



Coding4Girls

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Promuovere lo sviluppo del coding attraverso la metodologia e gli strumenti del progetto Coding4Girls

European Training and Research Association for a Cooperation Key to business

Questo progetto è stato finanziato con il sostegno della Commissione Europea. Questa pubblicazione rispecchia il punto di vista dell'autore e, pertanto, la Commissione non è responsabile di alcun uso che possa essere fatto di informazioni qui contenute.



Contesto

- Secondo il Centro Nazionale per l'educazione negli Stati Uniti, le donne rappresentano appena il **18%** dei laureati nelle TIC e, nelle migliori università, questo numero scende al **14%**.
- Il settore tecnologico è l'unico ambito STEM in cui è diminuita la partecipazione femminile.
- In Europa la situazione è ancora peggiore secondo quanto riferito dalla Commissione Europea: **su 1.000 donne solo il 29%** hanno una laurea in tecnologie dell'informazione e della comunicazione (TIC) (in contrasto con il 95% costituito da uomini), e di queste solo una minima parte lavora nel settore TIC.



Informazioni generali

Programma: Erasmus+

Azione: KA2 Partenariato Strategico - Settore Scuola **Coordinatore di progetto:** UNIVERZA V LJUBLJANI (Slovenia) **Inizio:** 01/09/2018

Durata: 24 mesi

Codice: 2018-1-SI01-KA201-047013

Principali beneficiari: Studenti con età compresa tra 9 – 13 anni
(Scuola Primaria e Secondaria)



www.coding4girls.eu



General goal

Overcoming the gap between male and female participation in computer science education and careers by introducing more attractive learning methods for young people.



Main objective

Introducing innovative methodological learning framework for building programming skills through the instructional support content and end-to-end learning activities based on the integration of the design thinking methodologies and the serious game approach.



Partners

European experts in the field of didactics of informatics, education, e-learning, coding computational thinking and game-based learning from Slovenia, Bulgaria, Croatia, Greece, Italy, Portugal and Turkey.



Participants

The direct participants are teachers from primary and secondary school with 10-16 years old students coming from Slovenia, Bulgaria, Croatia, Greece, Italy, Portugal and Turkey.

www.facebook.com/coding4girls/



Partners



UNIVERZA V
LJUBLJANI



EU-Track



SOUTH-WEST
UNIVERSITY NEOFIT
RILSKI



SVEUCILISTE U RIJECI



PANEPISTIMIO
THESSALIAS



ISTANBUL VALILIGI



VIRTUAL CAMPUS LDA



General goal

Il progetto affronta il **divario** tra **partecipazione maschile e femminile** nell'educazione tecnologica e nelle relative carriere professionali introducendo **metodi di apprendimento** più attraenti sia per le ragazze che per i ragazzi.

Tali metodi sono rivolti ad affrontare quei fattori che inducono le ragazze a non scegliere l'informatica, ovvero:

- l'errata percezione dei ruoli e delle carriere professionali;
- mancanza di interesse nella disciplina;
- basse competenze.



Main objective

- Convalidare un **quadro di apprendimento** strutturato attraverso la **progettazione** e l'**implementazione** di un ***serious game***.
- Gli **studenti** sono stati **incoraggiati** a **progettare** e **programmare** dei game.
- Inoltre, il progetto ha sviluppato **contenuti a supporto** degli educatori per **integrare le attività** in ambito tecnologico nella **pratica didattica**.

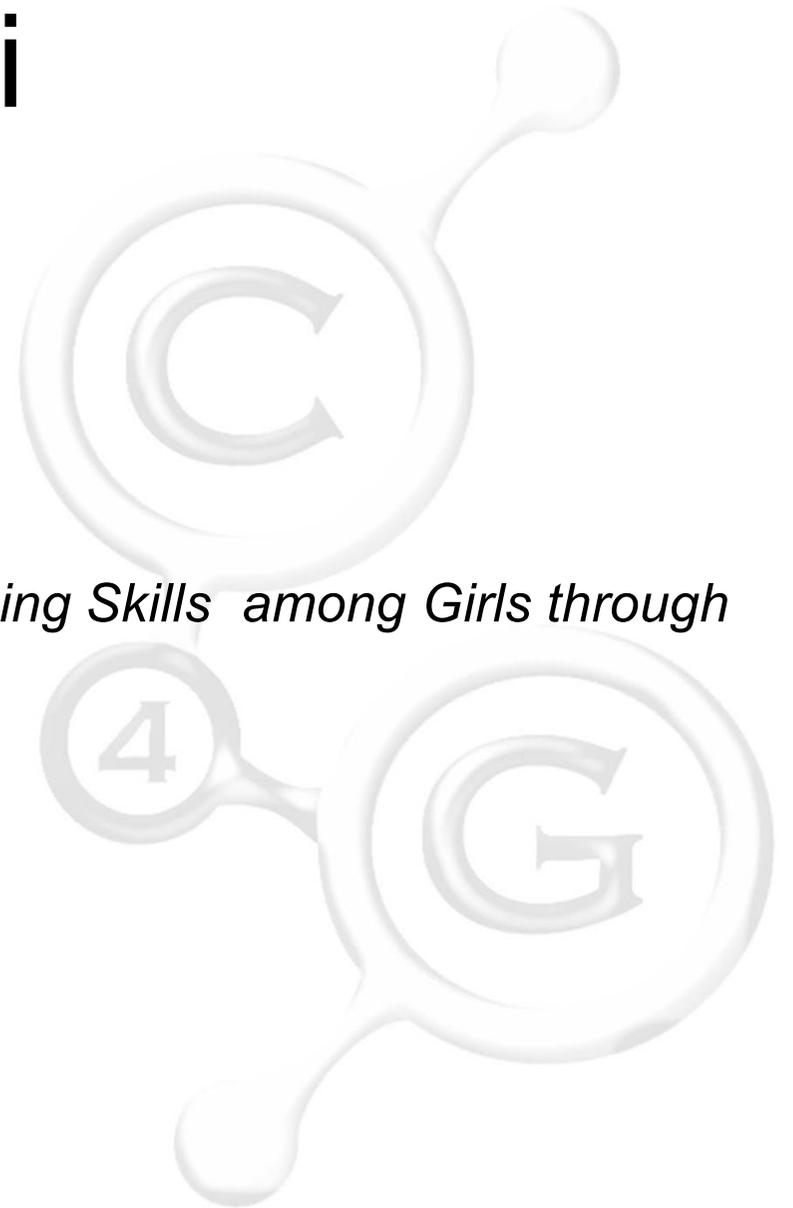


Risultati

IO1 - *Methodological Learning Framework*

IO2 - *Promoting the Development of Programming Skills among Girls through Serious Games*

IO3 - *Instructional Support Content*





Quadro metodologico

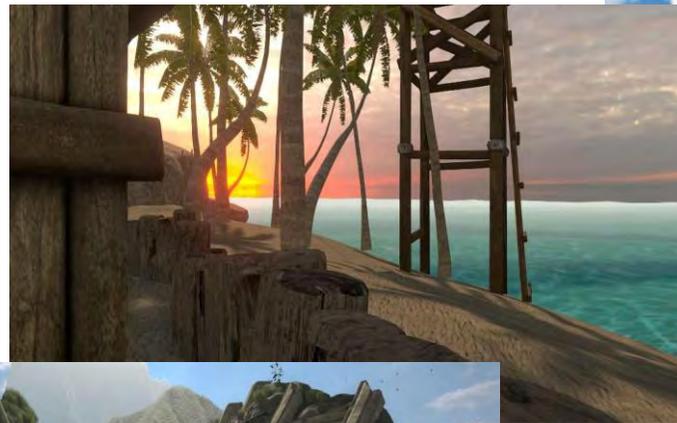
Il risultato di progetto è un **quadro di riferimento metodologico** che supporta lo **sviluppo** delle **competenze di programmazione** tra i giovani, con particolare attenzione alle ragazze, prendendo in considerazione lo **status quo** nelle scuole e i **fabbisogni emergenti nel mercato del lavoro**.



Seriuos game

Serious Game progettati per lo sviluppo delle competenze e conoscenze tecnologiche nei ragazzi.

Sia il software e sia i materiali didattici sono stati validati in **Grecia, Turchia, Italia, Slovenia e Portogallo.**





Promoting Serious Games

A proof-of-concept design and development approach for advanced learners, building blocks of s

<https://www.coding4girls.org>

Teachers' platform

This is a web-based platform where teachers can prepare their coding course using Snap and access a public repository of courses created by other teachers.

The platform is available at <https://coding4girls-e-ce.uth.gr/#/>

Teachers' Platform - User Manual

Teachers' Video Guideline - How to use the Teachers' Platform

Students' Game Environment

A Unity 3D video game that the students can use to discover and complete the courses in gamified fashion.

The software is available at these links:

- Windows: https://ctille-ce.uth.gr/downloads/c4g/launcher/w64/c4g_win.zip
- Mac: https://ctille-ce.uth.gr/downloads/c4g/launcher/m64/c4g_m64.zip
- Linux: https://ctille-ce.uth.gr/downloads/c4g/launcher/linux/c4g_linux.tar.gz

Students' Game Environment - User Manual





Name:

Changing Sprite's costumes

Challenge Description:

Let's the Sprite change the costume.

Mini Game Category

Drawing ▾

Mini Game

Puzzle Game ▾

Timer

120

Tag

Moviment

Mini Game

Match3 Game ▾

Match3 Game

Find your path Game

Inventory Game

Stepping Game

Sound Game

Snake Game

Puzzle Game

Pattern Matching Game

Stepping Game

Dice Game

Multiple Questions Game

eractions



Snap solution

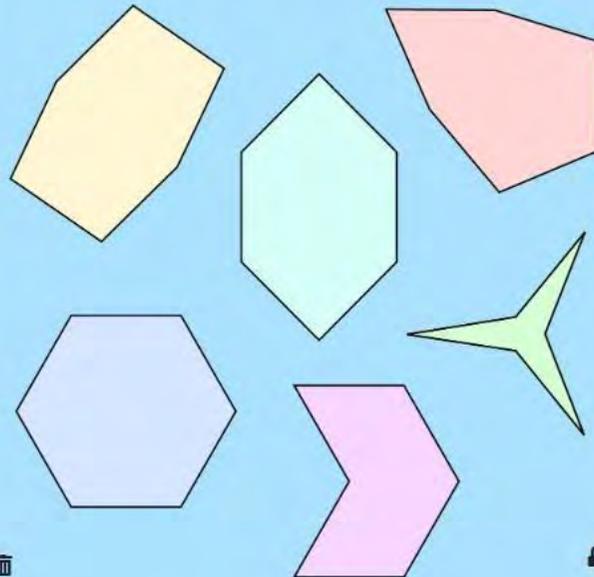
The image shows the Snap! programming interface. On the left is the 'Scripts' palette with various block categories: Motion, Looks, Sound, Pen, Control, Sensing, Operators, and Variables. The main workspace shows a 'Sprite' area with a ballerina icon and a script starting with 'when green flag clicked', followed by 'go to x: -220 y: -40', a 'repeat' loop of 14 iterations containing 'next costume', 'move 30 steps', and 'wait 1 secs'. The stage area on the right shows a ballerina sprite on a stage with red curtains. The bottom right corner has a 'Sprite' button with the ballerina icon.



Aggiungi una nuova nota

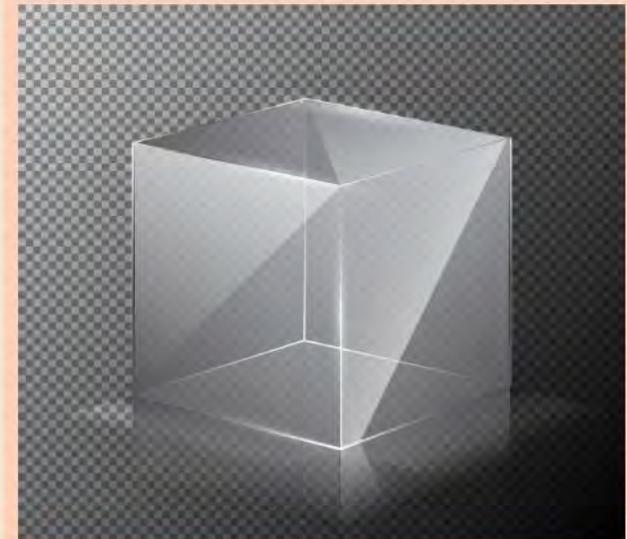
The activity is carried out with three different shapes: a square, a rectangle and the letter T.

Try to choose other shapes and modify the program accordingly.



Try to build and draw 3D images using previously prepared backgrounds.

Is it difficult for you?





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Students' Game Environment

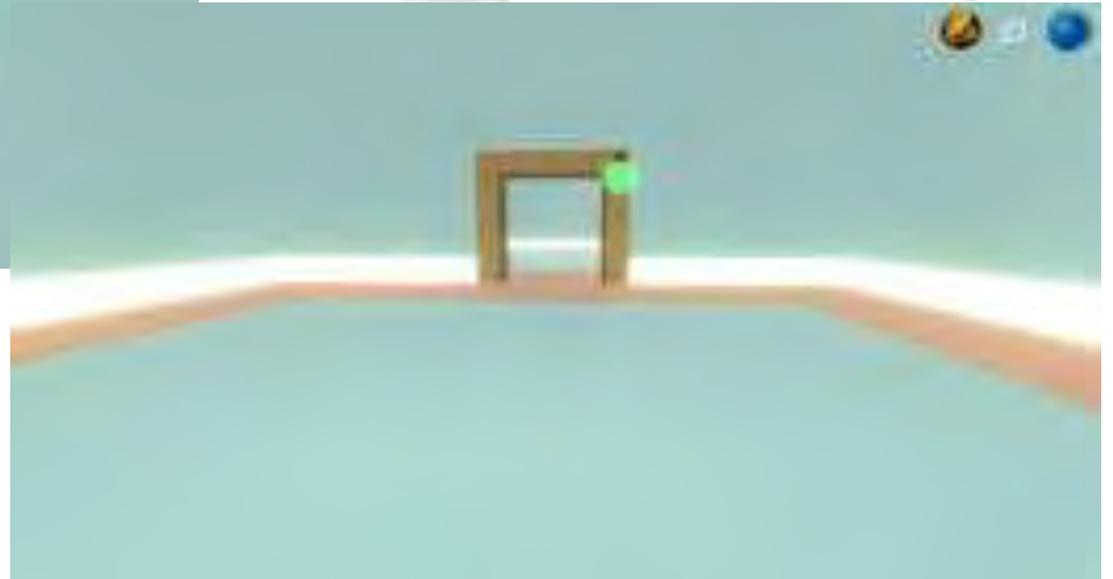
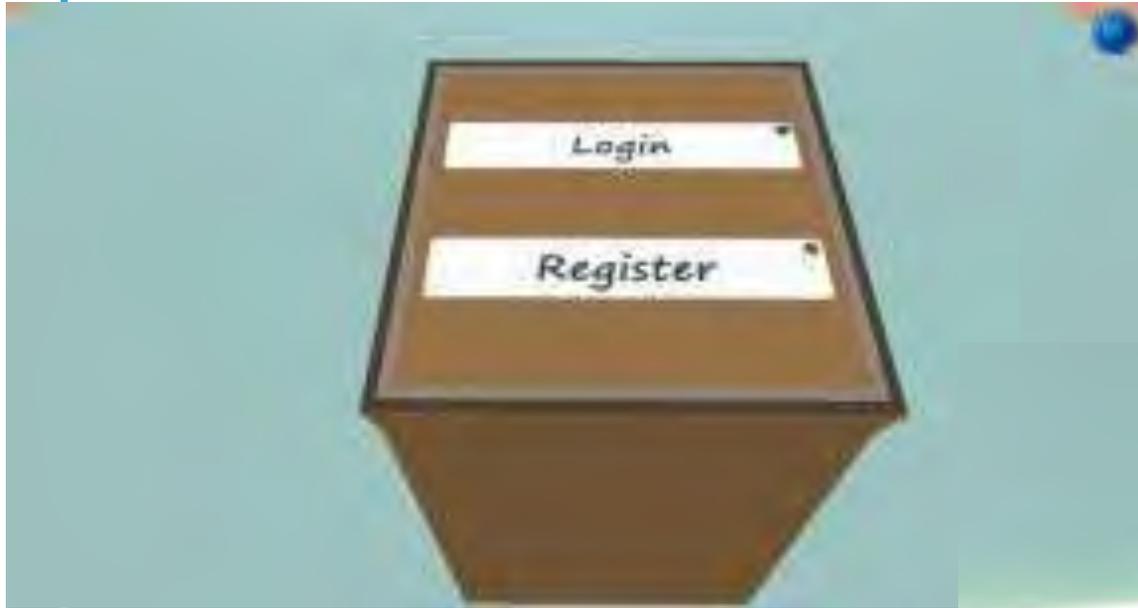
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[Students' Game Environment - User Manual](#)







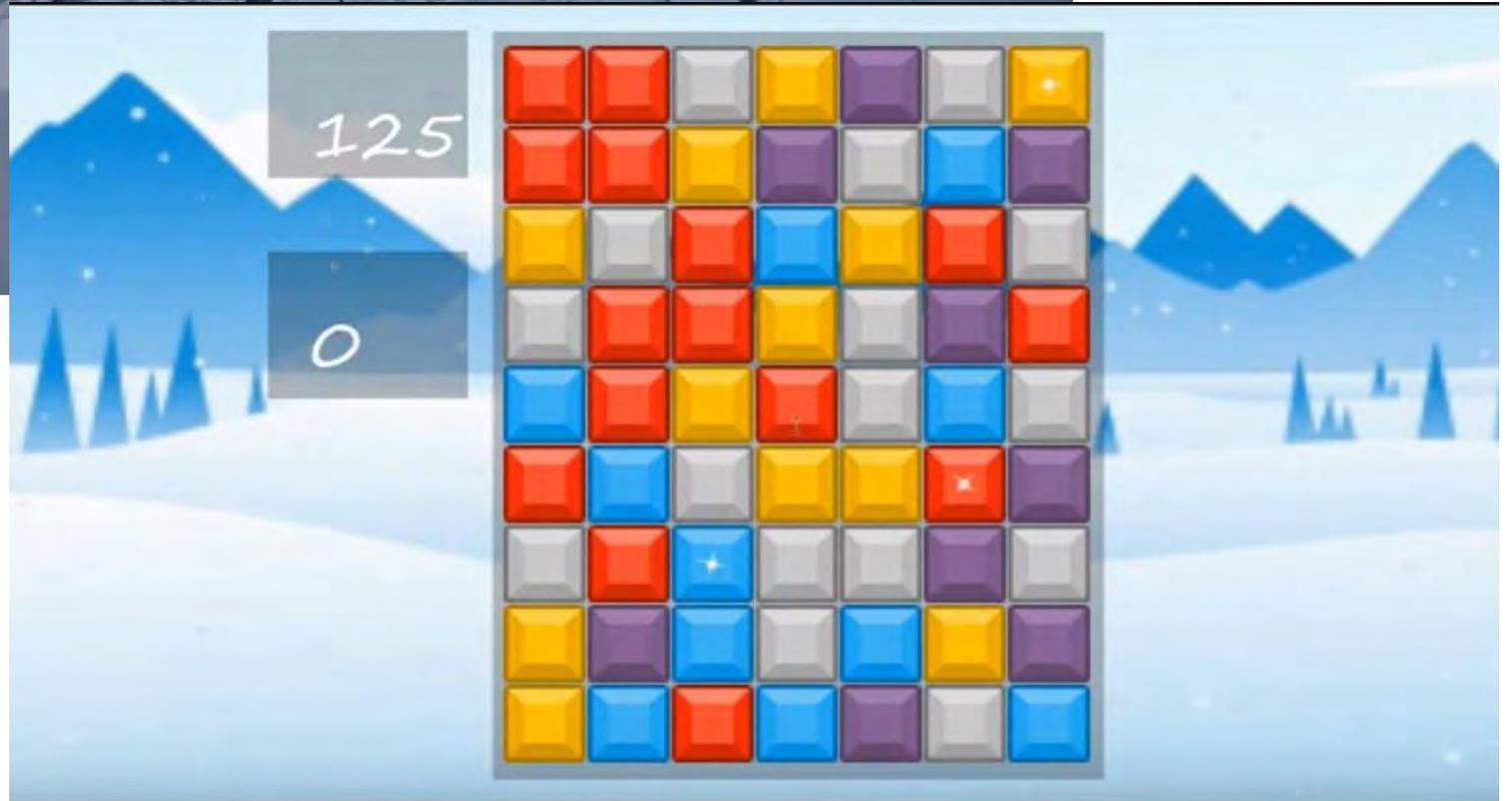
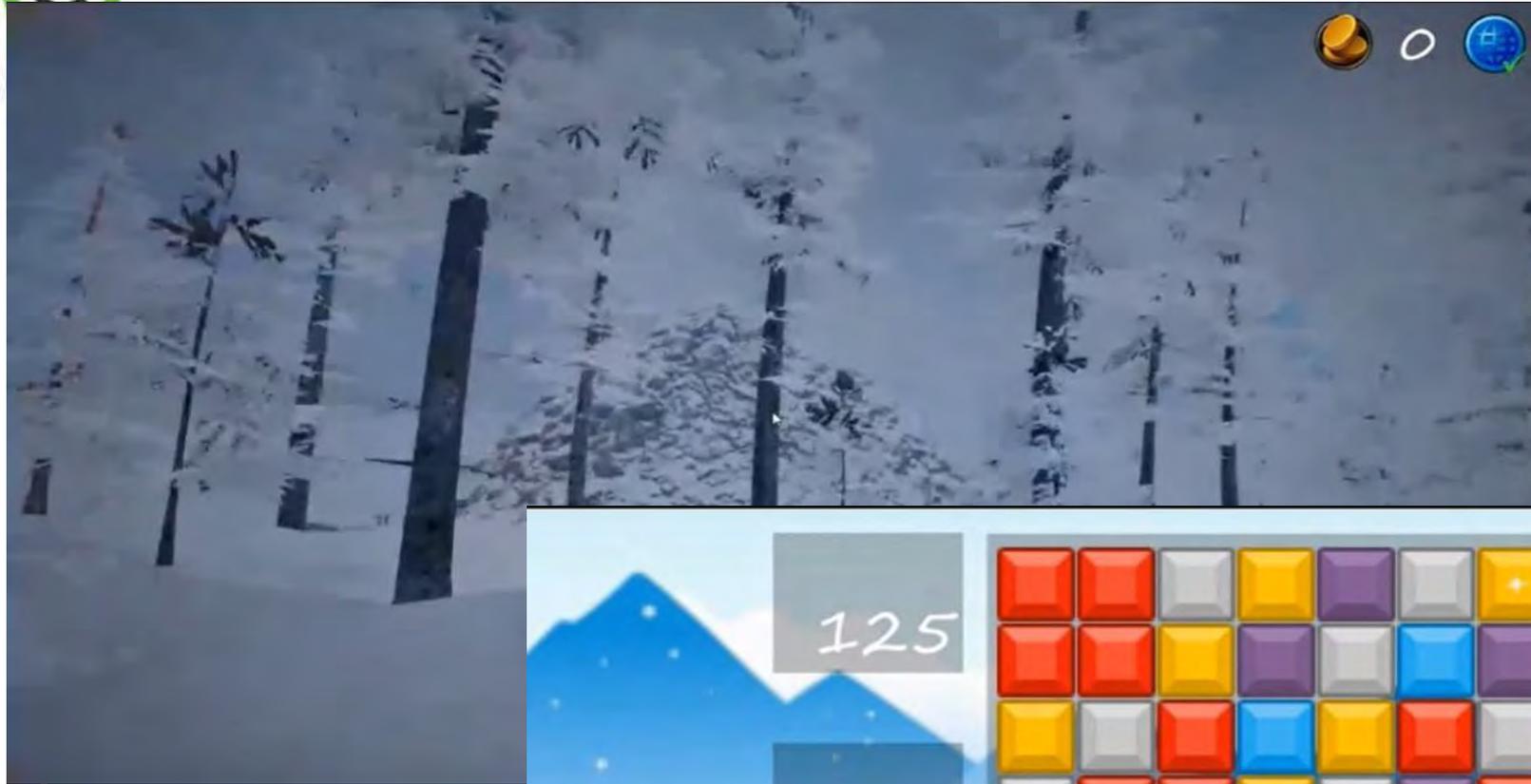
Scoprire Snap!

0 1 2 3

Instructions

Challenges' activities

The image shows a digital interface for a game titled "Scoprire Snap!". At the top, the title is displayed in a light-colored box. Below the title, four cards are laid out horizontally, each showing a number from 0 to 3. Each card has a small illustration of a person. A red arrow points from the "Instructions" box to the card with the number 0. Three red arrows point from the "Challenges' activities" box to the cards with numbers 1, 2, and 3. The interface is set against a dark background with a brown rectangular area in the center where the cards are placed. A red 'X' icon is visible in the top right corner of the interface.





Snap! Untitled

Character: Girl (draggable)

Scripts:

- clicked
- when clicked, say "canta la principessa e il principe a trovare gli animali" for 4 secs
- when clicked, say "mostra loro il percorso giusto disegnandolo" for 4 secs
- when clicked, say "attenzione, i percorsi non possono incrociarsi" for 4 secs

Key Presses:

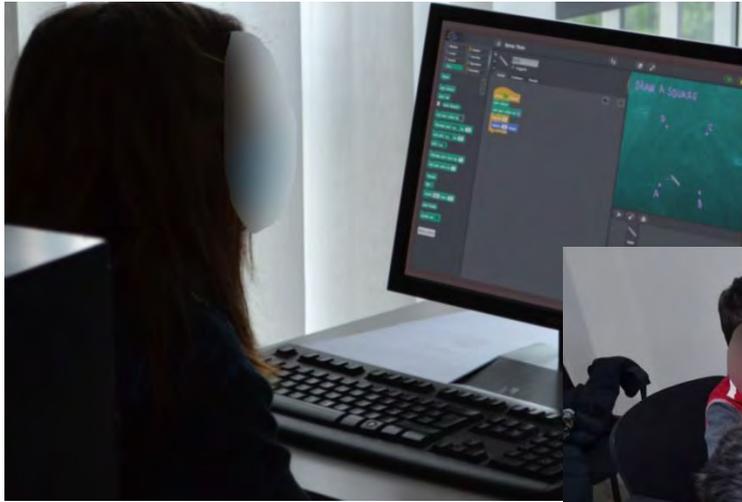
- when right arrow key pressed: point in direction 90, move 10 steps, if touching, move -10 steps
- when down arrow key pressed: point in direction 180, move 10 steps, if touching, move -10 steps
- when left arrow key pressed: point in direction -90, move 10 steps, if touching, move -10 steps

Stage: A maze on a grassy background with a Girl, Cal (cat), Princess, Prince, and Dog.

Character List: Girl, Cal, Princess, Prince, Dog



Attività di validazione





Grazie per l'attenzione!

A large, faded version of the logo described above is positioned in the background on the right side of the slide.