

Scripts for the films about the apps of the story *Man in the middle* (15-19+)

All the games begin and end in the same way:

Beginning

The initial image is projected during 5 seconds. The title includes: the name of the app (for instance “Key exchange”), the mathematical subject -- “Cryptography”, the corresponding age-group -- “15-19+”, and a link to the app in the repository -- “https://...”.

Ending

Background: black screen. **White text displayed:**

- Mathina Project with the UE logo;
- List of partners with the corresponding logos;
- The educator’s repository address.

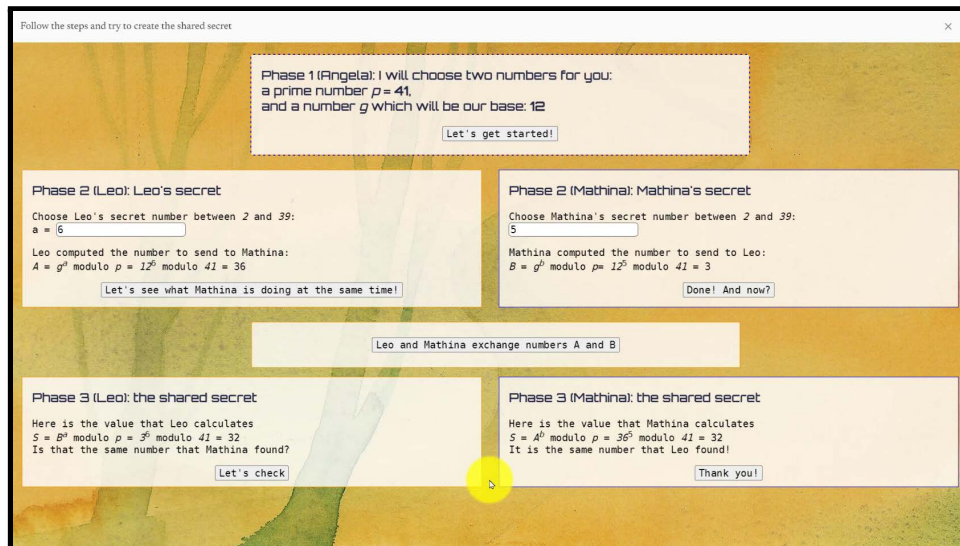
Scripts for the films about the apps:¹

Game 1, Key exchange



1. **Background:** a static image of the app.

¹ The text in italic represents the content of the voice-over.



- Simultaneously, the following **voice-over** is heard:

“Angela is teaching Mathina and Leo a way to create a shared secret with no secret communication.”

2. A **screen recording** is projected showing someone solving the app. **Voice-over:**

“In the first box Angela chooses a prime number p and a base number g , then Leo and Mathina simultaneously choose their secret numbers lowercase a and lowercase b , calculate uppercase A and uppercase B and share the latter ones.

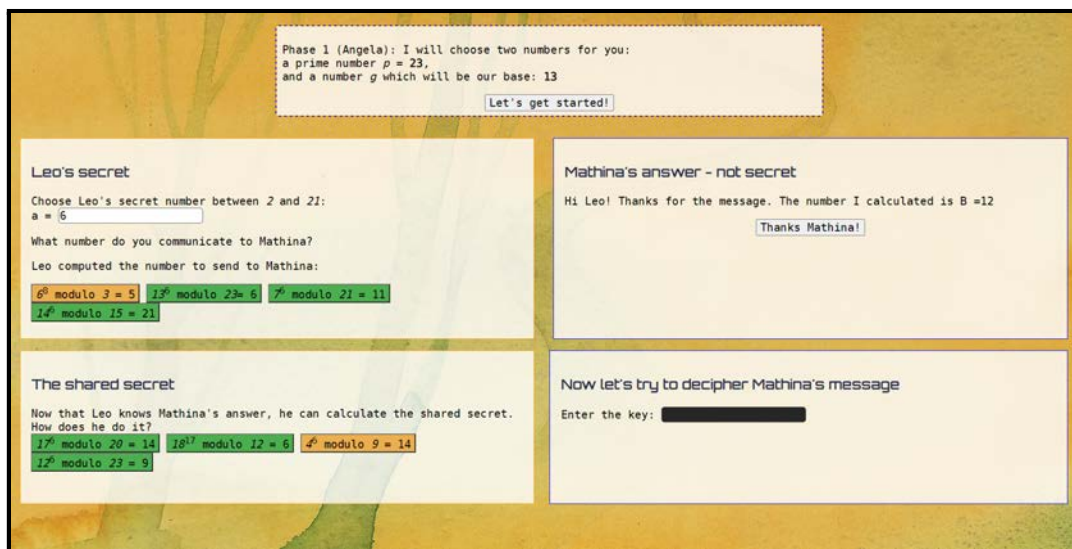


Finally the app shows the confirmation of the obtained shared secret.”

Game 2, Key exchange II



1. **Background:** a static image of the app.

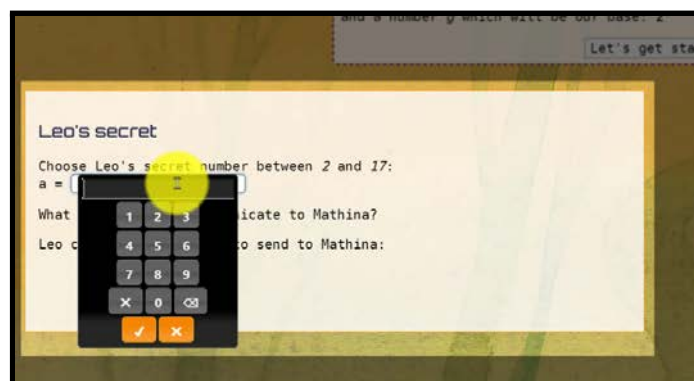


- Simultaneously, the following **voice-over** is heard:

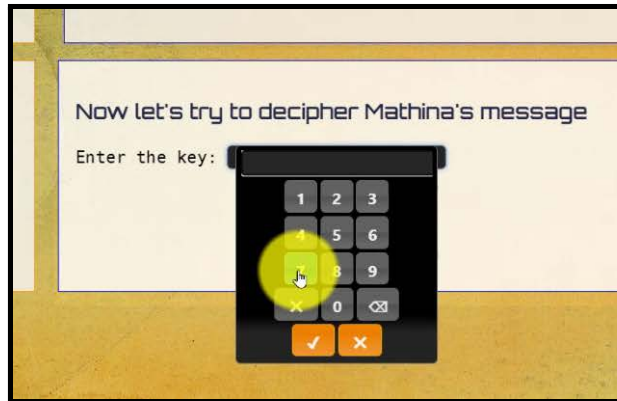
"Now it's your turn to play as Leo. In the first box you are reminded of the base and prime numbers chosen by Angela."

2. **Screen recording. Voice-over:**

"Then Leo shall choose a number a and then correctly choose which number to send to Mathina as it's part of the key. Once he has received the answer from Mathina he can now determine their shared secret."



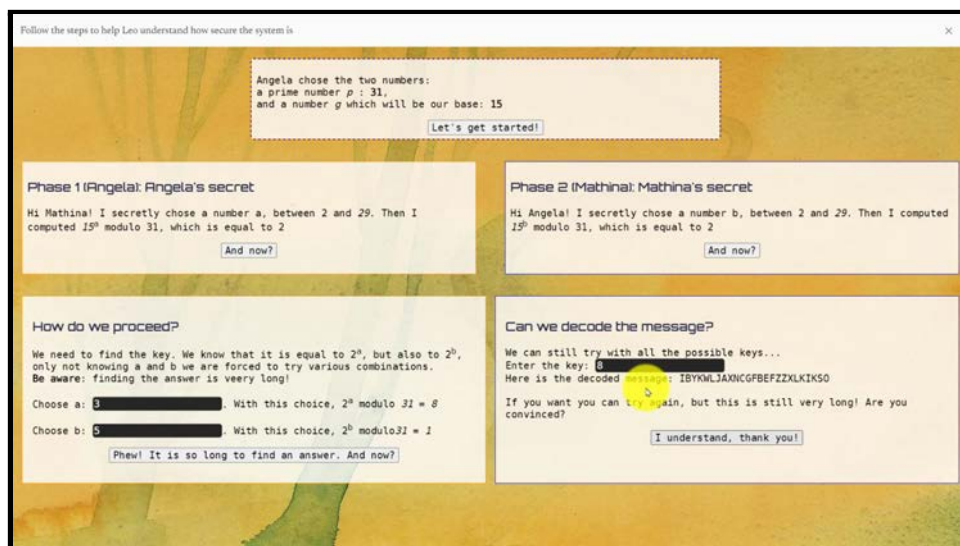
Finally he can decipher Mathina's message."



Game 3, Stealing the key



1. **Background:** a static image of the app.

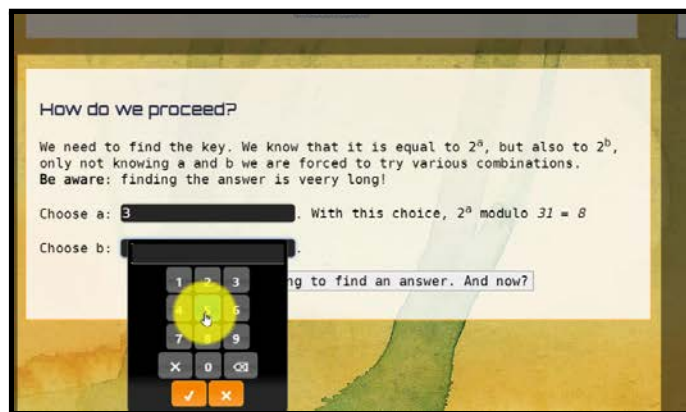


- Simultaneously, the following **voice-over** is heard:

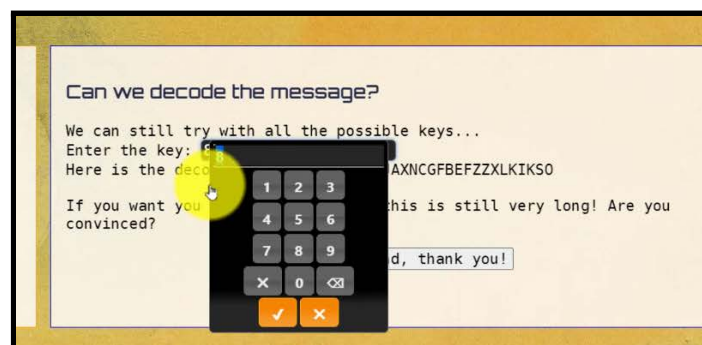
"This time you are playing as a hypothetical villain who aims at stealing Mathina and Leo's shared secret."

2. A **screen recording**. **Voice-over:**

“After gathering all the public information you can have, you are left to try to guess what the numbers a and b could be.



You can try and insert various numbers until you want to try to decipher Mathina's message.



A message will confirm whether your guess was correct or, much more likely, incorrect.”

Game 4, Key exchange II

Same video as Game 2