

# Ukrainian Engineering Pedagogics Academy

Ukrainian-Bavarian Conference on Digital Education  
23 – 24 June 2022



Büro des Freistaats  
Bayern in der Ukraine



UNIVERSITÄT  
BAYREUTH



FBZHL  
Fortbildungszentrum  
Hochschullehre



«Gamification as an  
effective tool of engaging  
students in educational  
process»

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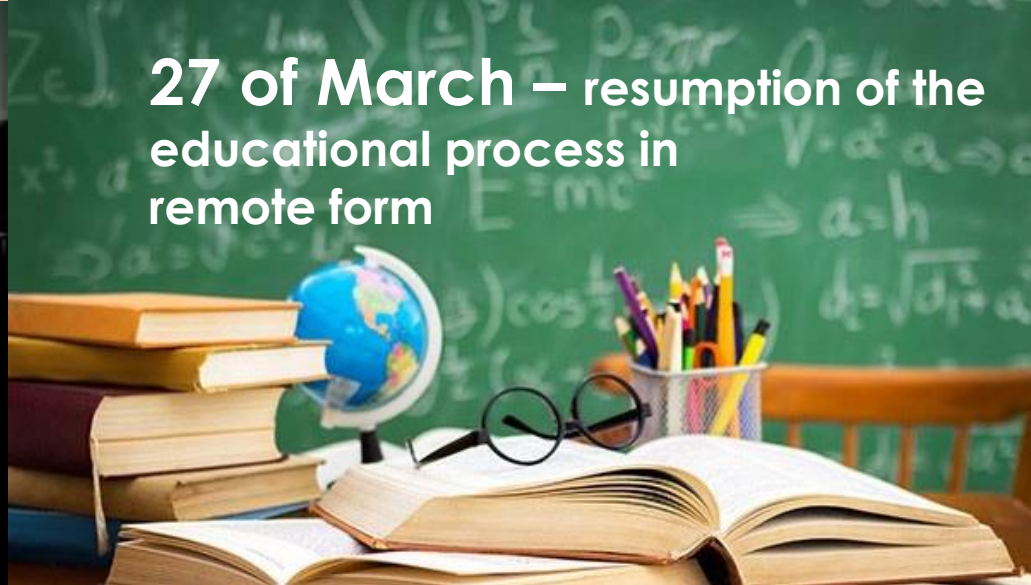
## Distance learning: *challenges for Ukraine – 2022:*

COVID-2019 (extension of quarantine restrictions);  
**WAR– 2022** (active hostilities in the eastern and southern regions)





# Gamification as an effective tool of engaging students in educational process



27 of March – resumption of the educational process in remote form



# Gamification as an effective tool of engaging students in educational process

## Consequences of the war

Go to [www.menti.com](http://www.menti.com) and use the code 9599 6787

Які потреби у вас на сьогодні?

психологічні

більше часу у добі

Відсутність миру

мир в Україні

психологічна підтримка

Go to [www.menti.com](http://www.menti.com) and use the code 9599 6787

Які складності у вас зараз у проведенні занять?

часта незавершеність уроку  
низька швидкість інтернет  
холод в приміщенні  
відволікання від лекції  
брак часу  
доступ до інтернету  
нестабільний інтернет  
запам'ятати всі еладреси  
слабка швидкість інтернет

У мене **немає можливості працювати за комп'ютером та проблеми з інтернетом**

У мене немає можливості робити лб, **тому що не вдома, комп'ютера немає з собою.**

Тетяно Сергіївно, добрий день, у мене немає можливості виконувати роботи на комп'ютері або телефоні, тому що у мене **дуже слабкий інтернет**. Що робити?

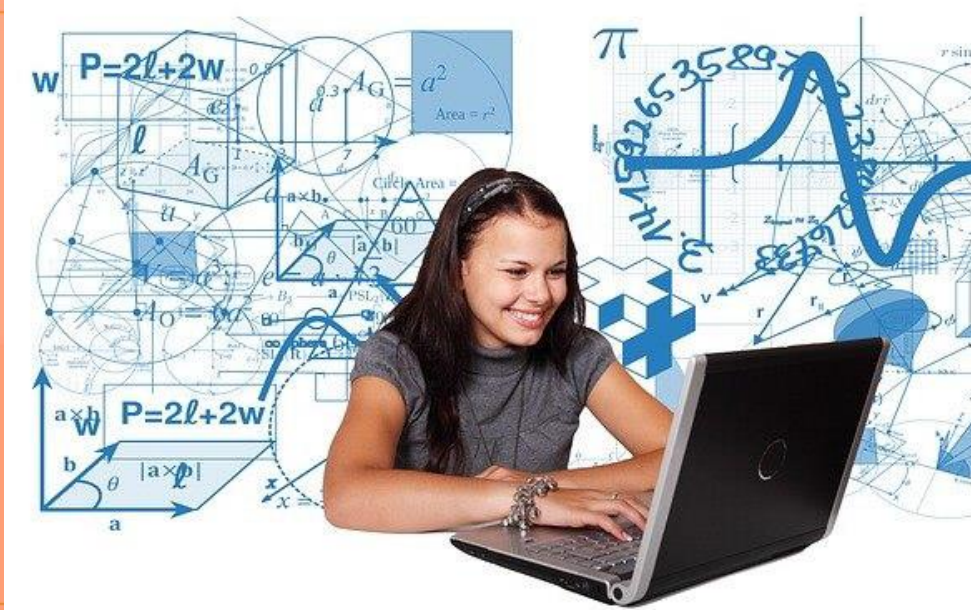
Доброго дня, Тетяна Сергіївна. У мене **немає можливості робити лабораторні**, що мені робити

Я не можу їх виконувати тому що **немає можливості користуватися ноутбуком або комп'ютером**

Вибачте що пишу у вихідний, у мене **немає хорошого інтернету, я вже 3 місяці сиджу через роумінг, оскільки сім карти видають із закордонним паспортом**, а у мене його немає і я не в Україні. Я не зможу бути присутнім на іспиті, що мені робити?



# Gamification as an effective tool of engaging students in educational process



# Gamification as an effective tool of engaging students in educational process

**Gamification** - the use of gamification practices and mechanisms in a non-gaming context to engage end users in problem solving (Wikipedia)

**Gamification** is a way of influencing human behavior based on the use of game elements.

**Gamification in education** is a process of spreading the game to different areas of education, which allows us to consider the game as a method of teaching and education, and as a form of educational work, and as a means of organizing a holistic educational process.



# " Gamification tools of engagement student in education process "

- ✓ **Synchronous lesson tools**
  - ✓ **Services for organizing online testing system**
  - ✓ **Applications for games, quizzes and exercises**
  - ✓ **Programming game applications**
- 

# Synchronous lesson tools

<https://nearpod.com/>

The screenshot displays the Nearpod web application interface. At the top, the browser address bar shows the URL [nearpod.com/library/](https://nearpod.com/library/). The Nearpod logo is in the top left, and navigation options like 'Create' and 'Quick Launch' are in the top right. A sidebar on the left contains navigation links: 'Join a lesson' with a 'CODE...' input field, 'MY MATERIALS' (with 'My Lessons' selected), 'Reports', 'NEARPOD CONTENT' (with 'Nearpod Library' selected), and 'RESOURCES' (with 'Teacher Resources' selected). The main content area is titled 'My Lessons' and includes a search bar with the placeholder 'Search lessons in your library'. Below this, there are buttons for 'Create' and '+ Folder', and a 'Sort by: Recent' dropdown menu. The main area displays a grid of lesson cards. The first card is a banner for 'EXPLORE THE NEARPOD LIBRARY'. The second card is titled 'New year' by Tetiana Bondarenko, dated Dec 7, 2020 - 1MB, with a 'Time To Climb' theme. The third card is 'Untitled Lesson (1)' by Tetiana Bondarenko, dated Dec 5, 2020 - 1MB, with an 'Unsaved' status and a 3D cell diagram. The fourth card is 'My First Time to Climb' by Tetiana Bondarenko, dated Dec 3, 2020 - 0MB, with a 'Time To Climb' theme. The fifth card is 'Untitled Lesson' by Tetiana Bondarenko, dated Dec 3, 2020 - 1MB, with an 'Unsaved' status and a corkboard background. The sixth card is a dark overlay with a 'Drag to folder' icon and a 'Save Changes' button. The seventh card is 'ДО' by Tetiana Bondarenko, dated Dec 3, 2020 - 0MB, with an 'Unsaved' status and a blue bubble background. The eighth card is 'My First Lesson' by Tetiana Bondarenko, dated Dec 3, 2020 - 1MB, with a corkboard background and the text 'How did you enjoy the summer holidays?'. A chat icon is visible in the bottom right corner.



# Synchronous lesson tools

<https://nearpod.com/>

app.nearpod.com/presentation?pin=TM7QU

## What is learning?

How would you define learning? What is learning about? What are the conditions for effective learning? Work in your groups and add words and phrases or images to share your understanding of the word.

New information which later 0

Learning is the constant way to gain smth new and improve yourself 1

Learning is a process of gaining new information and skills. Positive impact is important 2

mastering smth new 0

Studying sth which is useful, interesting and applicable 0

A process of getting new knowledge and new skills 0

lifelong process of change and development 2

a life-long process 0


self improvement 0

Gaining knowledge and skills 0

This is an ongoing journey to reach the highs 1

New knowledge 0

Learning is the way to remember, process and apply specific knowledge. Effective learning is achieved if both teacher and student understand the goals and scope 0



To get new knowledge 0


Creating new knowledge 1

Learning us the way to yourself and to this world 0

Finding out new knowledge and skills that you can use later. 0

Gaining knowledge and skills through processing information, getting experience 0

search for new information



Learning - acquiring new details about the environment and structuring them. The condition for successful

Share thoughts and/or images here 250 Post

# Synchronous lesson tools

<https://nearpod.com/>

What do you think of nearpod?

A. Love it

B. Not sure - I need to test it myself

C. I don't like it?

1 answer(s) selected

Submit

What do you think of nearpod?



- A LOVE IT
- B NO ANSWER
- C NOT SURE - I NEED TO TEST...
- D I DON'T LIKE IT?

| Student        | A                                | B                                | C |
|----------------|----------------------------------|----------------------------------|---|
| Ludmila Seta   | <input checked="" type="radio"/> |                                  |   |
| Vladimir       | <input checked="" type="radio"/> |                                  |   |
| Olena          |                                  |                                  |   |
| natasya        |                                  | <input checked="" type="radio"/> |   |
| Dmytro         | <input checked="" type="radio"/> |                                  |   |
| Natalia        |                                  |                                  |   |
| Kateryna Ho... |                                  |                                  |   |
| Natalia Liava  | <input checked="" type="radio"/> |                                  |   |
| Andri Klyop... |                                  |                                  |   |
| Marin Stali... | <input checked="" type="radio"/> |                                  |   |
| Hanna Dym...   | <input checked="" type="radio"/> |                                  |   |
| Oksana She...  | <input checked="" type="radio"/> |                                  |   |
| Tetyana Nes... |                                  | <input checked="" type="radio"/> |   |
| Olya           |                                  |                                  |   |
| Sasha          | <input checked="" type="radio"/> |                                  |   |



# Synchronous lesson tools

<https://miro.com/>

The screenshot displays the Miro online collaboration tool interface. The browser address bar shows the URL `miro.com/app/board/o9J_LCGαPU=?fromRedirect=1`. The Miro logo and "Untitled" board name are visible in the top left. The top right contains navigation and sharing icons, including a "Share" button, a search icon, and notification icons for 140 messages and 3 alerts. The main workspace is a grid of sticky notes. The top row contains six notes labeled "Participant 1" through "Participant 6". The second row contains "Idea 1", "Idea 2", "Idea 3", and three empty notes. The third row contains a purple note, a yellow note labeled "Idea 2 improvement", a yellow note labeled "Idea 3 improvement", and three empty notes. The remaining rows consist of various colored empty sticky notes. On the left side, a vertical toolbar contains icons for selection, text, eraser, lasso, line, arrow, and zoom. A bottom toolbar shows navigation and zoom controls, with the zoom level set to 59%.

# Synchronous lesson tools

<https://padlet.com/>

The screenshot shows the Padlet website homepage. On the left is a navigation sidebar with the following items: Home, Product, Personal, Business, and Schools. At the top of the sidebar is a 'Log in' button. The main content area features a large heading: "It's a beautiful day. Make something beautiful." Below this heading are two buttons: "Sign up for free" (pink) and "Install windows app" (black). Underneath are seven board templates arranged in two rows. The first row contains "Wall" (pink), "Canvas" (green), and "Shelf" (blue). The second row contains "Stream" (purple), "Grid" (orange), "Timeline" (teal), and "Map" (dark blue). Each template shows a preview of its layout with various images and text boxes. At the bottom left of the page, there are links for "About", "Jobs", "Privacy", and "More", along with a language selector set to "English (UK)".

**Padlet**

Log in

Home

Product

Personal

Business

Schools

About Jobs Privacy More

English (UK)

It's a beautiful day.  
**Make something beautiful.**

Sign up for free

Install windows app

Wall

Canvas

Shelf

Stream

Grid

Timeline

Map



# Synchronous lesson tools

<https://padlet.com/>

padlet


Анастасія Нікуліна • 11d

## Моя гармоничная доска Padlet

Сделано чудесным образом

REMAKE SHARE

### Новини модного світу 2022, приєднуйся))



harpersbazaar.com.ua


Мода, новости из мира моды на Harper's Bazaar

#### Головний тренд зими 2022: як носять капор зірки street style на вулицях Парижа

0 likes

Add comment

### Творча хвилинка




Запрошуємо на творчий конкурс дизайнерів України! Номінації:

- «The Best Womenswear Designer».
- «The Best Menswear Designer».
- «The Best Accessories Designer».
- «Sustainable Fashion» (supported by DHL Express).
- «The Discovery of the Year».
- «The Breakthrough of the Year».

0 likes

Add comment

### Інформаційний матеріал




| З'єднувальні машинні шви   |                          |                      |                      |
|----------------------------|--------------------------|----------------------|----------------------|
| <b>ЗШИВНИ ШВИ</b>          | <b>НАКЛАДНИ ШВИ</b>      | <b>ВІДСТУПНИ ШВИ</b> | <b>НАСТРОЧНІ ШВИ</b> |
| з'єднанні в робочі шари    | з'єднанні в закривання   | з відступом зліва    | з відступом зліва    |
| з'єднанні в розправленні   | розправленні             | з відступом зліва    | з відступом зліва    |
| шви з об'ємними елементами | шви                      | з відступом зліва    | шви                  |
| з однією застібкою зліва   | з однією застібкою зліва | з відступом зліва    | з відступом зліва    |
| з однією застібкою зліва   | з однією застібкою зліва | з відступом зліва    | з відступом зліва    |

Ознайомтеся з різними видами машинних швів. З'єднувальні шви — для постійного зшивання деталей швейного виробу.

0 likes

Add comment

### Відеоматеріали



YouTube

Ілюзії сприйняття та моделювання одягу. Що спільного? Цікаві факти!

0 likes

Add comment

### Доброго дня!

0 likes

1 comment

Анастасія Нікуліна 11d  
Продуктивного заняття

Add comment

+

# Synchronous lesson tools

<https://classroomscreen.com/>

The screenshot displays the ClassroomScreen website interface. At the top, there is a browser address bar with the URL `app.classroomscreen.com/vw1/4b3467a6-e47b-4ad0-a754-daddb1314774`. Below the address bar is a home button (house icon) and a large image of a classical building with orange and white facades. On the right side of the image, there is a vertical toolbar with icons for settings, full screen, zoom in, zoom out, and other navigation functions. At the bottom, there is a horizontal toolbar with 14 icons representing various interactive tools: background, random name, dice, sound level, media, qr code, draw, text, work symbols, traffic light, timer, stopwatch, clock, and calendar. A small downward arrow icon is located at the bottom right of the toolbar.



# Synchronous lesson tools

<https://jamboard.google.com/>

Литвин О.В. (приклад використання дошки на заняттях з курсу "...

1/4

Настройки Доступа

Только просмотр

## Тайм-менеджмент як спосіб самоорганізації

Як Ви розумієте це поняття і які у Вас виникають асоціації в межах цієї теми? Чому можна навчитися якщо правильно використовувати правила тайм-менеджменту?

«Якщо час - сама дорожча річ, то розтрата часу є найбільшим марнотратством»  
Бенджамін Франклін

### Тайм-менеджмент

(time management — управління часом) — це технологія ефективного планування часу, як робочого, так і особистого, для підвищення ефективності його використання.



# ✓ Services for organizing online testing system

<https://docs.google.com>

СІРІЙСЬКА ІНЖЕНЕРНО-ПЕДАГОГІЧНА АКАДЕМІЯ  
1958  
УІПА УКР

Тест №2

Тема: Создание электронных презентаций

Виберіть свою групу

Вибрати

Введіть своє ПІБ

Мой ответ

ЧНА АКАДЕМІЯ



# ✓ Services for organizing online testing system

<https://docs.google.com>

2. Дайте визначення програми Tildee?

1 балл.

інструмент для створення електронних підручників ✓

інструмент для створення контрольних питань

інструмент для створення енциклопедій

інструмент для ств

 [Добавить пояснение](#)

11. Виберіть основні пункти технічного завдання

4 балл.

підстава для розробки ✓

інструкція користувача ✓

вимоги до програмної документації ✓

інструкція програміста

техніко-економічні показники

стадії та етапи розробки

призначення розробки ✓

вимоги до програми або програмного виробу

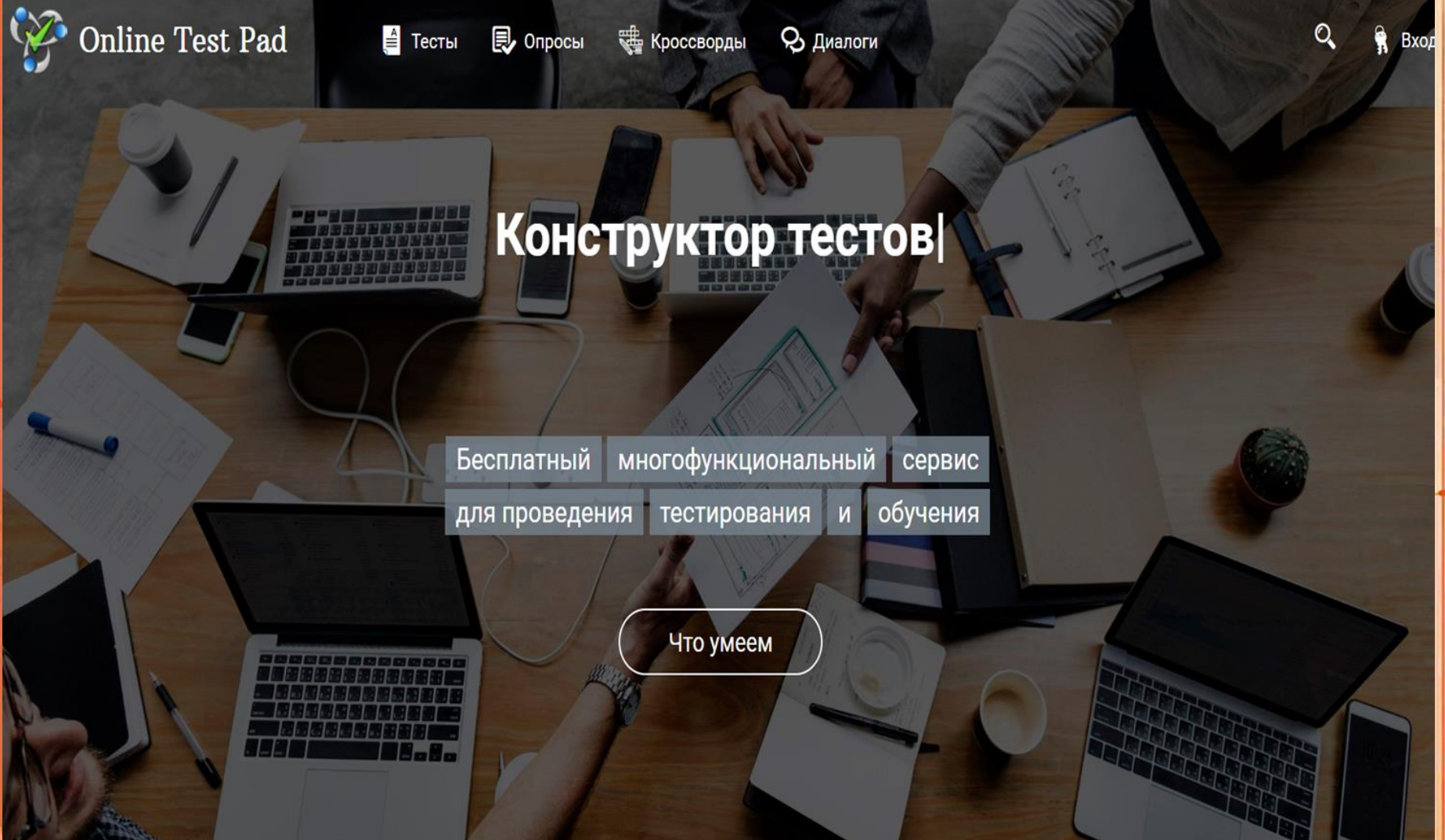
інструкція оператора

опис застосування

 [Добавить пояснение](#)

# ✓ Services for organizing online testing system

<https://onlinetestpad.com/>



Online Test Pad

Тесты   Опросы   Кроссворды   Диалоги   Вход

## Конструктор тестов

Бесплатный многофункциональный сервис  
для проведения тестирования и обучения

Что умеем

# ✓ Services for organizing online testing system

<https://onlinetestpad.com/>

The screenshot displays the Online Test Pad website interface. At the top, there is a blue navigation bar with the site logo and the text "Online Test Pad". To the right of the logo are icons for "Тесты" (Tests), "Опросы" (Surveys), "Кроссворды" (Crosswords), and "Диалоги" (Dialogs). A search icon and a user profile icon are also present in the top right corner.

Below the navigation bar, the main content area is titled "Тесты онлайн в Online Test Pad". Underneath this title, there is a section for "Популярные тесты" (Popular tests), which is divided into three columns:

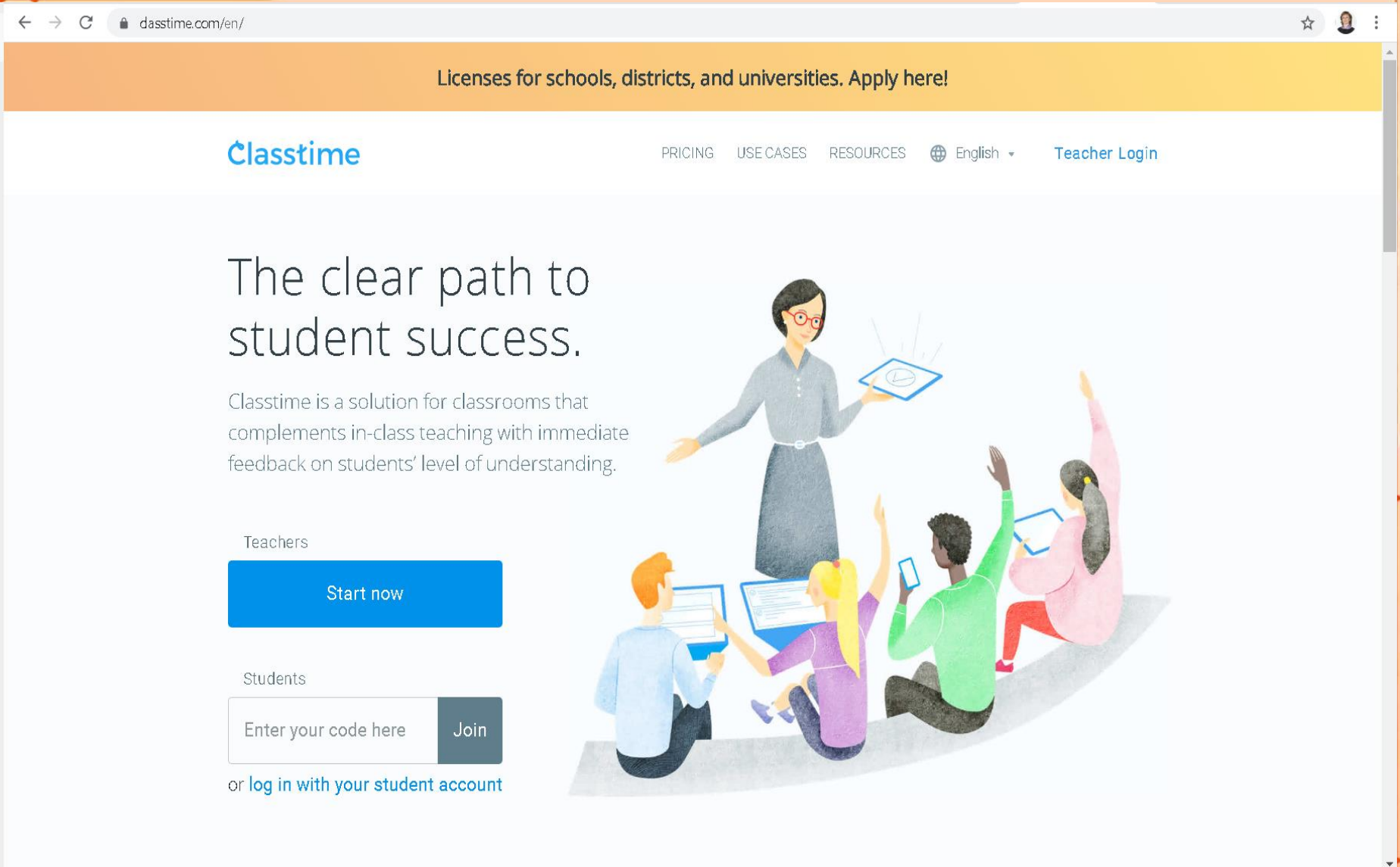
- Образовательные (Educational):** Includes tests such as "Промежуточная (годовая) аттестация по литературе 9 класс", "Итоговый тест по математике 6 класс", "ИТОГОВЫЙ ТЕСТ ПО БИОЛОГИИ 8 КЛАСС", "Тестовая работа «Повторение изученного в 7 классе»", "Итоговый тест по биологии для 5-го класса", "Алгебра 8 класс", "Итоговый тест по окружающему миру за учебный год, 4 класс", and "6класс. Русский язык. Итоговая работа".
- Психологические (Psychological):** Includes tests such as "Выбор будущей профессии", "Математика - 6 класс, итоговый тест", "Психотип личности", "Простой тест на IQ бесплатно онлайн без регистрации", "Ваш уровень эмпатии", "Шкала депрессии Э. Бека", "Госпитальная шкала тревоги и депрессии", and "Итоговый тест по астрономии".
- Развлекательные (Entertainment):** Includes tests such as "Кто ты из Винкс?", "Какая Вы машина", "Гендерные устан- обществом", "Какой у тебя патр", "Славянская письменность", "Состав атомного ядра. Энергия связи. Дефект массы", "Угадай Мелодию", and "тест на знание музыки".

On the right side of the page, a user profile dropdown menu is open, showing options: "Профиль" (Profile), "Опросы" (Surveys), "Тесты" (Tests), "Кроссворды" (Crosswords), "Диалоги" (Dialogs), "Комплексные задания" (Complex tasks), "СДОиТ", and "Выход" (Logout).



# ✓ Services for organizing online testing system

<https://www.classtime.com/en/>



The screenshot shows the homepage of the Classtime website. At the top, there is a navigation bar with the Classtime logo on the left and links for PRICING, USE CASES, RESOURCES, a language selector (English), and a Teacher Login button on the right. Below the navigation bar is a yellow banner with the text "Licenses for schools, districts, and universities. Apply here!". The main content area features a large heading "The clear path to student success." followed by a paragraph: "Classtime is a solution for classrooms that complements in-class teaching with immediate feedback on students' level of understanding." To the right of this text is an illustration of a teacher standing and holding a tablet, with four students sitting on the floor around her, also using tablets. Below the heading and paragraph, there are two sections for user registration. The "Teachers" section has a blue "Start now" button. The "Students" section has a text input field labeled "Enter your code here" and a dark blue "Join" button. Below the "Students" section, there is a link that says "or log in with your student account".

Licenses for schools, districts, and universities. Apply here!

**Classtime** PRICING USE CASES RESOURCES English Teacher Login

## The clear path to student success.

Classtime is a solution for classrooms that complements in-class teaching with immediate feedback on students' level of understanding.

Teachers

[Start now](#)

Students

[Join](#)

or [log in with your student account](#)

# ✓ Services for organizing online testing system

<https://www.classtime.com/en/>

The screenshot shows the 'Library' page on the Classtime website. The browser address bar displays 'classtime.com/library'. The navigation menu includes 'LIBRARY', 'SESSIONS', 'CLASSES', and 'CHALLENGES'. A user profile for 'Tetiana Bondarenko Basic' is visible in the top right corner. A search bar contains the text 'Search 50,000+ free questions on any subject...'. The main content area lists various question sets, including folders like 'Зарубіжна література' and 'ІКТ', and individual question sets such as 'Геодезія • 3', 'Історія України • 1', and 'Історія України 10 клас (Україна під час Другої світової війни) • 12'. A 'Start Session' button is present next to the 'Геодезія' question set. On the right side, there are buttons for 'Create Question Set' and 'Create Folder', and a 'More Questions:' section with links to 'Khan Academy' and 'IB Plato Math'. A 'Trash' icon is also visible at the bottom right.

Library

Search 50,000+ free questions on any subject...

Зарубіжна література

ІКТ

Історія України

fsdgvsvdgvf • 0

Геодезія • 3 [Start Session](#) [Add to Session](#)

Історія України • 1

Історія України • 1

Історія України 10 клас (Україна під час Другої світової війни) • 12

КТН • 0

Приклад: В. Нестайко "Тореадори з Васюківки" (укр.літ., 6 клас) • 7

Приклад: Іраціональні рівняння, степенева функція (алгебра, 10 клас) • 6

[Create Question Set](#)

[Create Folder](#)

More Questions:

[Khan Academy](#)

[IB Plato Math](#)

Trash

# ✓ Applications for games, quizzes and exercises

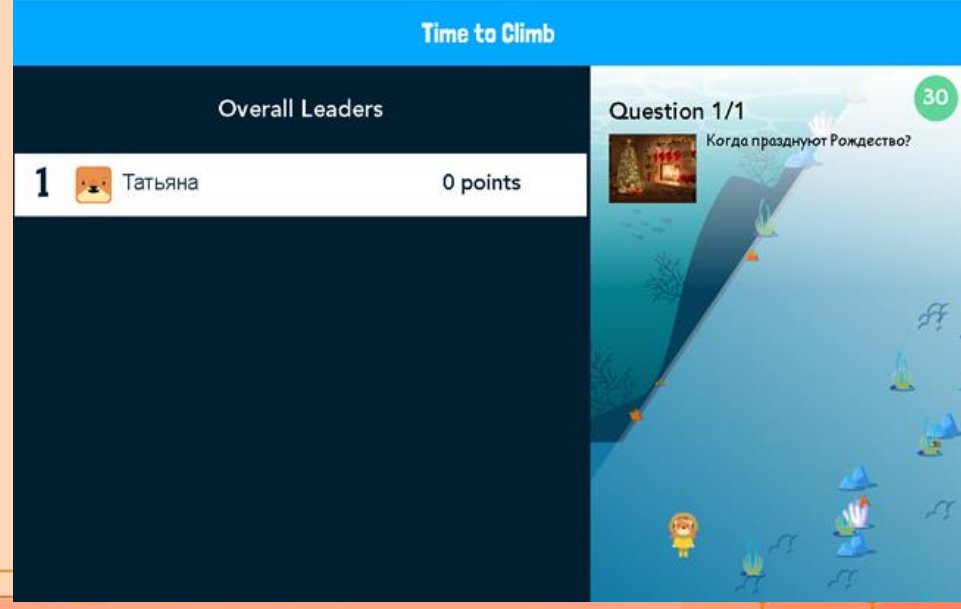
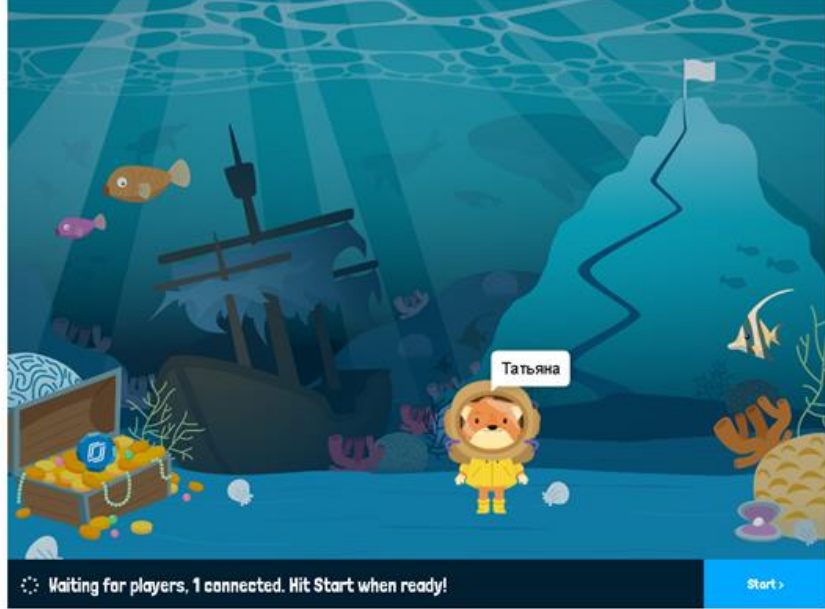
<https://nearpod.com/>

The screenshot shows a web browser window with the URL `app.nearpod.com/presentation?pin=TM7QU`. The interface features two input boxes at the top. The left box contains the equation  $0 = 0$ . The right box contains the equations  $x = 1$  and  $y = 1$ , with the numbers 1 in white boxes that have arrows indicating they can be moved. Below these boxes is a '+ Snapshots' button. In the center is a balance scale with two empty pans. At the bottom, there are two identical sets of draggable tiles:  $x$  (blue),  $-x$  (cyan),  $y$  (purple),  $-y$  (pink),  $1$  (yellow), and  $-1$  (grey). A lock icon is positioned between the two sets of tiles. A circular refresh button is located in the bottom right corner.



# ✓ Applications for games, quizzes and exercises

<https://nearpod.com/>



# ✓ Applications for games, quizzes and exercises

<https://getkahoot.com>

Kahoot!

School ▾

Work ▾

Home ▾

Enter game PIN

Sign up – it's free!

Log in



## Make learning awesome!

Kahoot! brings engagement and fun to more than 1 billion players every year at school, at work, and at home

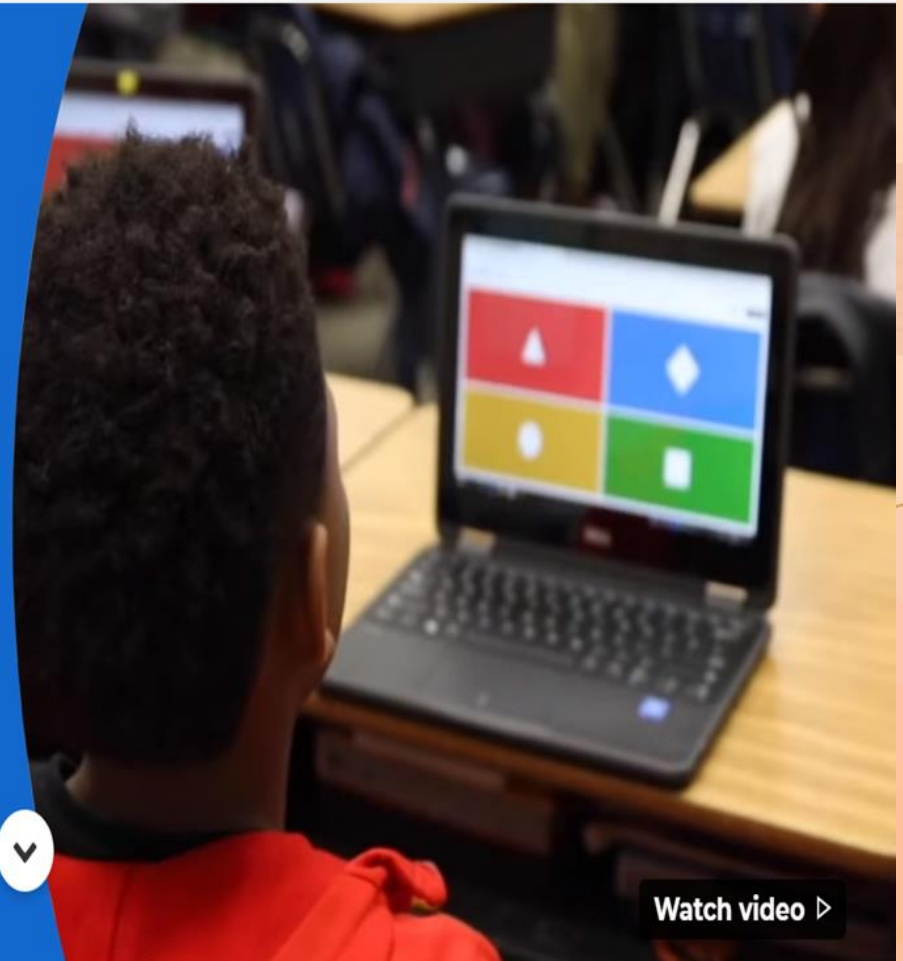
Sign up for free!

or

Go premium for business

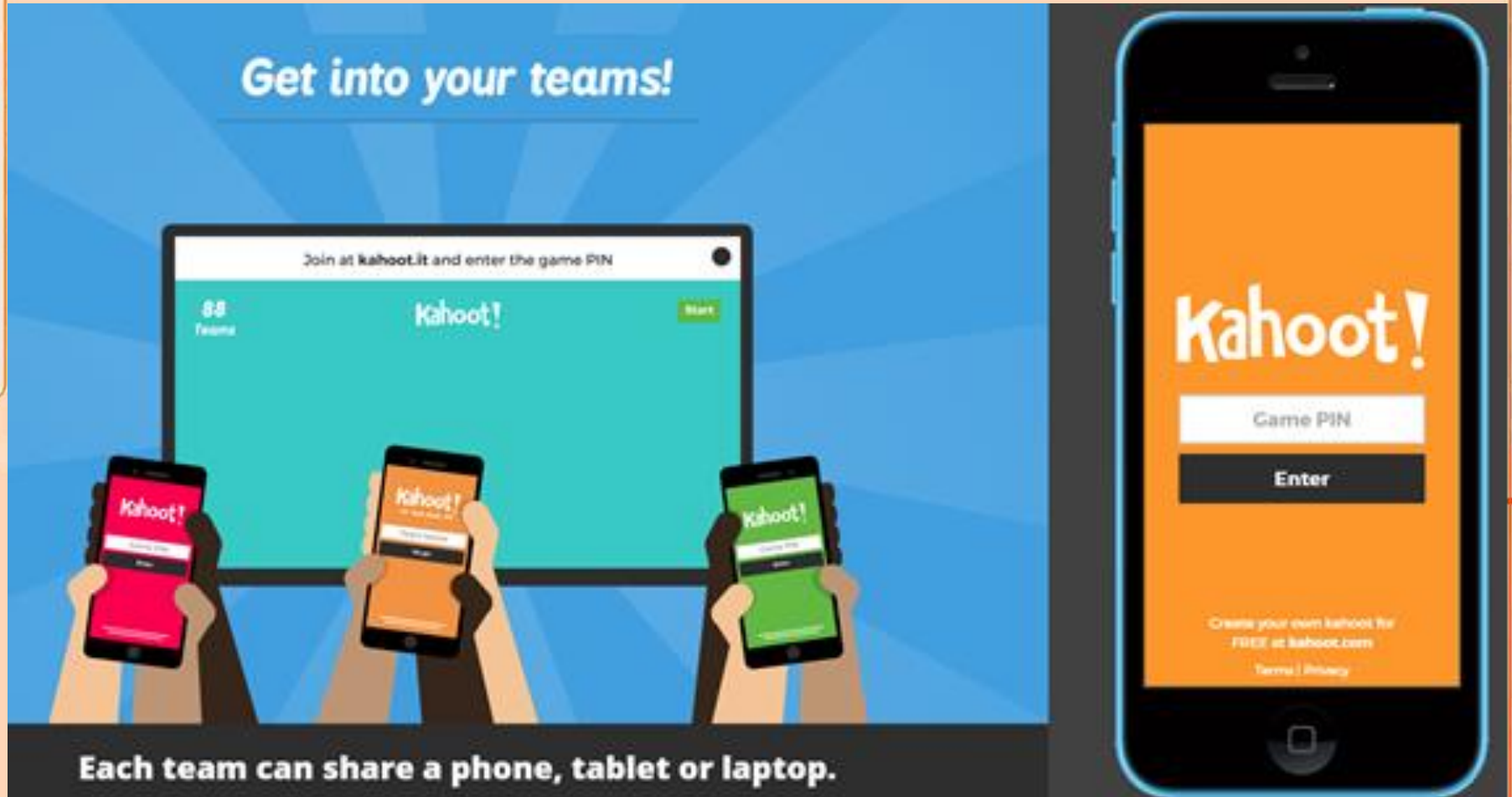


Watch video ▶



# ✓ Applications for games, quizzes and exercises

<https://getkahoot.com>



The image illustrates the Kahoot! interface across different devices. On the left, a laptop screen displays the text "Get into your teams!" at the top, followed by "Join at kahoot.it and enter the game PIN". Below this, the Kahoot! logo is visible, along with a "Start" button and a "Teams" section. Three hands are shown holding smartphones, each displaying the Kahoot! app interface. On the right, a smartphone screen shows the Kahoot! logo, a "Game PIN" input field, and an "Enter" button. At the bottom of the smartphone screen, it says "Create your own kahoot for FREE at kahoot.com" and "Terms | Privacy".

**Get into your teams!**

Join at [kahoot.it](https://kahoot.it) and enter the game PIN

Kahoot!

Start

Teams

Kahoot!

Kahoot!

Kahoot!

**Each team can share a phone, tablet or laptop.**

Kahoot!

Game PIN

Enter

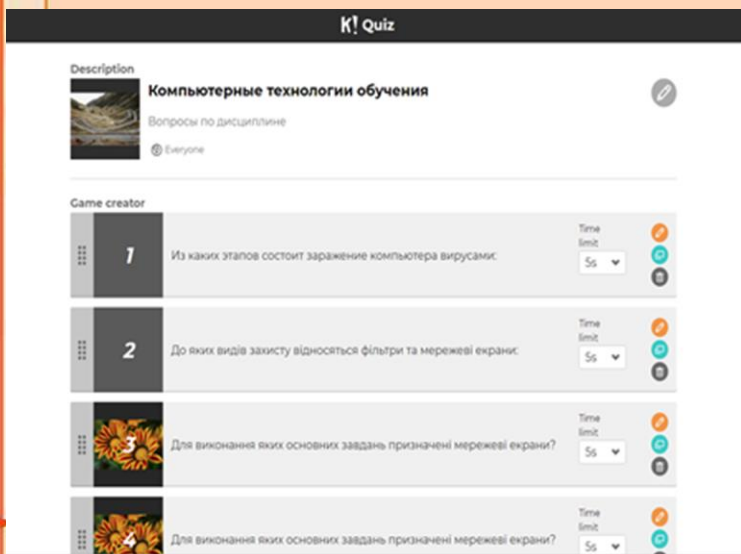
Create your own kahoot for FREE at [kahoot.com](https://kahoot.com)

Terms | Privacy



# ✓ Applications for games, quizzes and exercises

<https://getkahoot.com>

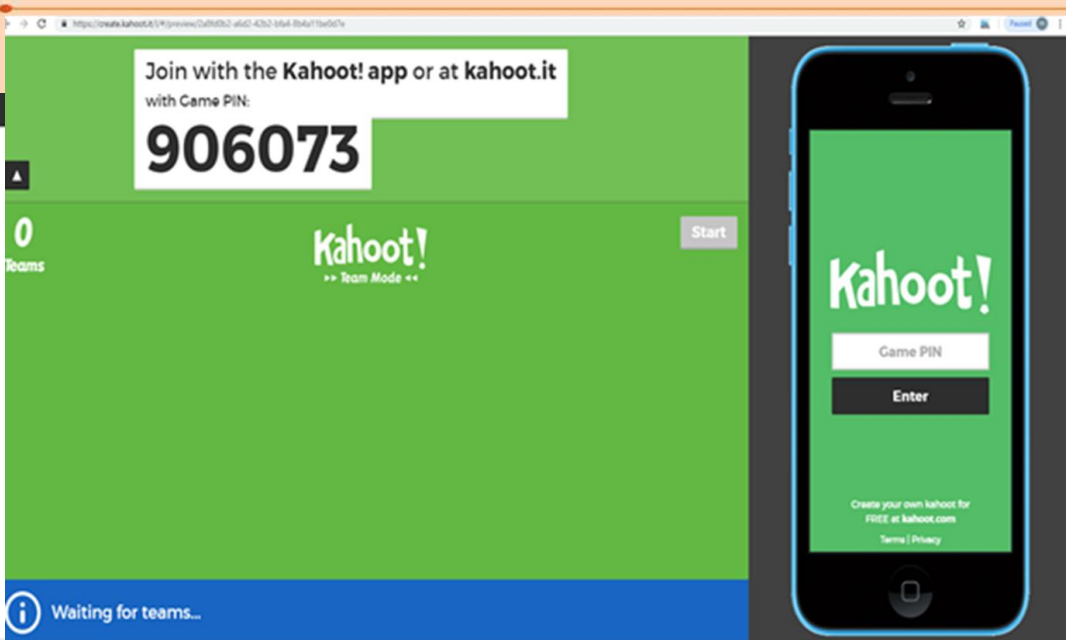


K! Quiz

Description  
**Компьютерные технологии обучения**  
Вопросы по дисциплине  
@ Everyone

Game creator

| Question  | Time limit |
|---|------------|
| 7 Из каких этапов состоит заражение компьютера вирусами.          | 5s         |
| 2 До яких видів захисту відносяться фільтри та мережеві екрани.   | 5s         |
| 3 Для виконання яких основних завдань призначені мережеві екрани? | 5s         |
| 4 Для виконання яких основних завдань призначені мережеві екрани? | 5s         |




Join with the Kahoot! app or at kahoot.it  
with Game PIN:  
**906073**

0 Teams

Kahoot!  
Team Mode

Start

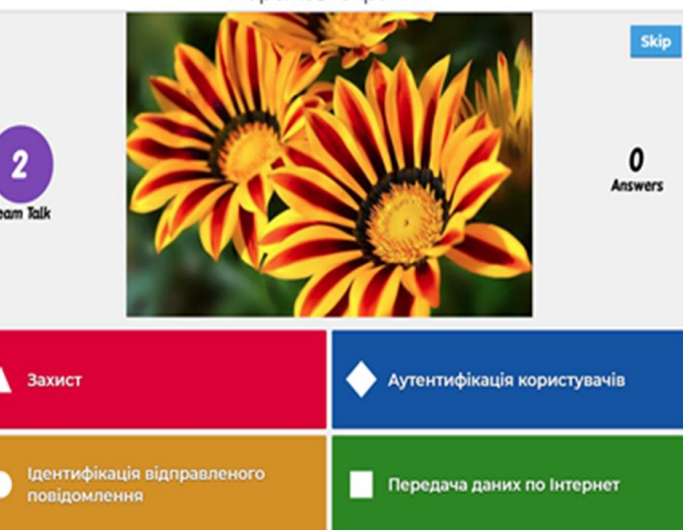
Waiting for teams...




Kahoot!  
Game PIN  
Enter

Create your own kahoot for FREE at kahoot.com  
Terms | Privacy

Для виконання яких основних завдань призначені мережеві екрани?



2 Team Talk



Skip

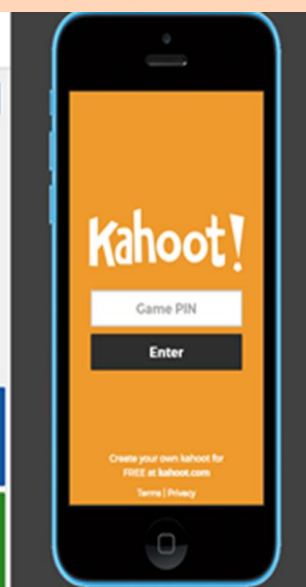
0 Answers

Захист

Аутифікація користувачів

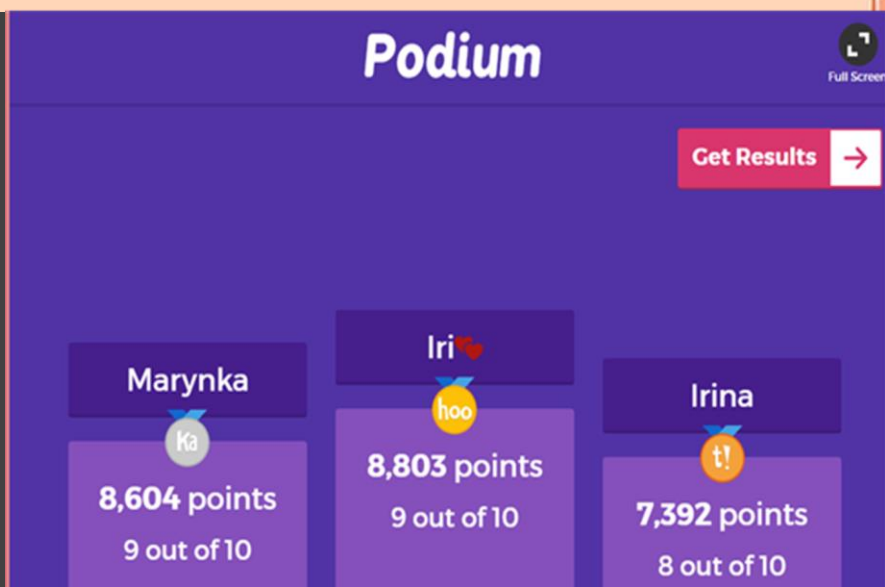
Ідентифікація відправленого повідомлення

Передача даних по Інтернет



Kahoot!  
Game PIN  
Enter

Create your own kahoot for FREE at kahoot.com  
Terms | Privacy



Podium

Full Screen

Get Results →

| Player  | Points       | Score       |
|---------|--------------|-------------|
| Marynka | 8,604 points | 9 out of 10 |
| Iri     | 8,803 points | 9 out of 10 |
| Irina   | 7,392 points | 8 out of 10 |

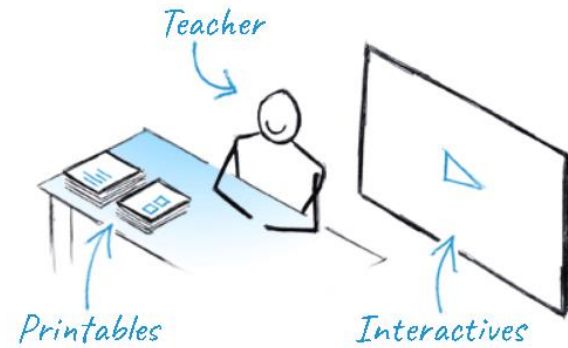
# ✓ Applications for games, quizzes and exercises

<https://wordwall.net/>

## The easy way to create your own teaching resources.

Make custom activities for your classroom.

Quizzes, match ups, word games, and much more.



28,539,529 resources created

## Easy as 1-2-3

Create a customized resource with just a few words and a few clicks.

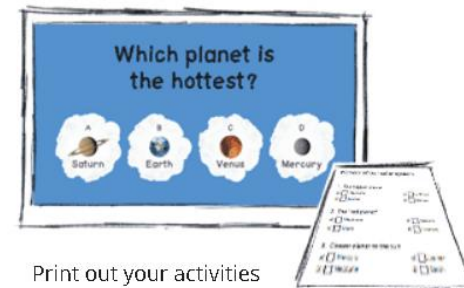
1



2



3



Print out your activities

# ✓ Applications for games, quizzes and exercises

<https://wordwall.net/>

Pick a template > Enter content > Play

★ Rate our ideas 🔍 Search templates:

You have used 3 of your 5 resources

▼ INTERACTIVES

Sort by: MOST POPULAR ALPHABETICAL



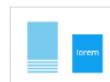
## Match up

Drag and drop each keyword next to its definition.



## Quiz

A series of multiple choice questions. Tap the correct answer to proceed.



## Random cards

Deal out cards at random from a shuffled deck.



## Open the box

Tap each box in turn to open them up and reveal the item inside.



## Random wheel

Spin the wheel to see which item comes up next.



## Missing word

A cloze activity where you drag and drop words into blank spaces within a text.



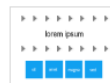
## Anagram

Drag the letters into their correct positions to unscramble the word or phrase.



## Group sort

Drag and drop each item into its correct group.



## Find the match

Tap the matching answer to eliminate it. Repeat until all answers are gone.



## Unjumble

Drag and drop words to rearrange each sentence into its correct order.



## Labelled diagram

Drag and drop the pins to their correct place on the image.



## Matching pairs

Tap a pair of tiles at a time to reveal if they are a match.



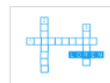
## Wordsearch

Words are hidden in a letter grid. Find them as fast as you can.



## Flip tiles

Explore a series of two sided tiles by tapping to zoom and swiping to flip.



## Crossword

Use the clues to solve the crossword. Tap on a word and type in the answer.



## True or false

Items fly by at speed. See how many you can get right before the time runs out.



## Gameshow quiz

A multiple choice quiz with time pressure, lifelines and a bonus round.



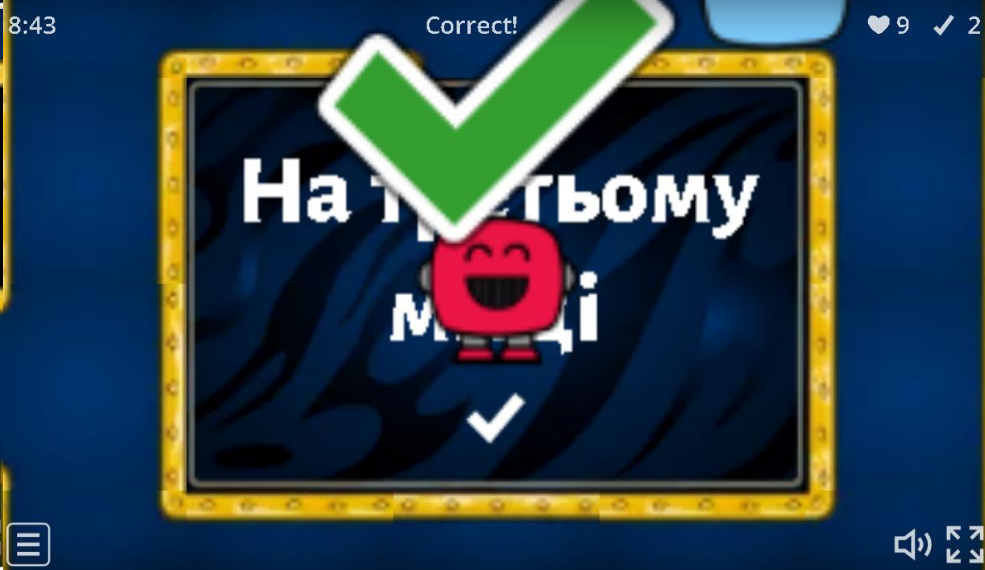
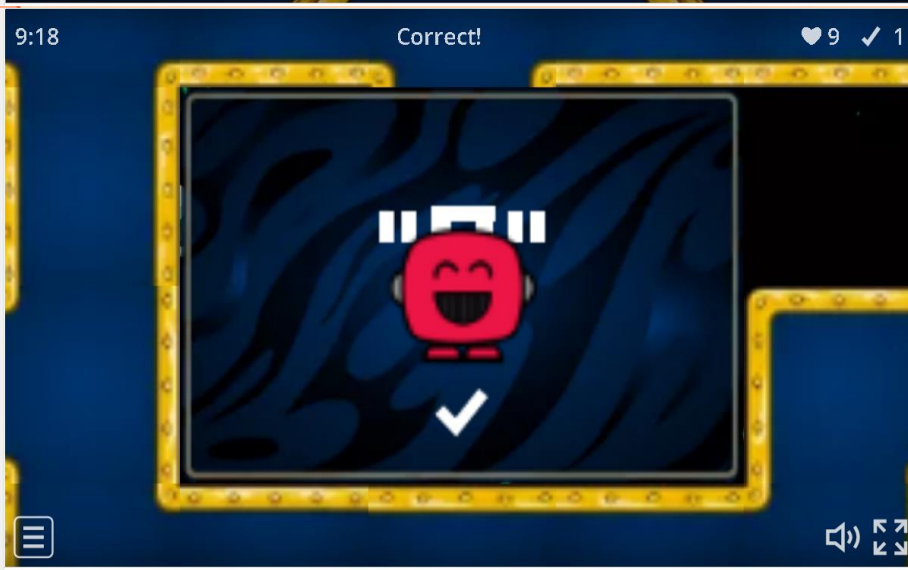
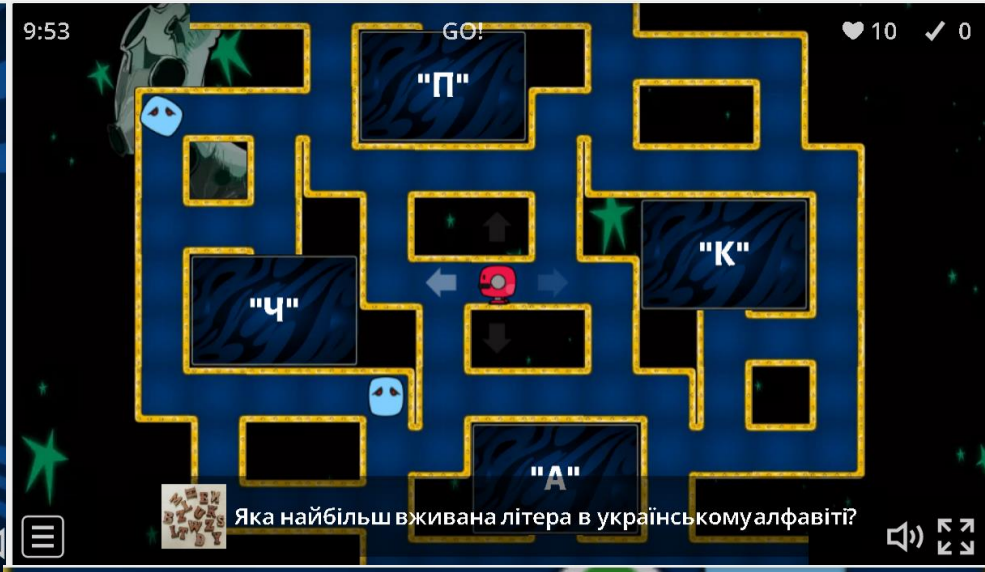
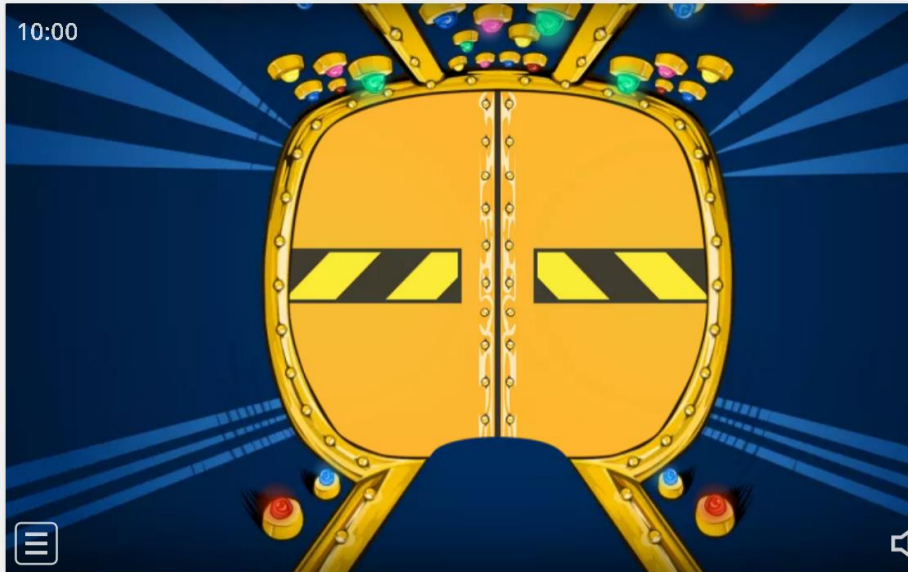
## Maze chase

Run to the correct answer zone, whilst avoiding the enemies.



# ✓ Applications for games, quizzes and exercises

<https://wordwall.net/>



# ✓ Applications for games, quizzes and exercises

**Plickers** <https://www.plickers.com/>

Хмарні технології

Яке із нижчеподаних визначень підходить до терміну «хмарні обчислення (Cloud Computing)»?

**A** це технологія розподіленої обробки даних в якій комп'ютерні ресурси і потужності надаються користувачеві як інтернет-серв

**B** це набір фізичних пристроїв (сервери,

Image

- Edit Image
- Replace
- Copy Image
- Download Image
- Remove

plickers Library Reports Classes Live View Cards Help D. Account

Psychology

Enter Student Name (or Tin Howard)

Sort By: Add Answer Print Answer

1 Alan B

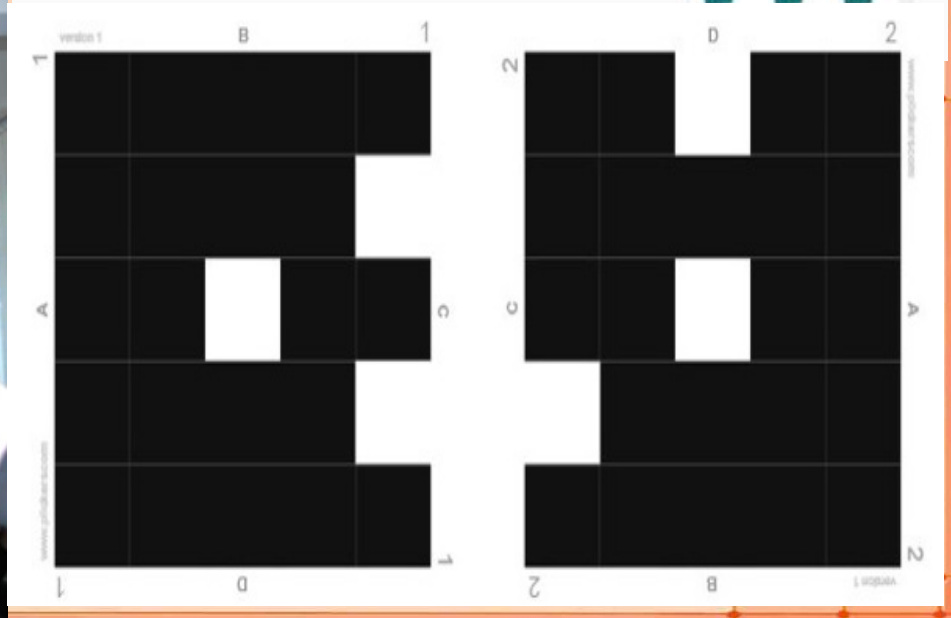
2 Kate M

3 George W

Show Archived Students

Available Cards

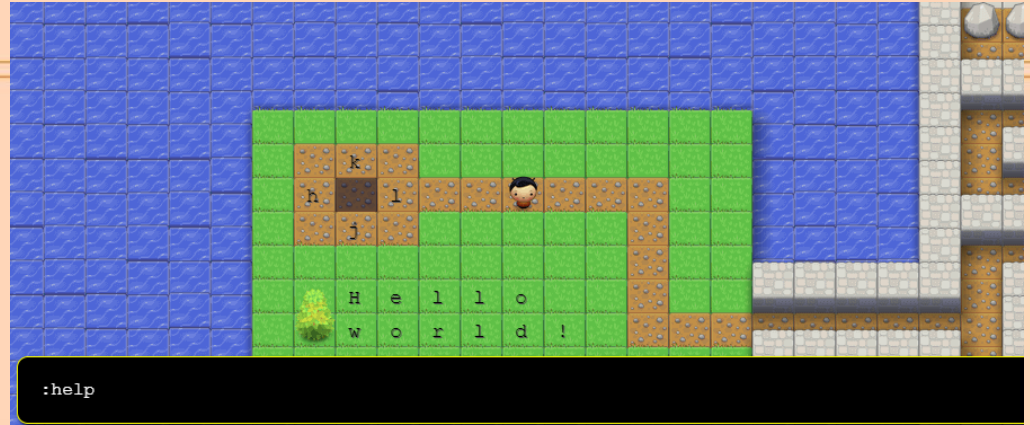
|    |    |    |
|----|----|----|
| 4  | 5  | 6  |
| 7  | 8  | 9  |
| 10 | 11 | 12 |
| 13 | 14 | 15 |
| 16 | 17 | 18 |
| 19 | 20 | 21 |
| 22 | 23 | 24 |
| 25 | 26 | 27 |





# ✓ Programming game applications

1. Untrusted
2. Robocode
3. Elevator Saga
4. Vim Adventures
5. CodeCombat
6. Flexbox Defense
7. Code Hunt
8. CheckIO
9. Screeps
10. CSS Diner



## Flexbox Defense

Wave 1 of 12

Use the `justify-content` property to move these two towers into position. Click the ? button in the stylesheet for a reminder on how the property works.

```
1 .tower-group-1 {  
2   display: flex;  
3  
4 }
```

Start Wave

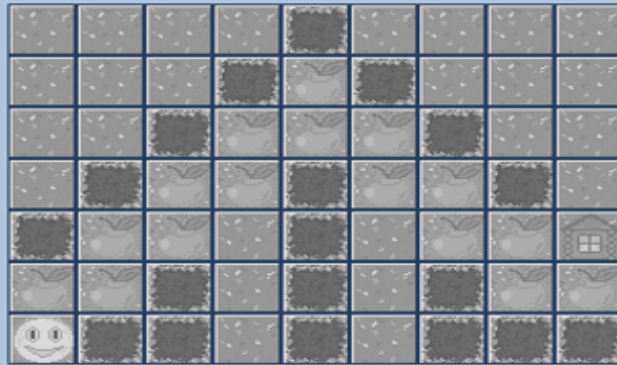




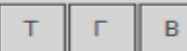
# The principle of simulator operation :

- 1. Training takes place in a playful way.**
- 2. The conditional image of the robot as a smiley face is the main character of the game.**
- 3. There is a maze with different types of fields: open fields, closed fields, fields with mandatory attendance.**
- 4. The student selects a set of commands from the available list of commands to guide the robot through the maze from the start to the end field (the robot can move from one field to another by moving left, right, up, down).**
- 5. The robot cannot go beyond the maze.**
- 6. Gradually, the tasks become more complex. At first, there are tasks for linear algorithms, and then for cyclic, conditional, and procedural ones**

# Editing the maze:



Turn on/turn off  
Panel



Вставить  
сверху



Вставить  
снизу



Вставить  
слева



Вставить  
справа

Creating a new maze

line

4

cell

4

OK

Cycle from 1 to 4

Start program  
Turn up  
Cycle from 1 to 4

End program

|     |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|---|---|
| 0   | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 0   | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 |
| 0   | 0 | 1 | 3 | 3 | 3 | 1 | 0 | 0 |
| 0   | 1 | 3 | 3 | 1 | 3 | 3 | 1 | 0 |
| 1   | 3 | 3 | 0 | 1 | 0 | 3 | 3 | 2 |
| 3   | 3 | 1 | 0 | 1 | 0 | 1 | 3 | 3 |
| 100 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |

Save all changes in maze

Run

Run All

Clearing all

Delete selected

Mark as correct

Uncheck

## Functions are available at editing the maze :

- **changing the maze cell;**
- **transpose the maze;**
- **horizontal display of the maze;**
- **vertical display of the maze;**
- **adding lines and columns to the maze;**
- **clearing all cells.**



# The main form of the simulator :

The image shows the main interface of a simulator. At the top, a title bar reads "User Belous Ivan, Linear program, Level 1". Below it is a menu bar with options: "Load the latest", "View", "Start the program", "Maze", "Task", "Levels", "Change user", and "Close". A row of buttons labeled "Level 1" through "Level 10" is positioned below the menu bar. The "Level 1" button is highlighted in green.

The main area is divided into several sections:

- Grid:** A 5x5 grid on the left shows a maze. The top-left cell contains a yellow smiley face emoji. Black squares represent obstacles. The grid is set against a green background.
- Level 1 Panel:** A yellow panel titled "Level 1" contains the text: "It is necessary to lead the hero to the house without hitting the black fields". Below this text are several control buttons: "Run", "Stop", "Run All", "Clearing all", "Delete", "Up", and "Down".
- Command List:** A cyan panel on the right is titled "List of available commands" and lists: "1. Move up", "2. Move down", "3. Move left", and "4. Move right".
- Command History:** A green panel at the bottom center shows a list of commands: "Move right", "Move down", "Move down", "Move down", "Move down", and "Move right". The fourth "Move down" command is highlighted with a grey background.
- Empty Panel:** A large blue panel is located at the bottom right of the interface.

## **The simulator menu provides the following functions:**

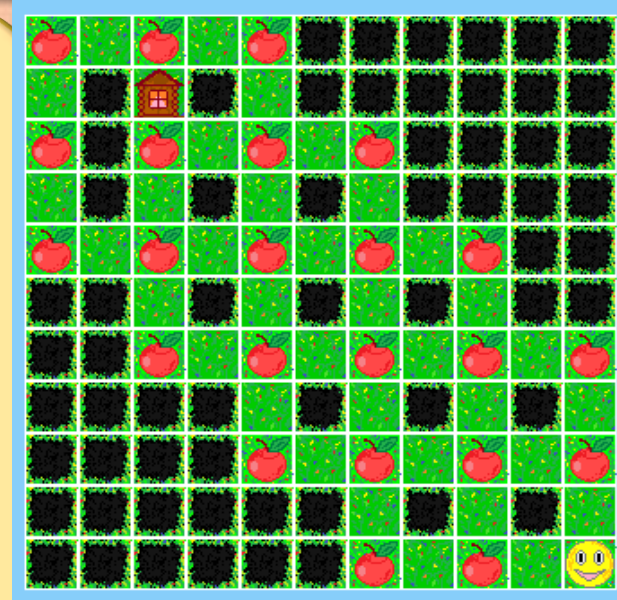
- **loading the last option for completing the task;**
- **editing the system view (for example, minimizing individual program fields);**
- **going to the next, previous, or selected level;**
- **selecting the program code execution mode (run command, run all, stop code execution);**
- **up-dating the maze;**
- **changing the user;**
- **saving the results;**
- **logging out.**

# The example of solving an issue of "Internal cycles":

**Task:** to develop a program, according to the results of which the robot shall go from the starting point to the house without hitting the black fields while collecting all the apples. One should use internal cycles when writing a program.

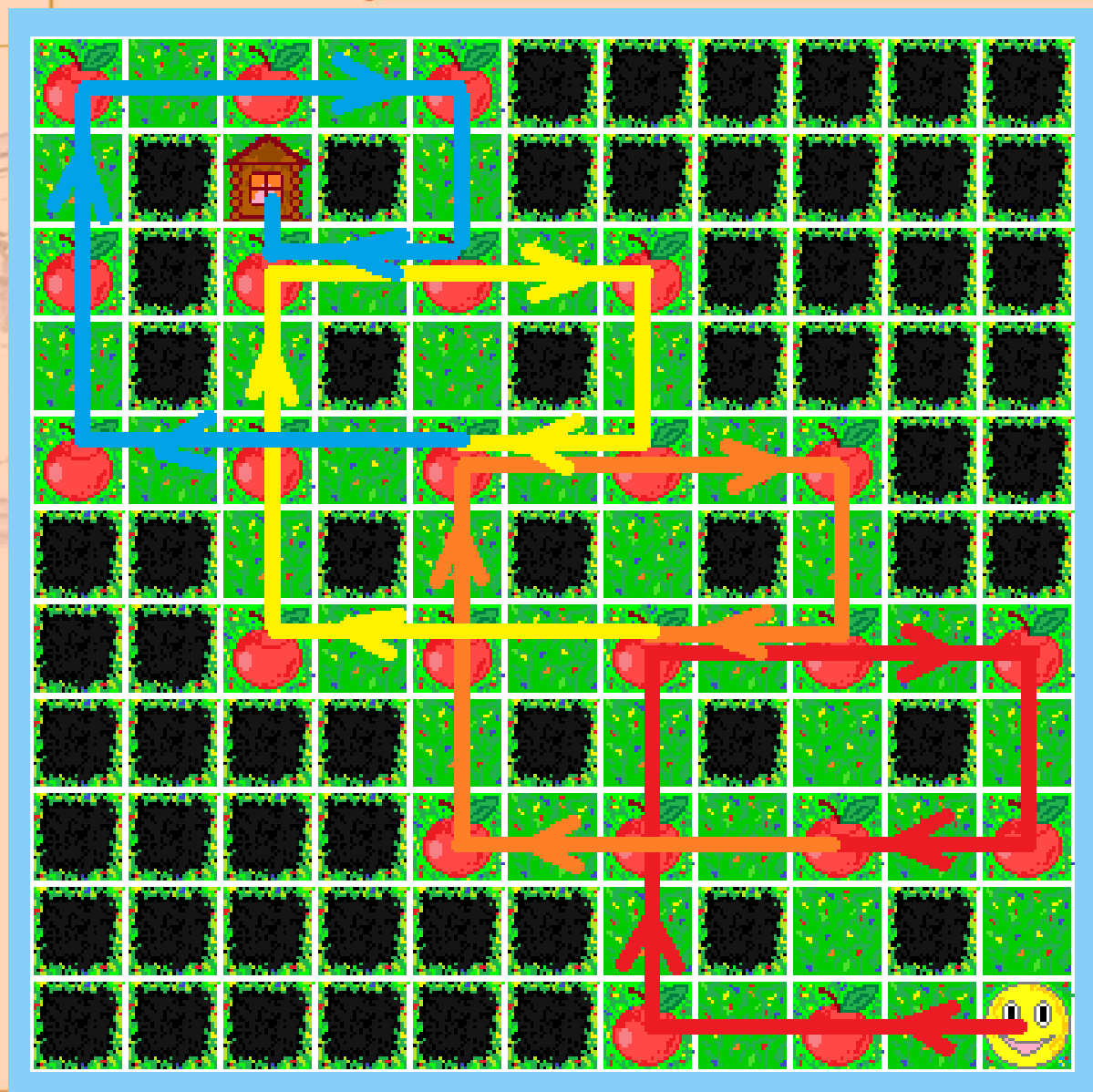
The list of available commands to solve this issue includes commands to move the robot:

- Move for 1 cell;
  - Go back 90° clockwise;
  - Go back 90° counterclockwise
- and cycle commands:
- Cycle from 1 to n, where n varies from 3 to 7;
  - End of the cycle.





# The possible trajectory of the robot's movement:



# ✓ Simulator for the Formation Programming Skills

Комплекс візуального програмування

## Регистрація

| Група  | Имя                  | Тема                 |
|--|----------------------|----------------------|
| <input type="text"/><br>ДКТ-К12-1<br>ДКТ-К11-1<br>ДКТ-проф13-1<br>ДКТ-проф14-1 | <input type="text"/> | <input type="text"/> |

OK

# ✓ Gamification and Visualization

Welcome to virtual tour to our class

