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A STUDY OF GRAPHICAL IMAGES FOR PASSWORD AUTHENTICATION SYSTEM

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ABSTRACT

Graphical images in password authentication systems offer a unique and user-friendly alternative to traditional alphanumeric passwords. Instead of typing text, users interact with visual elements, which can enhance security and usability. This approach involves presenting users with a series of images or a grid of visual patterns from which they select a specific combination to authenticate their identity. One popular graphical authentication method is the use of graphical password schemes, such as selecting a sequence of images or clicking on predefined locations within an image. This method leverages the human ability to recognize and remember visual patterns more easily than complex text passwords. By using graphical images, the authentication process can be more intuitive and less susceptible to certain types of attacks, such as keylogging or brute-force attacks, which are common with text-based passwords. Additionally, graphical passwords can incorporate features like spatial recognition or gesture-based interactions, further enhancing security. However, this method is not without its challenges. It requires careful design to avoid issues such as predictable patterns or easily guessable image sequences. Proper implementation must also ensure that the graphical images are diverse and not susceptible to replay attacks. Overall, graphical images offer a promising avenue for password authentication by combining visual memorability with enhanced security features, though they must be designed with robust security considerations to be truly effective.