



SafeSurfing- A Graphical Authentication

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Abstract-

SafeSurfing is a website which will help to user to make sure that they are using the web sites very securely. Technologies will be used to implement this project will be Python and Web Technologies. Graphical password is one of technique for authentication of System security.

In today's world, digital/computer security is one of the most important things that protect users from their online activities. Shoulder-surfing is one threat where criminals can steal passwords by watching directly or recording authentication sessions.

There are several ways available for this authentication, the most current and simple of which is the Graphical word fashion. So, we suggest a new fashion to combat this problem. We've developed two generalities to combat shoulder surfing attacks. First, the stoner must register if the enrollment doesn't live. Second, you must log in with a valid stoner ID and word. Third, stoner has to cross image- grounded, Pattern-ground authentication where stoner can choose their word and this system have advanced chances to neutralize each other. stoner should choose word according to the enrollment word, it must to match at login time. In color base authentication, there should be several color base watchwords and depending on the color, stoner need to flash back the word sequence. And it's like three- factor authentication.

Key words: Python, Web tools

Introduction

SafeSurfing is a website which will help to user to make sure that they are using the web sites very securely. Technologies will be used to implement this project will be Python and Web Technologies.

Graphical Word is one of fashion for authentication of System security. Now days digital/ computer security is most important effects for defended stoner. And Shoulder- surfing is a one of the pitfalls where a miscreant can steal a word by direct observation or by recording the authentication session.

There are several ways available for this authentication, the most current and simple of which is the Graphical word fashion. So, we suggest a new fashion to combat this problem. We've developed two generalities to combat shoulder surfing attacks. First, the stoner must register if the enrollment doesn't live. Second, you must log in with a valid stoner ID and word. Third, stoner has to cross image- grounded, Pattern- grounded authentication where stoner can choose their word and this system have advanced chances to neutralize each other. stoner should choose word according to the enrollment word, it must to match at login time. In color base authentication, there should be several color base watchwords and depending on the color, stoner need to flash back the word sequence. And it's like three- factor authentication.

Literature Review

In this generation, probing the Internet has come a part of our diurnal routine. With it, we can do numerous effects, similar as shopping for clothes, making musketeers, and getting information. We calculate on the Internet to break problems in our diurnal life. For any kind of guidance or understanding or information, probing internet is an integral part these days and to do so it also must come safe at the same time. So that the druggies can suds internet without any stress continue their day to day life they need a reliable authentication system which at the same time makes it delicate for any one to crack it. Safesurfing will give stoner with safe and unique set of pictorial watchwords. With the colorful options a stoner can fluently choose any of them and continue probing internet debonair. SafeSurfing is a website which will help to stoner to make sure that they're using the web spots veritably securely. This pictorial watchwords are delicate to guess and thus are hard to crack and provides better authentication to stoner. likewise this type of watchwords are also easy to flash back and no need to write it down anywhere in order to flash back it.

Solution Proposed

SafeSurfing is a Graphical Password Authentication system that uses some combination of graphical images replacing the regular passwords. Safesurfing uses graphical password authentication method in which user first have to provide username and email along with the selection of patterns as a password.

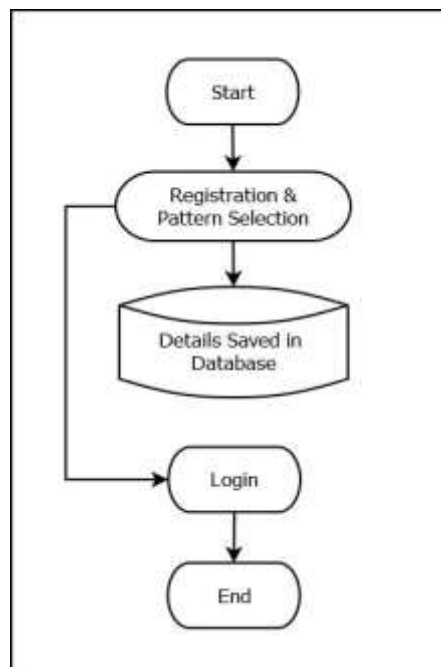
At the time of login, this pattern password along with username is checked and then user gets status as true or false accordingly. This method of authentication provides better security to user since it is nearly impossible for anyone to guess or crack graphical password as compares to simple alphanumeric password.

Authentication is the first line of defense against compromising confidentiality and integrity. Alphanumeric usernames and watchwords are the most common system of computer authentication. This system has numerous downsides. generally people use watchwords that can be fluently guessed, so that it doesn't becomes hard to flash back .

Hence to encounter this problem, inquiries have developed graphical word authentication styles that use filmland as watchwords. Graphical watchwords are an volition to textbook- grounded watchwords where stoner is asked to recall an image or corridor of an image rather of a word. We're farther agitating new and more secure graphical word system called pass points. In pass points system druggies can produce numerous points click sequence on a background image. The graphical word is new fashion which is more secure than textbook- grounded watchwords. In graphical watchwords, sequence of clicks is generated to decide the word. The click events are performed on same image or different image. Or druggies can also elect sequence of images. In this system there are four main modules videlicet, Image submission, Image word Point Mark, Pixel Tolerance computation and Authentication. druggies can submit image also he she can click on the image to produce a word also the system pixel forbearance calculates each pixel around. And also while authenticating stoner needs to click within the forbearance in the correctsequences.

SafeSurfing is a website which will help to stoner to make sure that they're using the web spots veritablysecurely.Graphical word is one of fashion for authentication of Systemsecurity.Safesurfing uses graphical word authentication system.

Block diagram



Technology Used

Python:

Python is a high- position, general- purpose programming language. Its design gospel emphasizes law readability with the use of significant indentation. Python is stoutly- compartmented and scrap- collected. It supports multiple programming paradigms, including structured, object- acquainted and functional programming

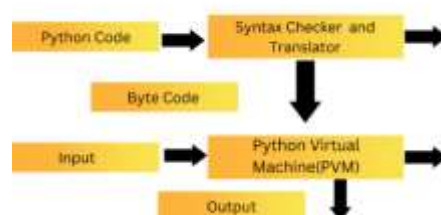


Figure: Python Architecture

JavaScript

JavaScript is a dynamic computer programming language. It's featherlight and most generally used as a part of web runners, whose executions allow customer- side script to interact with the stoner and make dynamic runners. It's an interpreted programming language with object- acquainted capabilities. A cure is a substance or procedure that ends a medical condition, similar as a drug, a surgical operation, a change in life or indeed a philosophical mindset that helps end a person's mournings; or the state of being healed, or cured.



Figure: JavaScript

Study of Existing System

Presently, there's no platform available which provides this type of graphical authentication free and have a stoner friendly interface. Due to this, druggies set up it hard to use that platforms since their stoner interface is complicated. With result to this problems, we're developing Safesurfing which have simple stoner interface which makes it easy for it's druggies to use and also Safesurfing is free for the end stoner similar that anyone can use its for authentication purpose.

There are also some platforms which can not be used on mobile phones, but Safesuring is responsive and can be used bias with different screen configurations. Some being platforms are easy to interact but their authentication results aren't accurate but in Safesurfing we've tried to give accurate results.

No.	Existing system/website/software	Features	Disadvantages	Limitations/Gaps
1.	https://github.com/rohanpillai20/Web-Based-Graphical-Password-Authentication-System	Can be used for images	Not User Friendly Interface	Not accurate results
2.	https://nevonprojects.com/graphical-password-authentication-system-by-using-pass-point-scheme/	Can be used for colors as well as for images	Not Free	Not for mobile phones

Our Findings

At the time of demand analysis for Safesurfing we set up that there are numerous security issues with internet surfing currently, which makes safesurfing an option to consider while using internet. We've created this app in such a way that stoner can fluently use it and can pierce it free of any cost. Safesurfing will use graphical word authentication for stoner which makes secure for druggies to internet surfing. utmost of the authentication system uses nascence-numeric word grounded authentication which makes it easy to guess word and can be cracked fluently and thus this systems may not give better authentication to stoner. That is why we've used graphical word grounded authentication which isn't easy to crack and can give better authentication while internet surfing.

Limitation of Work

- i. Registration and login take too long.
- ii. It requires more storage space because of images.

CONCLUSION

In current scripts, it's veritably important and critical content to keep stoner's data safe. SafeSurfing will give further secure and safe way to druggies for registering on any website or webapp. SafeSurfing will use Graphical Authentication fashion for watchwords which include patterns, colors and image representation. Python and web development technologies will be used to apply SafeSurfing.

Currently, graphical word has not been extensively used in practical. utmost of the graphical word authentication schemes are only bandied in laboratory. In this paper, some typical graphical word authentication schemes are introduced, and the security of them are anatomized according to its estimate criterions.

One conclusion is drawn that the memorability and security of graphical word are better than that of textbook- grounded word. In addition, it's shown that the graphical word scheme has better resistance to major word attacks than others.

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