

NOVEL CONCEPT OF GRAPHICAL GRID FOR DATA EXCHANGE

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Abstract: *The security of data is must these days as the hacking attempts are increasing data by dat. With seeing the importance of the data protection, in this paper we proposed the novel concept of security using the graphical images in segments which are placed on the grid to form the pattern which will be used for validating the data transfer. The pattern is formed on the basis of the positioning of the images in grid in combination with ASCII characters in it and also the separate platform is also proposed for the encrypted data transfer using id management and encryption key.*

Keyword: *Graphical Passwords, Grid Passwords, Security, User Authentication*

I. INTRODUCTION

Cryptography is considered as the assessment of the writing as the riddle code and is an old the workmanship; the fundamental recorded usage of the cryptography in making returns to the time of 1900 B.C. right when the Egyptian based recorder is then used the non-standard based pictographs in the drawing. A few of the experts' battle that the cryptography has then showed up out of the blues and sooner or later or the another in the wakes of making was then made, with then applications which are reaching out from the soothing notes to the war-time battle based structures. It isn't a lot, by then, that the new kinds of the cryptography which can came not long after the paying little heed to what you can look likes at its likewise an improvement of the PC based correspondences. In information and media communications, cryptography is the premise when it is ignoring on any of the untrusted medium, one which merges in every way that really matters any structure, particularly of the Internet. Within the setting up of any of the applications-to-applications correspondence, there are additionally to some unequivocal security essentials. [1] Encryption causes an endeavor so as to guarantee to perplex in the correspondences, for example, those of state experts, military pioneers, and masters. There's a record of some right on time of the Hebrew figures moreover. Cryptography at that point additionally is upheld inside the Hindu god Sanskrit writing as a course for darlings to pass on while not so much arranged revelation. [2] And the Steganography (i.e., stowage unendingly even the vicinity of the messages with verity target to remain it private) was conjointly at first made in out of date events. An early model, from historiographer, masked a message - the tattoo which is on the slave's spotless shaven head - underneath the duplicated hair. [2] Additional vitality models of the steganography join the primary utilization of dark ink, the microdots, and pushed

watermarks likewise to conceal data.

Figure things passed on by fitting figures (and some cutting edge ones) loyally reveal quantitative data in regards to the plaintext, which may a great deal of the time be utilized to intrude on them. At the point when the introduction of repeat assessment (possibly by the Arabs learned individual al-Kindis) inside the ninth century, with respect to each single such figure stirred being essentially rapidly delicate by the educated aggressors. Such settled figures despite everything recognize inevitability these days, regardless, everything contemplated as requests (see cryptogram). Fundamentally, all figures remained unprotected against cryptology using this technique till the movement of the polyalphabetic based figures, which are the most plainly by the Leon Battista originator round the time of the 1467. Alberti's advancement was to use explicit figures (i.e., replacement letter sets) for different segments of a message (possibly for each amazing plaintext letter inside the explanation behind control). He conjointly made what was little inquiry the natural adjusted figure creation, a wheel that dead a midway statement of his improvement. Inside the polyalphabetic based vigenere figure, coding uses a watchword that controls letters-based replacement depending whereat letters of the saying is utilized. Inside the mid of the 1800s Babbage then additionally indicated that polyalphabetic based figures of this casing remained normally inadequate against go over assessment structures. [3]

II. RELATED PAPERS

Anjali Somwanshiet. Al 2017 [4] textual mystery key's most commonly utilized authentication framework for securing these applications. Authentication plans zone unit powerless against very surprising assortments of assaults. The anticipated framework gives announce the assaults extraordinarily, 'Keystroke Logging', 'Shoulder Surfing' and 'Duplicate Login Pages'. The framework improves login security part. The framework incorporates of 6X6 system of twenty six letters so as and ten digits to enter the key expression. Though accomplishment inside the framework the customer must be constrained to offer his non-open key which can be utilized while coming into the key expression into the system. The non-open key of the customer can ne'er be utilized anyplace consequently there aren't any chances of getting the catchphrase bust.

S. Pandey, et. al , 2013 [5] during this paper, creators will in general analyze an approach to shield customers' passwords from being taken by adversaries. composed fundamentally based mystery express authentication subject have a twisted to be a great deal of unprotected against assaults, for

example, bear water sport. to conquer the vulnerabilities which are of ordinary methods, the visual or the graphical mystery key topics are made according to the possible elective based responses for the substance principally based plan. S. Agrawal , et. al, 2016 [6] Security framework accept an indispensable occupation in any framework any place customer id includes concern, security frameworks region unit essential for any modernized or propelled get to the executives. Authentication framework have basically been installed for every one among the fields, for example, security, data frameworks and even in physical structures . The anticipated topic intends to help the faithful nature of the substance principally based password for driving edge buyers by then modifying a mix of the substance and the graphical passwords. on these of the lines a more secure way are given to buyers to allowing access to the confirmed based framework. The anticipated idea might be very helpful for ATM machines any place get to strategy is by proposes that of a fake mystery state. M. H. Zaki ,et .al, 2017 [7] Text-based mystery state authentication topic is overwhelmed against different assaults, for example, bear water sport assault and equivalent style of assaults like word reference assault, savage force assault then on. Different reasonable essentially based mystery word authentication plans region unit there yet they're moreover horribly expensive in causing and wants a ton of time stretch at login stage. During this paper, a more secure model key essentially based mystery state authentication topic is anticipated which supplies bigger security using blend of model, key, and trick digits. For this, customer must comprehend and enlist style as space numbers from cross section, enroll key characteristics that guides regards to mystery expression and add trick characteristics to mystery state in order to deceive the assaulter. From that time forward, to login, customer must survey the occurrence and guides the composed mystery word from model with recorded key characteristics, making a mystery expression by along with hoax digits.

III. PROPOSED ALGORITHM

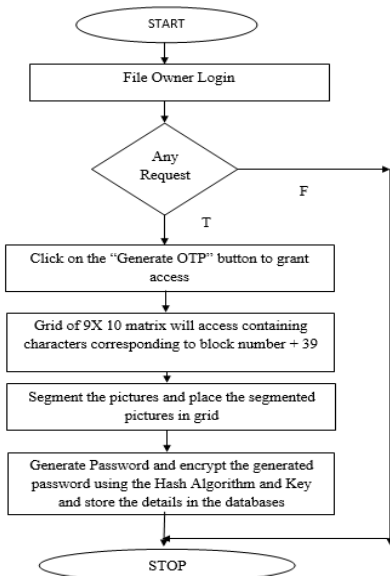


Fig 1. Process for Granting Access to File

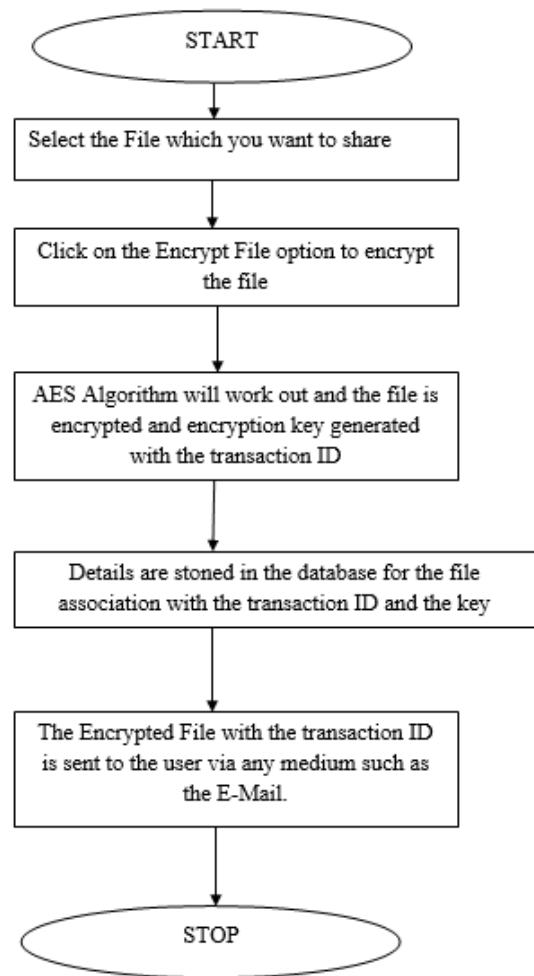


Fig 2. Process for Secure Data Share Implementation and Results
 The Implementation is done in the language PHP and database is maintained in MySQL.

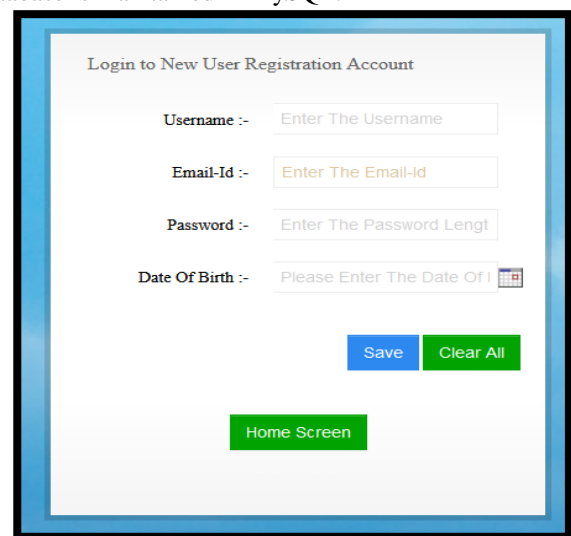


Fig 3. User Registration

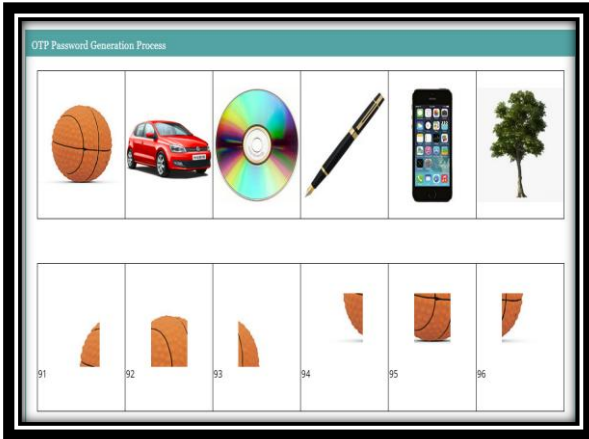


Fig 4. Grid for Forming Password

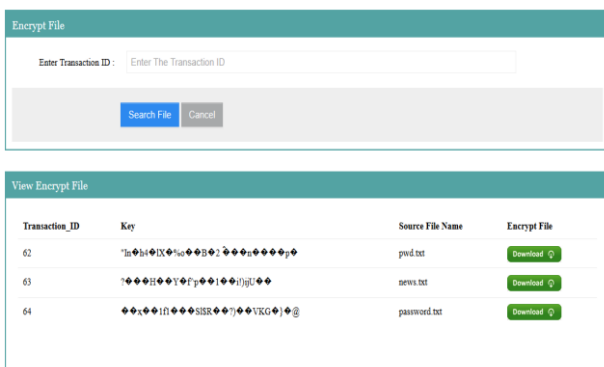


Fig 5. Secure Access

Table 1. Proposed Work Strength Checking

OTP	Website/Tool	Result
ba-Segment-1-1-(ba-Segment-2-3- *ba-Segment-6-10-1-ba-Segment- 3-15-6-ba-Segment-4-17-8-ba- Segment-5-27-B-	Password Meter	Very Strong
ba-Segment-1-1-(ba-Segment-2-3- *ba-Segment-6-10-1-ba-Segment- 3-15-6-ba-Segment-4-17-8-ba- Segment-5-27-B-	Password Checker	Excellent Strength
ba-Segment-1-1-(ba-Segment-2-3- *ba-Segment-6-10-1-ba-Segment- 3-15-6-ba-Segment-4-17-8-ba- Segment-5-27-B-	Cryptool2	Entropy 3.93 Strength 158 Very Strong

IV. CONCLUSION

In this paper we proposed the novel concept of security using the graphical images in segments which are placed on the grid to form the pattern which will be used for validating the data transfer. The pattern is formed on the basis of the positioning of the images in grid in combination with ASCII characters in it and also the separate platform is also proposed for the encrypted data transfer using id management and encryption key. The results is analyzed using the various examination tools for passwords and results are quire impressive one.

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