



Graphical Password Authentication

- WORK IN PROGRESS

Idea/Approach Details

Organization Name: All India Council for Technical Education(AICTE).

Problem Statement: Graphical Password Authentication

Team Name: Work in Progress

Team Leader Name: Hareesh R

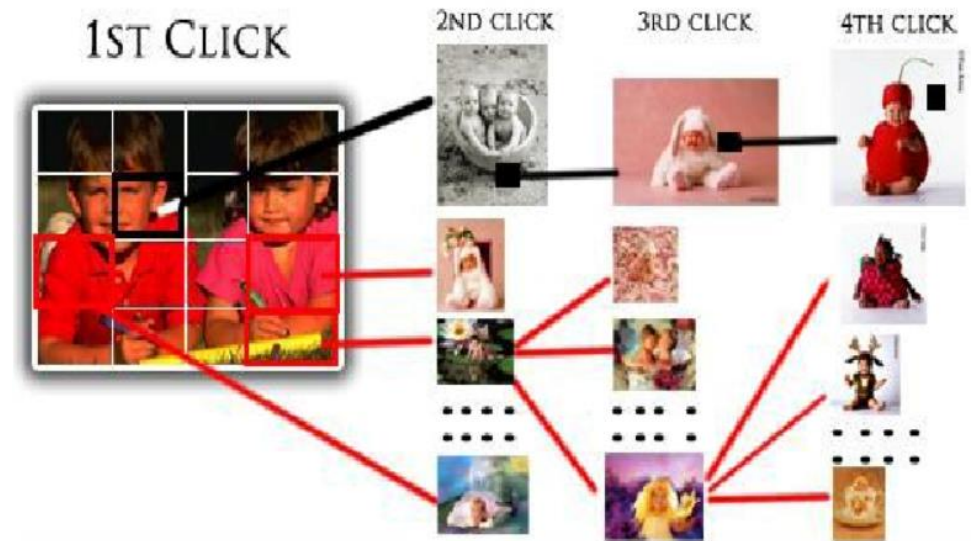
College Code: 1117

Problem Statement

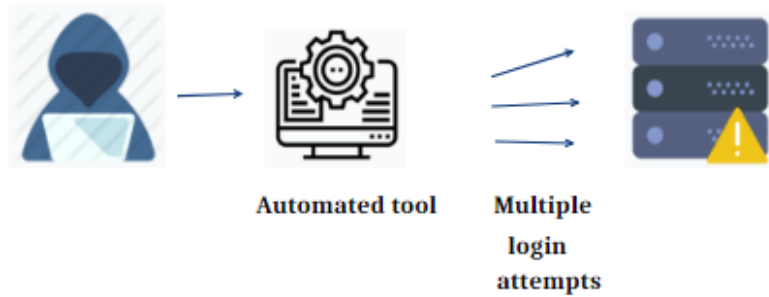
- Passwords are unavoidable today on any platform, on possibly any website. But to remember so difficult passwords and that too on numerous websites seems daunting.
- So, to provide some flexibility we can provide users a graphical password authentication system where instead of creating a password a user has to select graphical objects in a particular order to keep it as their password.
- In this method, the user is required to select some images in a specific pattern, next time the user tries to log in, the images would have been shuffled, but the user will be required to follow the same pattern which was used initially.
- Every time the user will have to use the same sequence while the images are placed in different ways.
- This type of authentication is difficult to break since neither brute force nor dictionary attacks could breach it.

Solution

In this method, the user is required to select some images in a specific pattern. Next time the user tries to log in, the images would have been shuffled, but the user will be required to follow the same pattern which was used initially. Every time the user will have to use the same sequence while the images are placed in different ways. This type of authentication is difficult to break since neither brute force nor dictionary attacks could breach it.



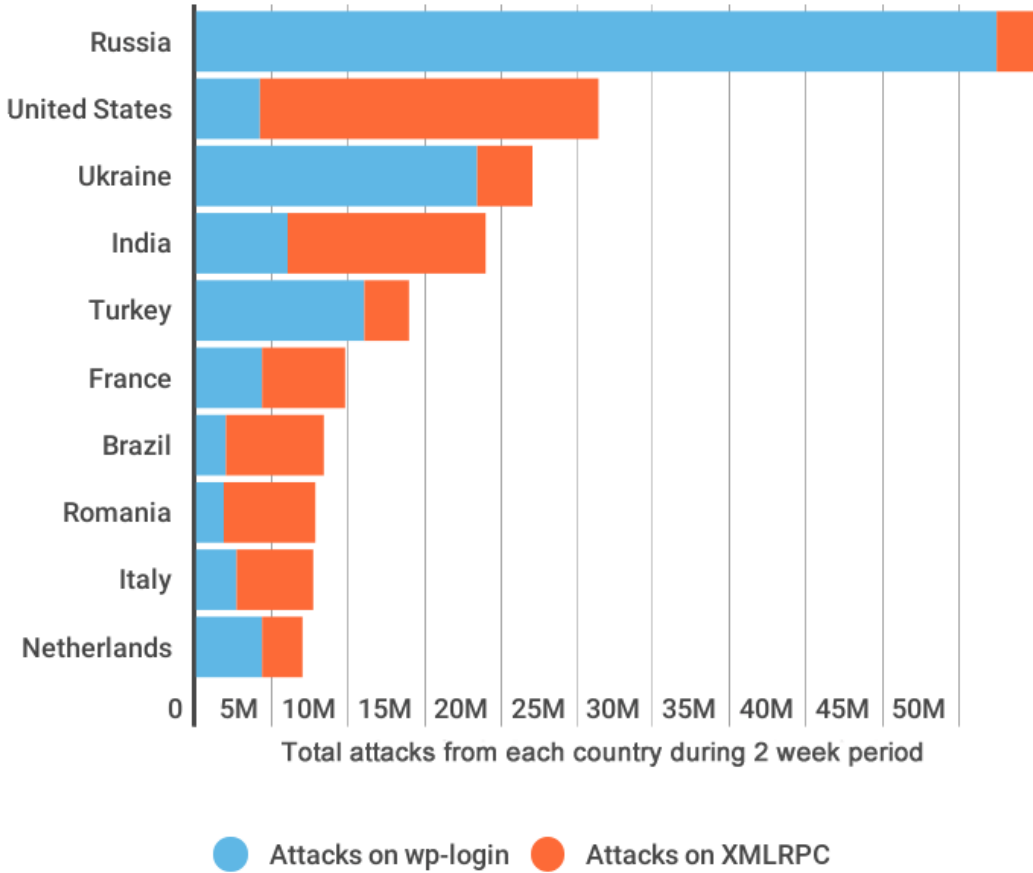
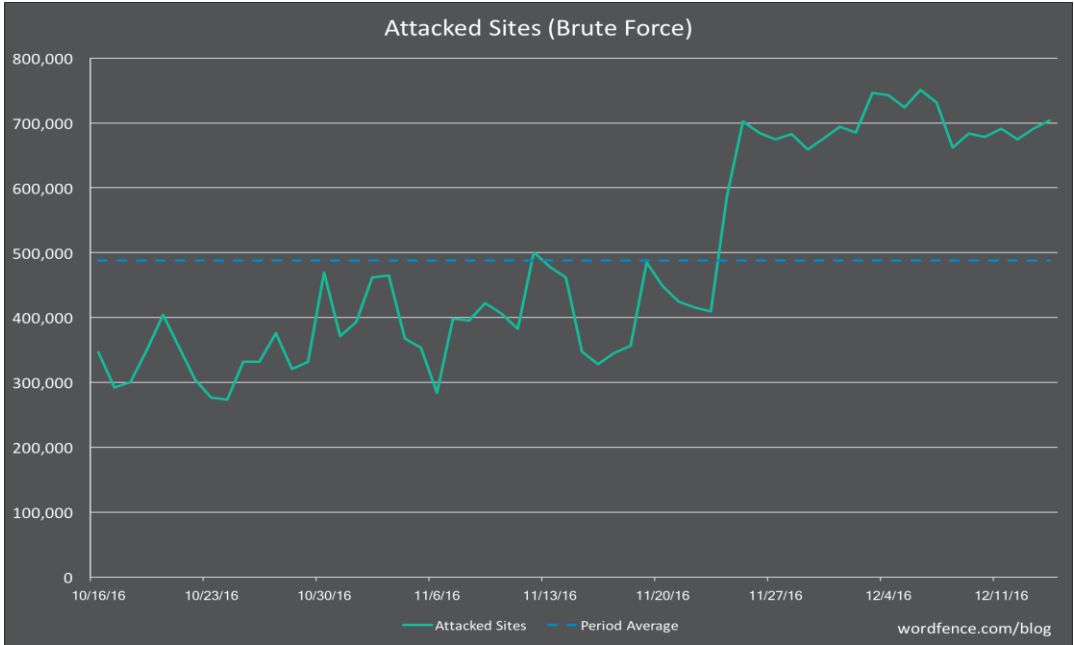
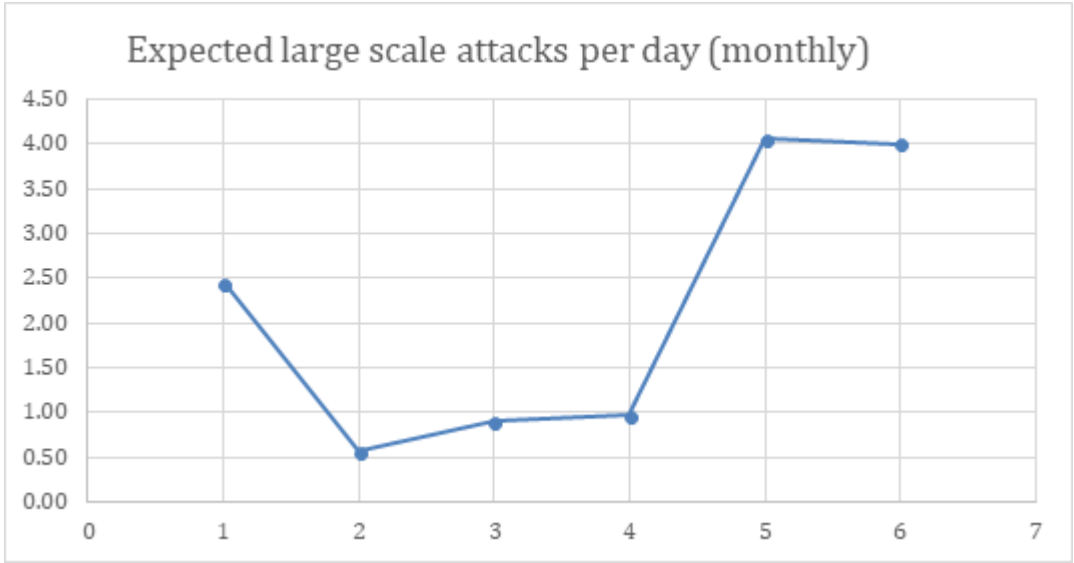
Showstopper



- Dictionary attacks and brute force search are infeasible.



- The security of the system is very high.



Use cases

Financial Services

It comes as no surprise that cyber criminals are targeting financial institutions. Overall, financial firms are 300 times more likely to be targeted than other companies

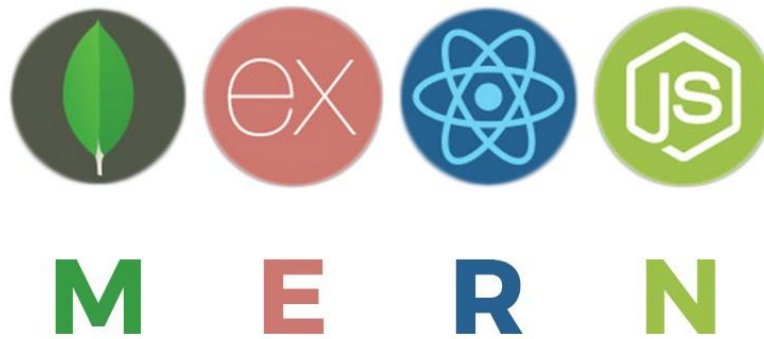
Government

The government isn't known for speed and when it comes to cybersecurity it's lagging dangerously behind. The vulnerabilities in government systems are alarming considering the vast amount of data stored there

Health Care

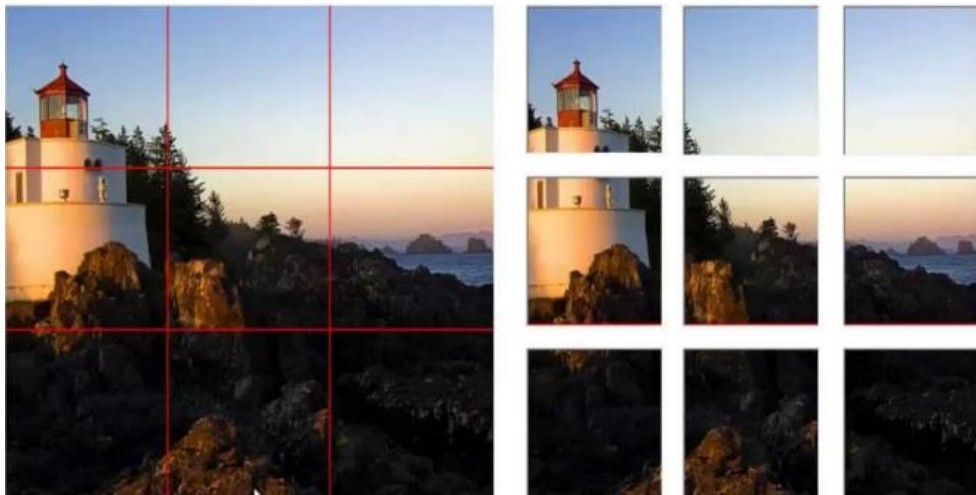
Like the government, health care organizations are privy to a plethora of sensitive information. And like the government, many organizations are not adequately protecting that data.

Tech Stack



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- **Authentication Process-Cued Recall:** In Cued Click Points (CCP), users click on several pre-registered images in the right sequence.
 - **Advantages:**
 - It is user-friendly.
 - It provides higher security than other traditional password schemes.
 - Dictionary attacks are infeasible.
 - CCP makes attacks based on hotspot analysis more challenging.

Future Plans



We are going to divide each image in the sequence into a 3x3 grid and use cue click points, so that the user can select them sequentially as well.