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Review Paper Graphical Password Authentication Technique for Security

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Abstract: ***In modern age user authentication is a mandatory attribute in the area of data security. The characteristics of finding an individual generally based on a user id and password which is commonly used methodology for identifying users in system. Text based password is a general authentication method used from early times. There are numerous authentication systems like biometric, textual, graphical, smart card etc. Graphical password is an alternative to alphanumeric password which is tough to remember and generally forget by users as times passes. But in graphical password there is less probability to disremember password because people generally remember images more effortlessly than text based password. There are also fewer probabilities for intruder to take the graphical based password because hackers will not be capable to access the images uploaded by the user as password. Some graphical password schemes have been intended so far as it grows password usability and security. In this paper, we manner a wide survey of the current graphical password methods.***
Keywords: Graphical password, Text based password, usability, security, Attacks, Authentication

I. INTRODUCTION

Data security and user identity is common factor for information system. A password is formally called as stealthy authentication that is used to grant access to user. Its role to keep secret from unauthorized users and those desiring to increase access are verified and are approved.

Ancient security methods which are using from a long time afford minimum security with respect to authentication as compare to advance security techniques. Passwords are used from early times itself as the distinctive code to overcome unattendent access. Nowadays, passwords are used to bounds to access to guard computer operating systems, mobile phones, and others. A computer user may require passwords for many uses such as login to accessing e-mail from servers, personal accounts, retrieving files, networks, databases, web sites, etc. Normal passwords have some weaknesses such as hacked password; fail to recall password and stolen password. Conventional passwords have been used for verification but they are known to have complications in usability and safety. Recent days, another method such as graphical authorization is comfortable. Graphical password has been offered as different to alphanumeric password. Psychological readings have presented that individuals can remember images better than text. Images are normally easier to be recalled than alphabets and numbers, especially photos, which are even easier to be recalled than casual pictures.

II. LITERATURE SURVEY

1) In this survey paper, they discuss about graphical password authentication methods and exiting graphical password based methods. It fulfills both differing requirements i.e.it is easy to recall and it is tough to predict. Graphical password schemes offer a way of creating more human-friendly passwords. In this safety of the system is very extraordinary. Dictionary attacks and brute force search are infeasible. Passwords are easy to recall. Pictures are stress-free to recall than text strings. Then, they tried to survey on attack patterns and common attacks in graphical password authentication methods. Finally they have discussed different issues related to graphical password.

2) In this system they proposed scheme has various advantages such as it will be hard for attackers to guess the password because using feature of PCCP pattern formation attacks and HOTSPOTS will be removed using viewport & shuffle button. By adding feature of secret drawing to PCCP, attackers fails to know that there is use of secret drawing technique in between these images, unfortunately if they knows about secret drawing, they don't get exact idea that on which image secret has to be done .The one more advantage is that the message of correct password or incorrect password is displayed after the final click only, by this feature it will hard for attackers to find on which image their guess is correct or incorrect. So by this their proposed scheme will provide higher security in authentication

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3) In this study they analyzed the properties of a recognition-based graphical password which uses a set of single-object images as the authentication key. They identified factors which implicate source of bias in graphical password selection, based on user preferences. They additionally studied the effects that graphical password length on memo ability and observed the gender role of the participants as a factor for differences in the selection process. The research study in this paper examined the properties of the graphical password in more details and defined user preferences for single-object images based on category, color and shape. Based on the findings in this experiment there are several design implications for similar systems. First, the initial selection of images available in the authentication database has to be adapted to the preference of the users in order to increase the number of images that would be effectively selected as a graphical password. More importantly, the algorithm that selects decoy images to complete the authentication image set should not be strictly random. In order to lower the probability of a guessing attack the decoy selector algorithm should be based on a matrix that is partially aligned with the probabilities of a user selecting images from a specific category and/or with a specific color/shape. For future research, there are several different directions that can expand the results presented in this paper. Initially, we would like to clarify the implications that the users' favorite color might have a strong influence in object preference and evaluate other personal characteristics that affect graphical password selection. Furthermore, several studies with elderly participants conclude that there are no significant differences between men and women when it comes to color preference (Mather et al., 1971; Tate & Allen, 1985; Wijk et al., 1999), indicating that gender differences might dissipate with age. They would like to study how this effect translates in graphical password selection by evaluating selection criteria and differences among senior users. Finally, they would like to deploy this authentication mechanism on mobile devices and evaluate its usable security characteristics in a touch-based interaction environment.

4) In this system they concluded that a major advantage of proposed scheme is that it provides larger password space then the alphanumeric passwords. For Graphical passwords there is a rising interest is that they are better than the Text based passwords, while the important argument for graphical passwords are that people are better at memorizing graphical passwords than text-based passwords. Also it removes the pattern formation and hotspot attack since it provides the system suggestion. Also the proposed system removes the shoulder surfing attack.

III. SYSTEM DIAGRAM

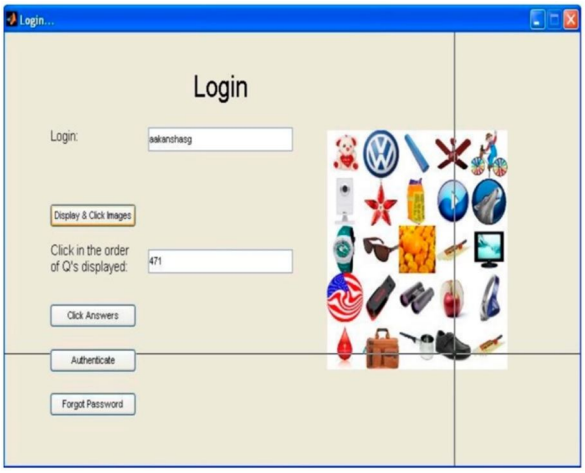


Fig: Graphical Password for Authentication

IV. CONCLUSION

In this survey paper, we discuss about graphical password authentication methods and exiting graphical password based methods based on different survey papers. It fulfills both differing requirements i.e.it is easy to recall and it is tough to predict. Graphical password schemes offer a way of creating more human-friendly passwords. Pictures are stress-free to recall than text strings. Then, we tried to survey on attack patterns and common attacks in graphical password authentication methods. Finally we have discussed different issues related to graphical password.

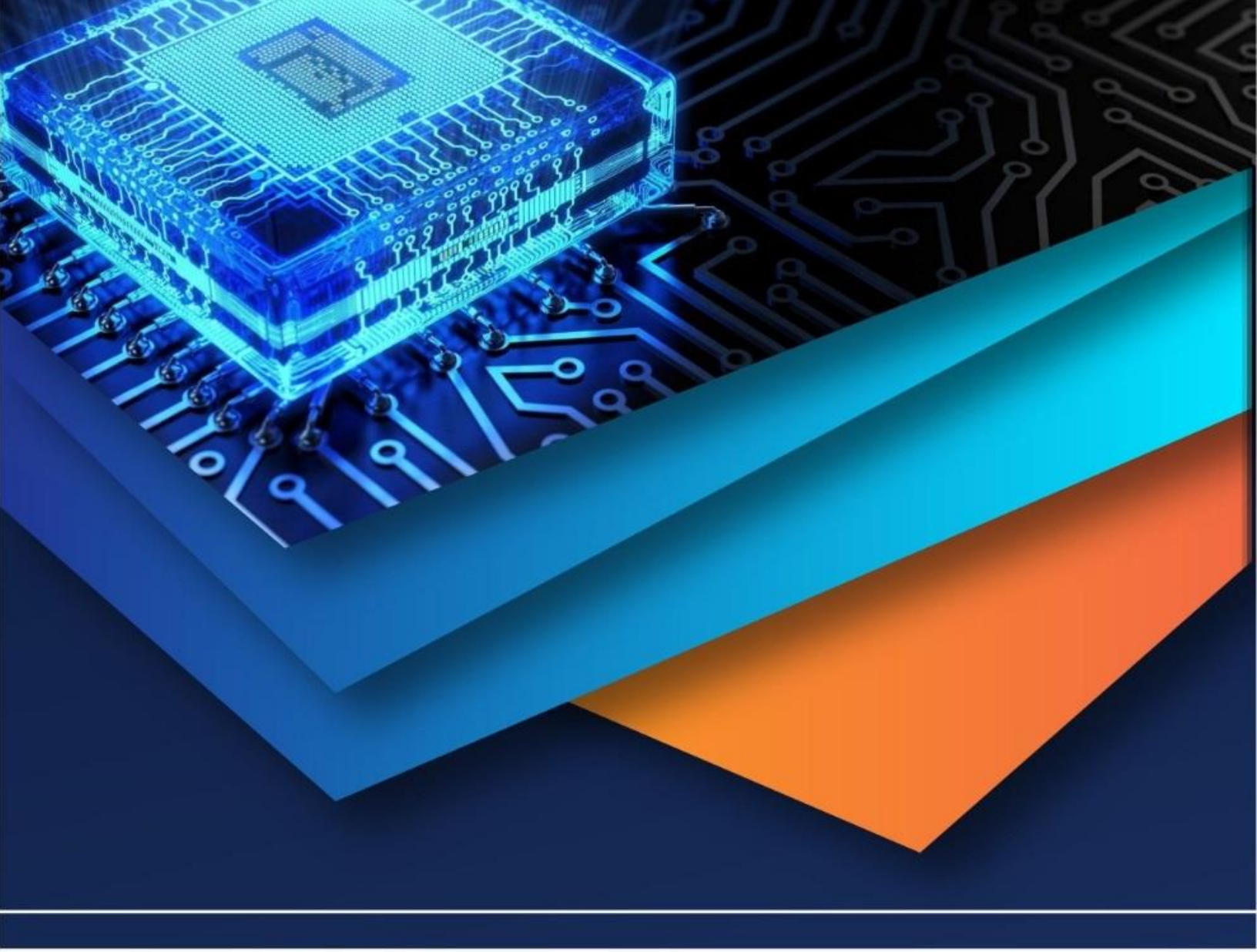
V. ACKNOWLEDGEMENT

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REFERENCES

[1] Sharayu S.Ganorkar1 ,Prof. H. V. Vyawahare 2 " Review Paper On Graphical Password Authentication Techniques " Volume 5, Issue 03, March -2018
[2] P. R. Devale Shrikala, M. Deshukh and Anil B. Pawar, "Persuasive Cued Click Points with Click Draw Based Graphical Password Scheme", International Journal of Soft Computing and Engineering, Vol.3, Issue-2 May 2013.
[3] R. Dhamija and A. Perrig, "Deja Vu: A User Study Using Images for Authentication," in Proceedings of 9 USENIX Security Symposiums, 2000.
[4] S. Chiasson, P. van Oorschot, and R. Biddle, "Graphical Password Authentication Using Cued Click Points," Proc. European Symp. Research in Computer Security (ESORICS), pp. 359-374, Sept. 2007.
[5] J. Yan, A. Blackwell, R. Anderson, and A. Grant, "The Memorability and Security of Passwords," Security and Usability: Designing Secure Systems That People Can Use, L. Cranor and S. Garfinkel, eds., ch. 7, pp. 129-142, O'Reilly Media, 2005.
[6] L. O'Gorman, "Comparing Passwords, Tokens, and Biometrics for User Authentication," Proc. IEEE, vol. 91, no. 12, pp. 2019 2020, Dec. 2003.
[7] A. Jain, A. Ross, and S. Pankanti, "Biometrics: A Tool for Information Security," IEEE Trans. Information Forensics and Security (TIFS), vol. 1, no. 2, pp. 125-143, June 2006.
[8] G. E. Blonder, "Graphical passwords," in Lucent Technologies, Inc., Murray Hill, NJ, U. S. Patent, Ed. United States, 1996.
[9] S. Wiedenbeck, J. Waters, J. Birget, A. Brodskiy, and N. Memon, "PassPoints: Design and Longitudinal Evaluation of a Graphical Password System," Int'l J. Human-Computer Studies, vol. 63, nos. 1/2, pp. 102-127, 2005.
[10] S. Wiedenbeck, J. Waters, J. Birget, A. Brodskiy, and N. Memon, "Authentication Using Graphical Passwords: Effects of Tolerance and Image Choice," Proc. First Symp. Usable Privacy and Security (SOUPS), July 2005

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