

Two Factor Authentication Using QR_Code

**Prof. Shital Patil, Ms. Gayatri R. Burkul, Ms. Anuradha S. Ghuge,
Ms. Sujata R. Barke, Ms. Kanchan D. Nehe**

Department of IT Engineering
Sir Visvesvaraya Institute of Technology, Nashik, Maharashtra, India

Abstract: *With the rapid expansion of wireless communication technology, user authentication is becoming increasingly vital in order to assure the technology's security. Passwords serve a vital part in the authentication process. During the authentication procedure, the user's password is sent along with the traffic to the authentication server, allowing the server to grant access to the authorised user. The attackers will take advantage of the opportunity to try to sniff out other people's passwords in order to carry out illicit acts under the guise of someone else's identity, keeping them out of trouble. Many methods have been offered to improve the security of wireless communication technologies as a result of the challenge. In this paper, the previously proposed solution will be used to enhance the security of the system. The solution adopted is the one time password, hashing and two-factor authentication. There also a new solution will be added by using the QR code to help to save more data. The objective of the system outcome is to enhance the current login authentication system. It provides solutions for making password breaking more difficult as well as convinces users to choose and set passwords..*

Keywords: Authentication, Factor, Saas, HCMA, HMAC, IOS, U2F, TOTP, OTP

REFERENCES

- [1]. Kuan-Chieh Liao, Wei-Hsun Lee, Min-Hsuan Sung, Ting-Ching Lin, "A One-Time Password Scheme with QR-Code Based on Mobile Phone", Fifth International Joint Conference on INC, IMS and IDC, 2009, pp 2069-2071
- [2]. Ohbuchi, E., Hanaizumi, H., Hock, L.A., "Barcode Readers using the Camera Device in Cyberworlds, pp.260-265, 2004.
- [3]. D. M'Raihi, M. Bellare, F. Hoornaert, D. Naccache, O. Ranen, "HOTP: An HMACBased One-Time Password Algorithm", RFC 4226, December 2005.
- [4]. Understanding Login Authentication n.d. Available from: <http://lia.deis.unibo.it/Courses/TecnologieWeb0708/materiale/laboratorio/guid_ej2ee14tutorial7/Security5.html> (Accessed: 18 November 2017).
- [5]. Vaithyasubramanian, S., Christy, A. and Saravanan, D. (2015) 'Two Factor Authentications for Secured Login in Support of Effective Information Preservation', 10(5), pp. 2053-2056. Available from: [http://www.arpnjournals.com/jeas/research_papers/rp_2015/jeas_0315_1713.p df](http://www.arpnjournals.com/jeas/research_papers/rp_2015/jeas_0315_1713.pdf) (Accessed: 18 November 2017).
- [6]. Kuan-Chieh Liao and Wei-Hsun Lee, "A Novel User Authentication Scheme Based on QR Code", Journal of Networks, VOL. 5, NO. 8, AUGUST 2010 "Two-Factor authentication goes mobile", First Edition September 2012, www.goodeintelligence.com