

# AUTHENTICATION METHOD FOR KIDS

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## INTRODUCTION

Online applications are responsible for storing people's important and personal information. A common way to keep this safe is the use of an authentication mechanism like a username and password. Children upload their information and use authentication mechanisms, but they have a harder time creating and remembering their passwords compared to adults, leading to weak passwords that are vulnerable to malicious attacks.

## BACKGROUND

Alphanumeric passwords are the most common security method, but it has been shown that children are better at remembering graphical information (images) compared to texts and numbers. It has been demonstrated that children have a high degree of visual capacity, they exhibit high fidelity and can remember a large set of images early in their lives.

## KIDSPIC

KidsPic is a way to facilitate the creation of passwords for children between the ages of 6 to 11 years for them to use on online applications, as well as improve on their creativity. It does so by displaying sets of images for the user to choose from, the order of the images selected will serve as the authentication method. Making a total of 1087 images to select, leading to a password composed of 7 images

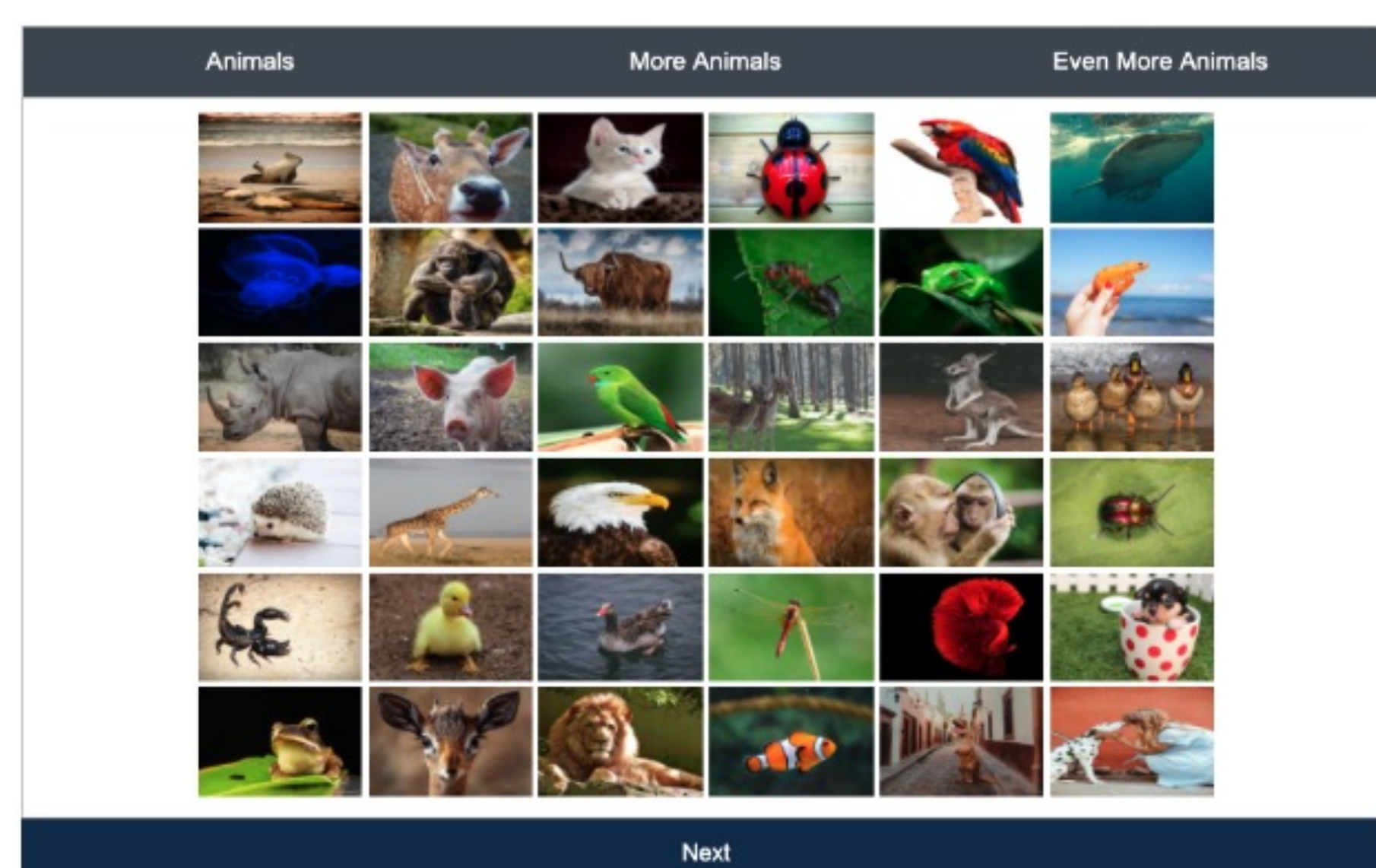


Figure 1.  
KidsPic<sub>1087</sub> image selection

Cat, you are successfully registered!

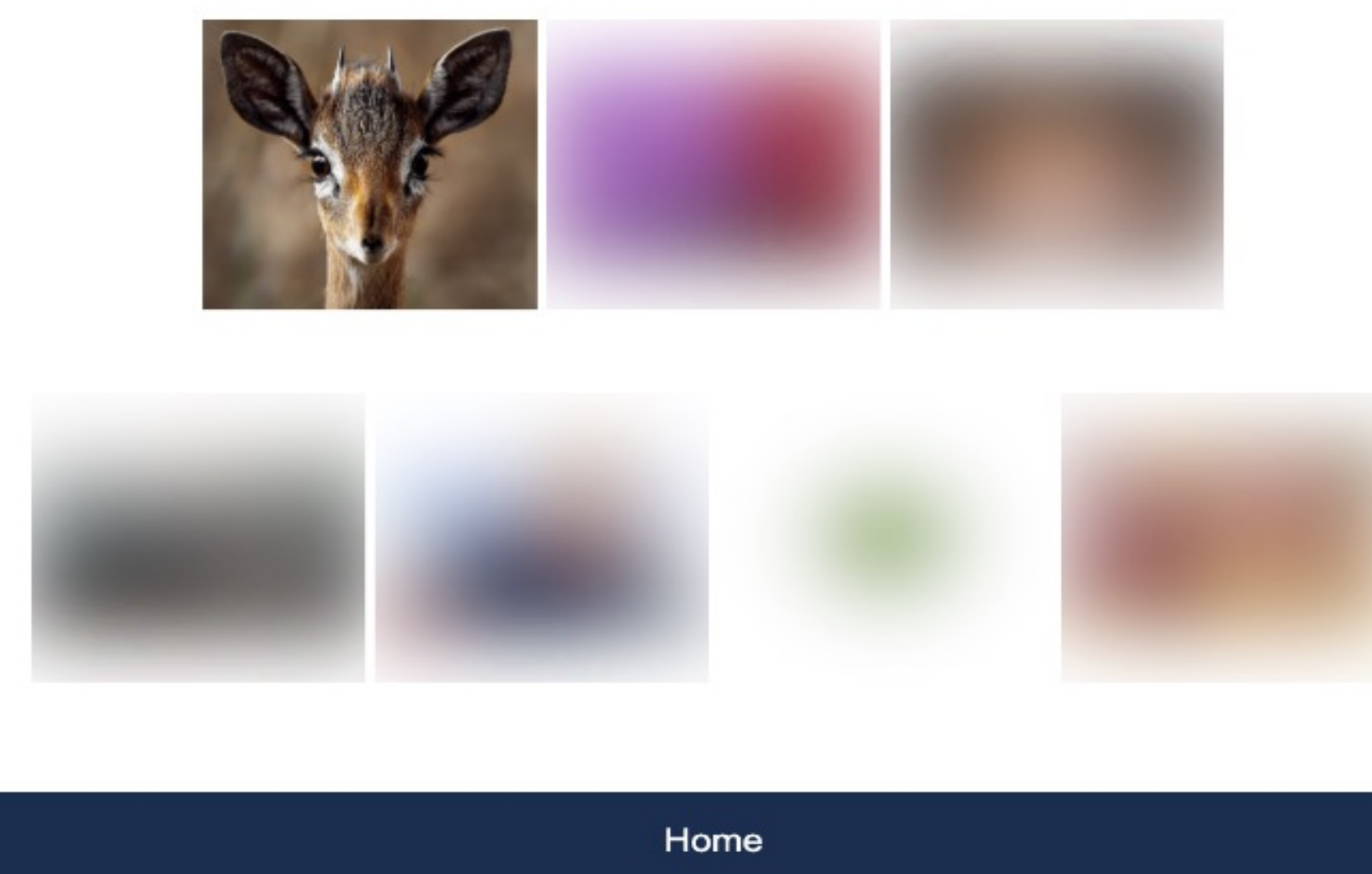


Figure 2.  
KidsPic<sub>1087</sub> password display

## OBJECTIVES

- Help make the password creation faster and easier to remember
- Increase accessibility
- Improve children's creativity by giving them alternative ways to make passwords
- Improve online security
- Teach children the importance of strong authentication methods

## APPROACH

- Adding audio elements when users are creating passwords to increase security
- Reduce shoulder surfing with the audio samples used in the password
- Reduce quantity of images displayed
- Encourage children to do distributed practices to improve memory
- When first creating their password, ask to enter password again
- Use minimal text to make it user friendly and easy for children to understand

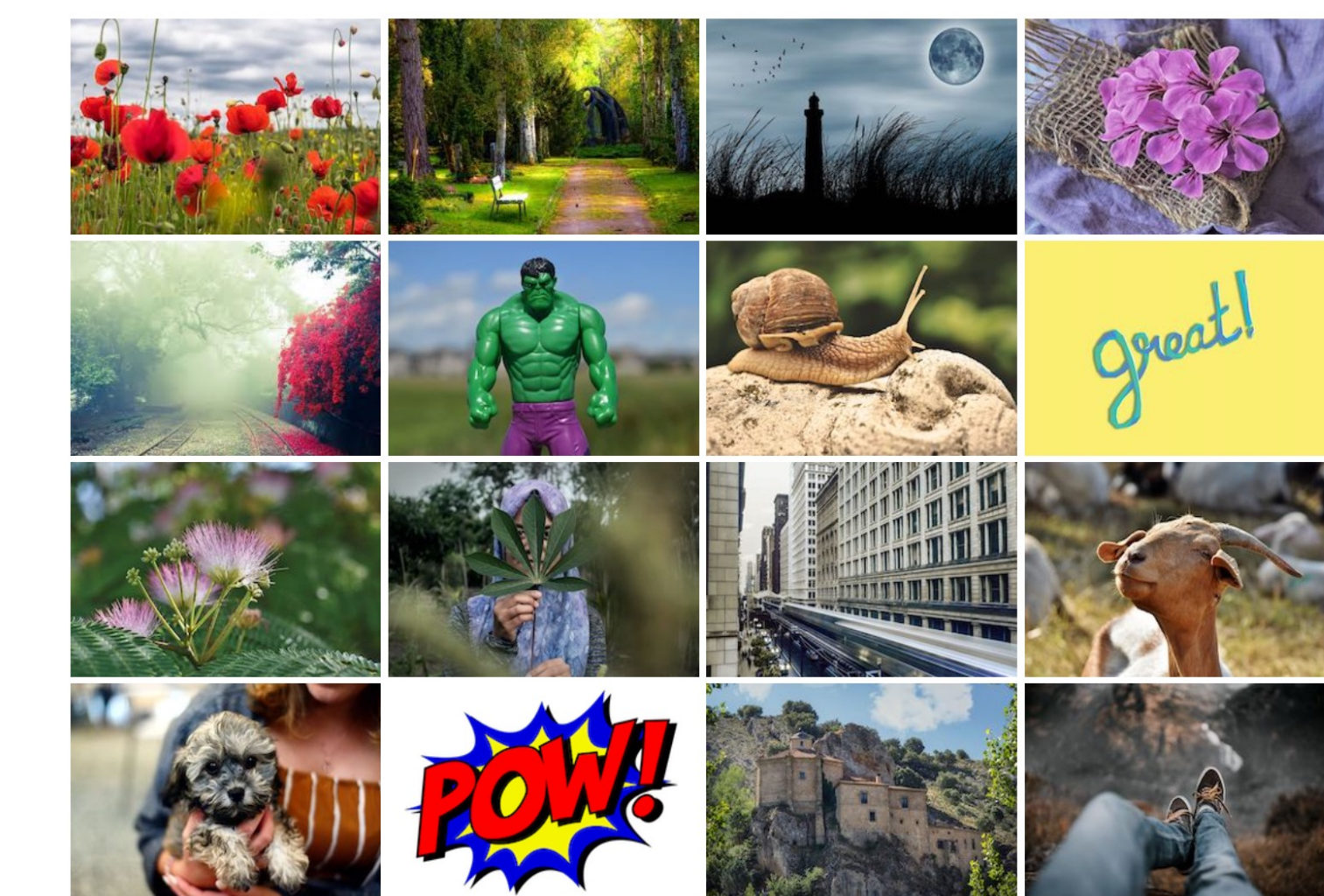


Figure 3.  
KidsPic with audio element concept

## EXPECTED RESULTS

This authentication method can improve children's memory and serve as an alternative to alphanumeric passwords in online environments. Using this as an alternative can lead to quicker password creations and protect against malicious attacks like shoulder surfing.

## REFERENCES

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