**ABSTRACT**

Considering today’s technology, almost everything relies on computer and Internet now- Communication (email, cell phones) – transportation (car engine systems, navigation systems) – medicine (equipment, medical records) – shopping – entertainment. The whole of the Internet relies on web and communication can happen via web application as one of the source. Web application security is a branch of Information Security that deals specifically with security of websites, web applications and web services. Web Application Security can be done by authentication. Single factor authentication is applicable to few smaller level applications but can be breached by intruder. Multifactor authentication gives better security than Single factor which combines two or more independent credentials: what the user knows (password), what the user has (security token) and what the user is (biometric verification). The goal of MFA is to create a layered defence and make it more difficult for an unauthorized person to access a target such as a physical location, computing device, network or database. If one factor is compromised or broken, the attacker still has at least one more barrier to breach before successfully breaking into the target.

This project is about multifactor authentication which is achieved by parameters like password, Token- Colour/Normal QR code, Biometrics- Fingerprint where the process of authentication happens on web application. The user needs to register password and respective security parameters and those values are stored in secure database in order to provide a better security features for the asset. After registering, the user needs to login to proceed for further transactions/process. The whole process will be tracked at every moment using log actions so when intruder attacks, we can able to track the intruder easily.

The multifactor authentication provides the way for future security features to protect data by giving access rights to certain user – Authorization. By combining many security components, we can able to achieve/process the activity in web application without worrying about the security breakable such that the asset we are providing to application will no longer be access by unknown user.

**References:**

1. <http://searchsecurity.techtarget.com/definition/multifactor-authentication-MFA>