l'Université de Sousse



Gamification Tools

Crossword puzzle

<https://crosswordlabs.com/>

Crossword Labs

[Make a Crossword](#) [Find a Crossword](#) [About](#)

Enter the passcode for Retrofit Puzzle:

Don't remember it? Tough cookies. There is no way to recover it.
But you can sign up for a membership and get the answer key, if needed.

[« Back to Retrofit Puzzle](#)

Crossword Labs

[Edit a Crossword](#) [Find a Crossword](#) [About](#) [Login/Sign Up](#)

Crossword Puzzle Title

Retrofit Puzzle

Enter the answer, a space and then the clue. One word/clue pair per line. [Need to see an example?](#)

Retrofit :Bibliothèque principale pour les appels HTTP
OkHttp : Client HTTP utilisé par Retrofit
Gson :Convertisseur JSON utilisé avec Retrofit
JSON :Format de données souvent utilisé dans les API
Volley :Alternative à Retrofit pour les requêtes réseau
API :Interface de programmation d'application
Moshi :Alternative à Gson pour la conversion JSON
POST :Annotation Retrofit pour une requête HTTP POST
Interface : Structure utilisée pour définir les endpoints

Privacy Setting

☒ **Public (free!)**

Anyone can find, view, solve and print your puzzle. It will be visible in search engines. The answer key can be viewed by you and paid members of CrosswordLabs.

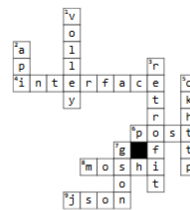
☐ **Hidden (members only)**

Only people who have the direct URL will be able to view/print/solve your puzzle. It will be hidden from search engines. Only you can view the answer key.

☐ **Private (members only)**

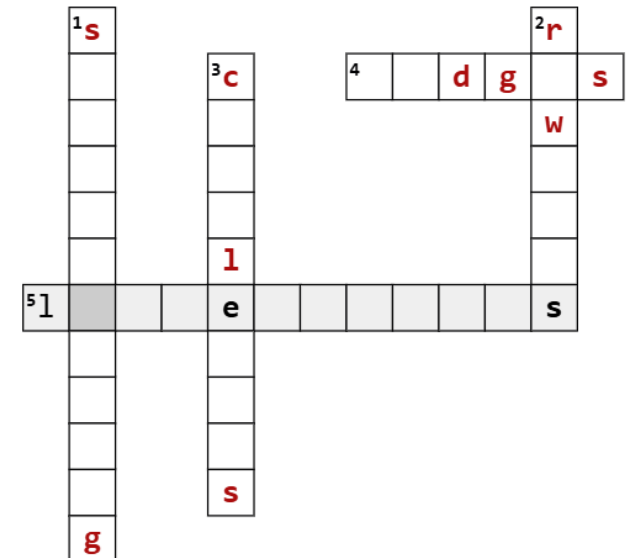
Only you can view the puzzle. It cannot be accessed by anyone else, or search engines. Only you can view the answer key.

Retrofit Puzzle



Across
4. : Structure utilisée pour définir les endpoints
6. : Annotation Retrofit pour une requête HTTP POST
8. : Alternative à Gson pour la conversion JSON
9. : Format de données souvent utilisé dans les API
Down
1. : Alternative à Retrofit pour les requêtes réseau
2. : Interface de programmation d'application
3. : Bibliothèque principale pour les appels HTTP
5. : Client HTTP utilisé par Retrofit
7. : Convertisseur JSON

Save & Finish



Quizalize Tutorial

quizalize.com

Quizalize

Plans ▶ Demo and resources ▶ Contact and help ▶ Teacher Login Students enter code

Make a difference to each and every one of your students.


▶ How it works

Epic whole class quiz games, smart quizzes with built in personalisation, and instant mastery data that helps you address learning loss in every student.

Teachers
Start here - It's free

Students
Enter code

School Leaders and Instructional Coaches ▶



My Classes Find resources My Library Create Search Resources... Resources ▼ 900 maha harzallah Basic

Hi maha harzallah, what are you teaching today?

Find quizzes and questions about... Go

or try our Starter Quizzes

Fun Mathematics Science Computer Science English (ELA) English (ESL) World Languages

My Library See all My Library>

QuizProgressive webApp

Create

Make a smart quiz with AI help
Get an instant question bank, and add personalised help for every student

Classic quiz editor
with sound, images and all question types

Play quizzes from...
Google Forms Quizlet spreadsheet

Give your class a...
PDF YouTube video Link

AI Quiz generated

My Classes Find resources My Library Create

Hello! What are you teaching today?

Enter a topic...

New time-savers! get suggested questions from any of these

Paste some long text a PDF

Skills or standard YouTube link

Vocabulary quiz Fill in the blank

New World languages

Vocabulary quiz Reading comprehension

Fill in the blank



My Classes Find resources My Library Create

Home

Quiz from a PDF

Drag a PDF here or Choose file



My Classes Find resources My Library Create

Hello! What are you teaching today?

Android

I teach in... English More...

for grade...


K 1st 2nd 3rd 4th 5th 6th

7th 8th High School AP SAT

ACT College Professional

Quizalize

Preview or print Quiz



My ClassesFind resourcesMy LibraryCreate

800800maha harzallahBasic

HomeQuiz for High School

Android

Save and PreviewPrint

Export to Google FormsExport to Kahoot

Export to QuizizzExport to Blooket

Suggestions

Make moreAdd all

Quel est le système d'exploitation mobile développé par Google?
Android

Quel langage de programmation est principalement utilisé pour développer des applications Android?
Java

Quel environnement de développement est souvent utilisé pour créer des applications Android?
Android Studio

Title

Android

Quiz for High School

7 questions Hints & explanations enabled

Make private
Hide the quiz from other users

Save and PreviewSaves quiz to My Library

Q 1/7

Score 0

Q 2

Quel est le système d'exploitation mobile
développé par Google?

30

BlackBerry OS

Android

iOS

Play as a student
to try out the quiz

Edit questions
to suit your class

7 questions

👁 Show answers

Give this quiz to

My first class

in class



Give to class

as a Classic Quiz

Choose a team or solo game...

as homework

☐

as an exam

☐

as a printed PDF

☐

Give...



Android

Quiz

Add a game

to...



My first class

Continue

Hit **targets** with **arrows** and score up to **1000** points for a **bullseye**. A new target will appear each time you hit one and a **pointer** will appear after 10 seconds to help you find it. Find and hit targets more quickly to get up to **3x time bonus**.

Answer **quiz questions** correctly to collect more arrows. The game ends when you have answered all quiz questions and have no arrows left.

Pause and show these instructions again - **I** key

Move - forwards **W**, back **S**, left **A**, right **D**

Look around and aim - **Move mouse**

Fire arrow - **Q** key or **Click mouse**

Jump - **Space bar**

Change camera view - **V** key

[building instructions](#)

Continue

Choose game to play

Choose a game for students to play **on their device**

students start and answer independently

Students can **start immediately** when they wish, no big screen



Play as a mighty wizard and cast spells in this fast-paced puzzle game!

NEW multiplayer option



Try Blockerzz

Give to class



Shoot hoops while you quiz

Give...



Android

Quiz



with Blockerzz

Solo or multiplayer

to...







My first class

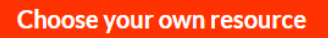




Continue

Feedback & Follow-up Students






Skip for now →

Provide your students with different follow-up  YouTube videos,  PDF worksheets,  web activities or even  other quizzes depending on their quiz score.

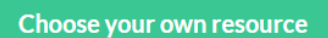




A student that scores **less than 50%** should see...

 or use a shared    

A student that scores **between 50-80%** should see...


 or use a shared    


A student that scores **more than 80%** should see...


 or use a shared    



Quiz Gamified

**Android**
Quiz

with **Blockerzz**
Solo game

My first class
Ready to play

Students go to **zzi.sh** and enter code **dhn79934**




Or share as a **Magic class link** **QR code**

Live results

Questions
In quiz order By difficulty

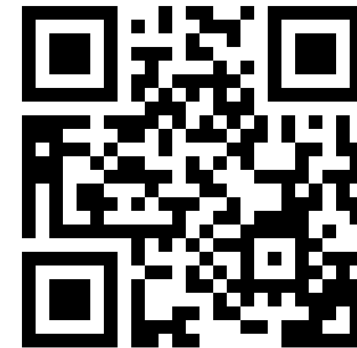
Q1 Quel est le système d'exploitation mobile développé par Google?

Q2 Quel langage de programmation est principalement utilisé pour développer des applications Android?

2	 Robert Johnson	<div><div></div></div>	7/8
3	 Rachel Jones	<div><div></div></div>	7/8
4	 Wayne Salsman	<div><div></div></div>	7/8

Watch live progress **View Leaderboard**

To play: students scan the QR code below









Leaderboard

app.quizalize.com/student/simple/dhn79934

Join class **My first class**

(Maximum of 150 characters)

Pick your name from the list

	Alketa		Altin Idrizi		Ameni Rjiba		Lenida		Mh		Rudina Mita
--	--------	--	--------------	---	-------------	--	--------	--	----	--	-------------

Not on the list?

Create

Conclusion



Strengths

- **Increased** Motivation and Engagement
- Improvement of Retention and **Understanding**
- Development of Skills and **Know-how**
- **Immediate** and Personalized **Feedback**
- Reinforcement of **Active** Learning
- Creation of a **Positive** Learning Environment



- Poorly designed gamification can prove superficial and not produce the desired effects.

Merci pour votre Attention

