SOFTWARE PUZZLE TO SECURE THE BANK ACCOUNTS

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ABSTRACT:

This world is vitally depends on passwords for protecting their personal and other vital information. Textual Password are the most common method used for authentication. But textual passwords are vulnerable to eves dropping, dictionary attacks, social engineering and shoulder surfing. To overcome this drawbacks a method of Graphical Password is introduced which can be consider as an alternative technique for Textual Password. In this paper Software Puzzle techniques called BYOP("Bring Your Own Picture") is used to secure the passwords. This method makes use of the sequence of image which are to be selected within the time limit. If the system is being hacked the user will directly get the notification from the database. This process also utilizes the user and can use their own image as their password to secure the account. These systems have been shown to improve memorability without sacrificing input time or error rates, and also maintaining high resistance. This BYOP technique increase the security as well as reducing the users memory load on remembering the lengthy password. The implementation is done using NetBeans

KEYWORD: Graphical password,Authentication security,BYOP technique,time limit.

INTRODUCTION:

Network security consists of the policies and practices adopted to prevent and monitor unauthorized access, misuse, modification, or denial of a computer network and network-accessible resources. Network security involves the authorization of access to data in a network, which is controlled by the network administrator. Users choose or are assigned an ID and password or other authenticating information that allows them access to information and programs within their authority. Network security covers a variety of computer networks, both public and private, that are used in everyday jobs; conducting transactions and communications among businesses, government agencies and individuals. In this Graphical passwords are used. To design and development CaPRP to address a number of security problems altogether, such as online guessing attacks, relay attacks. It offers reasonable security and usability and appears to fit well with some practical applications for improving online security. Many security primitives are based on hard mathematical problems. Using hard AI problems for security is emerging as an exciting new paradigm, but has been underexplored. In this paper, we present a new security primitive based on hard AI problems, namely, a novel family of graphical password systems built on top of Puzzle technology, which we call Puzzle as graphical passwords (CaPRP). CaPRP is both a Puzzle and a graphical password scheme

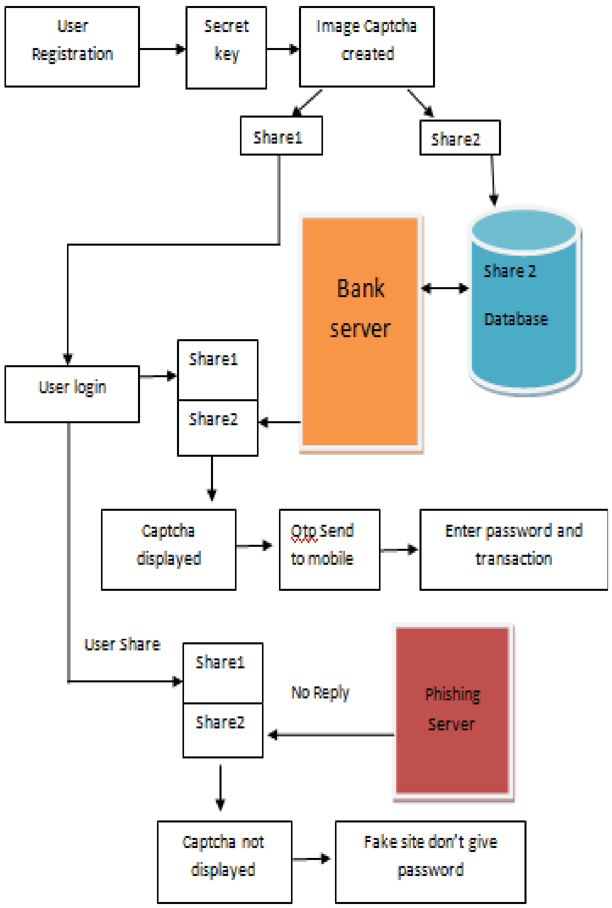
RELATED WORKS:

[1]Two way authentication, cyber-criminal have been benefited from online banking system regardless of extensive research of financial cyber-security. To better be prepared for what the future might bring, we try to predict how hacking tool might evolve. So that they introduced browser rootkit which perform automated attack on client's computer.**[2]**They generated the One Time Password is valid for short user defined period of time and is generated by factor that are unique to both, the user and mobile device itself, SMS based mechanism also implemented back up purpose.**[3]** graphical password schemes have been proposed, motivated by the promise improved password memorability and thus usability, while at the same time improving strength against guessing attacks. Like text passwords, graphical passwords are knowledge- based authentication mechanisms where users enter a shared secret as evidence of their identity. However, where text passwords involve alphanumeric and/or special keyboard characters, the idea behind graphical passwords is to leverage man memory for visual information.**[4]** The concise overview offered by Table I allows us to see high level patterns that might otherwise be missed. We could at this stage draw a variety of conclusions and note, for example, that graphical and cognitive schemes offer only minor improvements over passwords and thus have little hope of displacing them. Or we could note that most of the schemes with substantial improvements in both usability and security can be seen as incarnations of Single-Sign- On (including in this broad definition not only federated schemes but also "local SSO" systems [26] such as password managers or Pico). Having said that, we expect the longterm scientific value of our contribution will lie not as much in the raw data distilled herein, as in the methodology by which it was assembled.**[5]**In this they proposed a CCP technique(cued click point)in which user click one point per image for a sequence of images, so that the next image is based on previous click.The performance was good in speed,accuracy and number of errors.Users prepare that CCP to Passpoints,saying that selecting and remembering one image is easier than selecting the group of images.**[6]**They proposed a simple graphical password technique,they selected single particular image and then click on the image,user type the particular detail of the image.

PROPOSED SYSTEM:

We present a new security primitive based on hard AI problems, namely, a novel family of graphical password systems built on top of Puzzle technology,which we call Puzzle as graphical passwords (CaPRP). CaPRP is both a Puzzle and a graphical password scheme. CaPRP addresses a number of security problems altogether, such as online guessing attacks, relay attacks, and, if combined withdual-view technologies, shoulder-surfing attacks. Notably, a CaPRP password can be found only probabilistically by automatic online guessing attacks even if the password is in the search set. CaPRP also offers a novel approach to address the well-known image hotspot problem in popular graphical password systems, such as PassPoints, that often leads to weak password choices. CaPRP is not a panacea, but it offers reasonable security and usability and appears to fit well with some practical applications for improving online security**.**We present exemplary CaPRPs built on both text Puzzle and image-recognition Puzzle. One of them is a text CaPRP wherein a password is a sequence of characters like a text password, but entered by clicking the right character sequence on CaPRP images. CaPRP offers protection against online dictionary attacks on passwords, which have been for long time a major security threat for various online services. This threat is widespread and considered as a top cyber security risk.

ARCHITECTUREDIAGRAM:



(fig 1.1 architecture diagram)

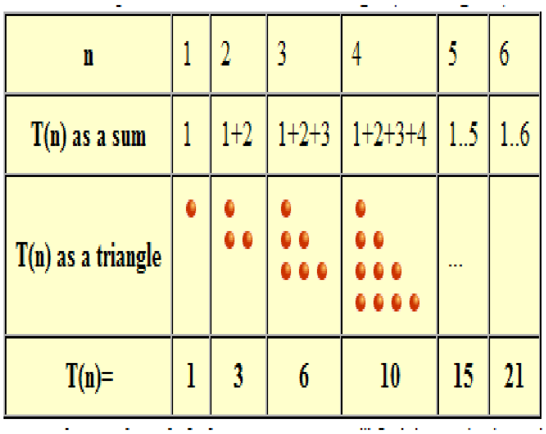
In this user first enter they name and choose the selected of images as password.The particular image is already stored in databases.The databases check the images which has been send by user,if the match is not found means then the alarm signal is send to the user.It will evolve the OTP(One Time Password)technique.The total process is takes the particular time,if the time extend means then alarm signal is send to the user.

BYOP TECHNIQUES:

1. Puzzle Login

The security and usability problems in text-based Login And password schemes have resulted in the development of Puzzle password schemes as a possible alternative.

We can visualize the sum 1+2+3+...+n as a triangle of character . Numbers which have such a pattern of character are called Triangle (or triangular) numbers, written T(n), the sum of the integers from 1 to n time using puzzle login method.



n	1	2	3	4	5	6
T(n) as a sum	1	1+2	1+2+3	1+2+3+4	1..5	1..6
T(n) as a triangle	●	● ● ●	● ● ● ● ● ●	● ● ● ● ● ● ● ● ● ●	...	
T(n)=	1	3	6	10	15	21

(fig 2.1 Visualize the sum of numbers as a triangle of character)

2. Random Captcha Selection

A CAPTCHA is a test that is used to separate humans and machines CAPTCHA stands for "Completely Automated Turing test to tell Computers and

Humans Apart." It is normally an image test or a simple mathematics problem which a human can read or solve, but a computer cannot. It is made to stop computer hackers from using a program to automatically set up hundreds of accounts, such as email accounts. It is named after mathematician.

Each individual is chosen randomly and entirely by chance, such that each individual has the same probability of being chosen at any stage during the sampling process, and each subset of n individuals has the same probability of being chosen for the sample as any other subset of n individuals This process and technique is known as simple random sampling, and should not be confused with systematic random sampling. A simple random sample is an unbiased surveying technique.

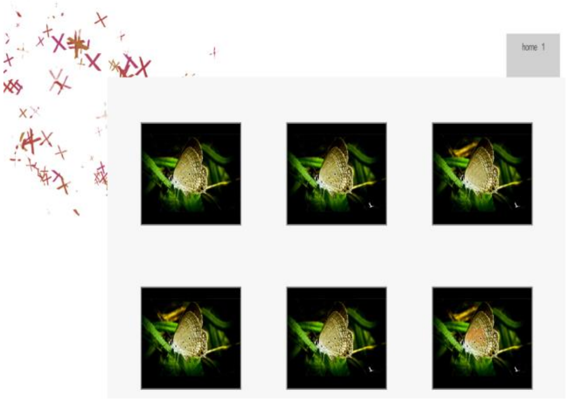
3. Image Puzzle Solving

we study how to prevent DoS/DDoSattackers from inflating their puzzle-solving capabilities. To this end, we introduce a new client puzzle referred to as software puzzle. Unlike the existing client puzzle schemes, which publish their puzzle algorithms in advance, a puzzle algorithm in the present software puzzle scheme is randomly generated only after a client request is received at the server side and the algorithm is generated such that: 1) an attacker is unable to prepare an implementation to solve the puzzle in advance and 2) the attacker needs considerable effort in translating a central processing unit puzzle software to its functionally equivalent GPU version such that the translation cannot be done in real time. Moreover, we show how to implement software puzzle in the generic server-browser model.

4. OTP Generation

A one-time password (OTP) is a password that is valid for only one login session or transaction, on a computer system or other digital device. OTPs avoid a number of shortcomings that are associated with traditional (static) password-based authentication; a number of implementations also incorporate two factor authentication by ensuring that the one-time password requires access to something a person has (such as a small keyring fob device with the OTP calculator built into it, or a smartcard or specific cellphone) as well as something a person knows (such as a PIN).

RESULTS:



(fig3.1OutputforPuzzleLogic)

CONCLUSION:

The software puzzle may be built upon a data puzzle,it can be integrated with any existing server-side data puzzle scheme, and easily deployed as the present client puzzle schemes do. CAPTHCHA is widely research field act as internet rectifier to secure web applications by discern human from bots. CAPTCHA presented which will improve resistance of math calculus CAPTCHA. By use, Boolean operations and expressions instead of trigonometric and differential function which will help in reduce the complexity of CAPTCHA and help to achieve better usability and security as compared to math calculus CAPTCHA. Boolean CAPTCHA can be easily use by educated user. No need of technical skill, by using intellectual

mind to solve this CAPTCHA and help to reduce time complexity.

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