

Graphical Based Registration and Authentication System

Dr. Sarita Kadian

Dept. of Computer Science, Bharati College, University of Delhi, India

Abstract

A user authentication is most important factor in network security. Therefore, passwords are used for high level authentication of computers and information security. Graphical password method is used to remove the complication which is coming in to security of the information. Graphical passwords are used more in those days because our mind can easily remember pictures then text. We introduce a Graphical based password authentication in this paper, its helps to exterminate uproar the attacks like dictionary attack, brute force attack. Images are easy to recall in analogous to text. Graphical password hard to guess and not easy to crack password, it is easy associated with the users.

Keywords

Authentication, Password, Login, Graphics

I. Introduction

Authentication is the preexistent step for securing the resources and the information security. Authentication is the course of action of proof that he is original or the right person of using the resources. It is replenish the path to control the system and user responsibility. Users moves towards to take password which can be easily guessed, if a password hard to guess means it is hard to remember. To solve this problem, we introduce authentication methods that use pictures as password. It is very important tool in information security those days. It is easy to retain and implement for those user who are not able to retain text password.

Graphical password authentication provides goods result as alternative to traditional alphanumeric password authentication; it is easy to remember than text. The Graphical passwords were originally described by Greg Blonder in 1992. The user has to select image related to the question and make the password. In graphical password authentication user select images from database, in a specific order, presented in a Graphical User Interface (GUI). For this reason, the graphical password approach is sometimes called graphical user authentication (GUA).(1)

A. Technique of Graphical Authentication:

Graphical authentication are based on

1. Recognition Based Authentication

Recognition based authentication are D'ej'a Vu (5) and Passfaces (6). D'ej'a Vu uses random images whereas Passfaces uses pictures of faces. The user must recognize previously images which are select at the time of registration for authentication password. Result from a user study (5) showed that 90% of successful authenticated user using graphical authentication.

2. Pure recall Based Authentication

Pure recall- based graphical password scheme is DAS(Draw-A-Secret)(7), where user can draw a unique password on a 2D grid. In Pure recall –based system users must be to redrawing their password without being given any reminder, clue or intimation. It is more secure than recognition based method.

3. Cued Recall Based Authentication

Passlogix(8) and PassPoint are both cued recall-based graphical password authentication methods. In this method, framework of clue that help the users to reproduce their password. (1)

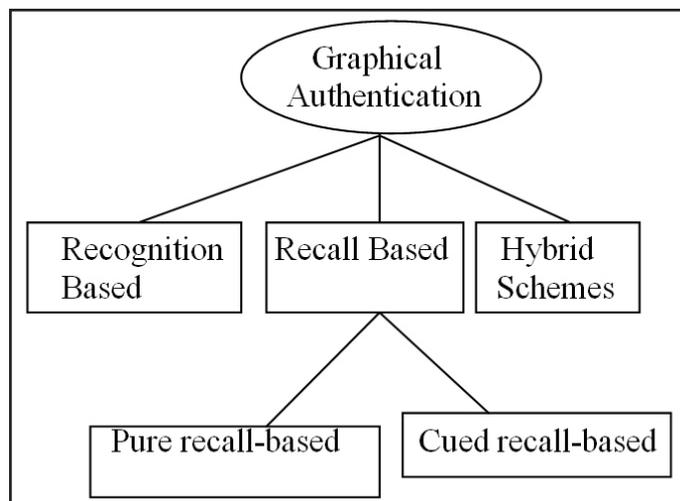


Fig. 1:

4. Hybrid Schemes

Hybrid schemes is the combination of recognition based and recall based scheme. It is more convenient for the users than others.

II. Proposed Work

A. Registration Phase

During registration phase, we present 3x3 grid consisting of pictures relating with their 50 questions representations as shown in fig. 1, if the user doesn't have the user ID and password then he need to register him-self or create a new user id. In this, user can enter unique ID and select an image of each question from the database as a password. It is compulsory to give answer of each question at the time of registration. Once the user has submitted these answer in the form of images in database of the system after that, a confirmation message is displayed about successful completion of registration.

Example of few questions:

1. What is your favourite flower?
2. What is your favourite vegetable?
3. What is your favourite fruit?
4. What is your favourite tourist place in the world?
5. What is your favourite animal?
6. What is your favourite actor?
7. What is your favourite actress?
8. What is your favourite sweet?
9. What is your favourite colour?

Rest of others are like above questions

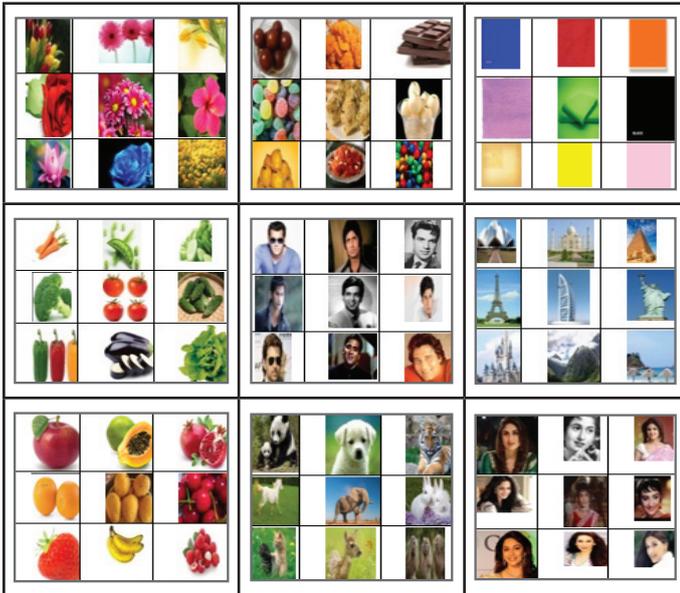


Fig. 2:

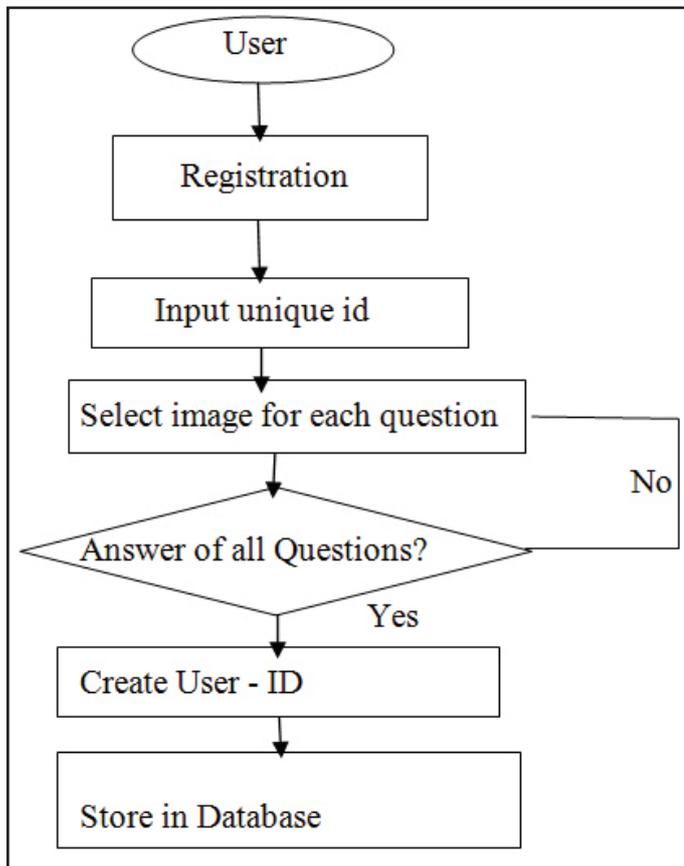


Fig. 3:

B. Login Phase

In login phase, User open the system, he must have to enter the unique id which is entered in the registration phase. System asks any two questions from the registered database and user has to give same answers that were selected during registration time. User is authenticated to use the information or access the system. It will be possible only, when entered the password image is matched with database image. If password is not matched then user can try again maximum three times, but there is system ask question randomly as login every time. When the user entered the wrong password to open the system, he attempt only three times after that user id is locked for 24 hours. In case, user forgets the

password of his account he has to choose the given option “Forget Password”. After clicking on this option security question will be displayed on the screen and the user has to give the answer. After completion of this process correctly the password is be sent on the user mail id.

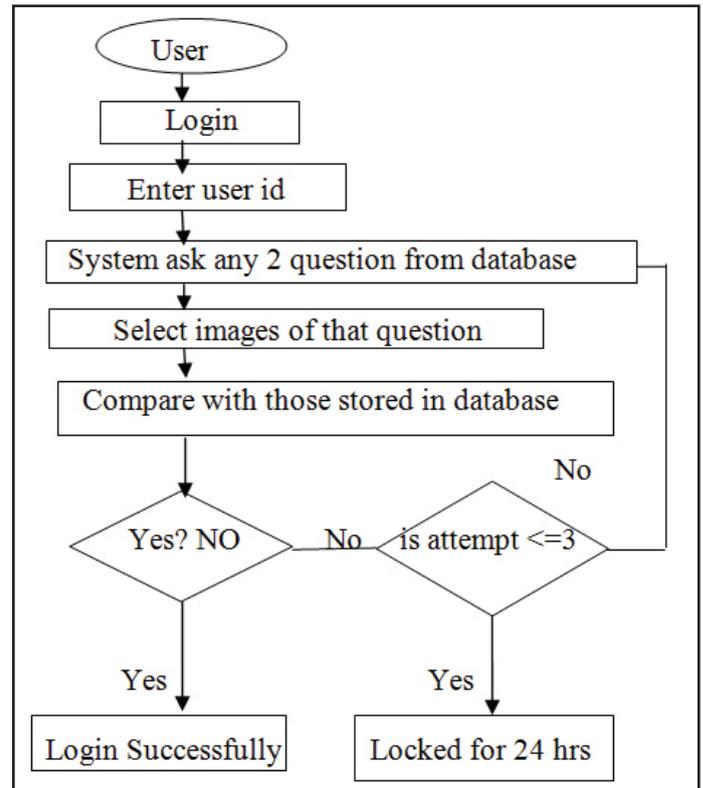


Fig. 4:

III. Conclusion

In authentication scheme, various methods and techniques are available but each methods has own advantages and weakness. In this paper, basically we focused on graphical password uses instead of text-based password which is more secure system. Graphical based authentication is more useful than the other authentication system and very easy to use. Graphical based authentication has avoided the brute force attack. Due to use of graphical based password, we secure our authentication system and more powerful.

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Dr. Sarita Kadian, Working as "Assistant Professor", Department of Computer Science & Applications, Bharati College, University of Delhi, India from November 2006 to till date.

Academic Qualification:

- Ph.D. (Computer Science) from Singhanian University, Pachari Bari, Rajasthan, India in Year 2012 (Thesis Submitted in Year 2011).
Topic: Evaluating And Developing Image Based Authentication Systems
- M. Phil (Computer Science)

from CDLU (Sirsa), India in Year 2007

- M.Sc. (Computer Science) specialization in Visual Basic with first class from Maha Rishi Dayanand University, Rohtak, Haryana, India in Year 2004.

Publications

- A Research Survey on Image Based Authentication System and proposed new scheme
- New Scheme based on Image password Authentication
- A new Mobile Phone Authentication Scheme based on Graphics
- A Research Survey on Authentication
- A Review study of various face recognition methods

Conference

- International Conference on Big Data Analytics 2012, New Delhi, India
- International Conference on History And Development Of Mathematical Sciences And Symposium On Nonlinear Analysis (ICHSDMS-2012)

Papers Taught

Information Security, Visual Basic, HTML (Hyper Text Markup Language), Operating System, System Administration, Multimedia (Flash 8).