SOMAIYA VIDYAVIHAR UNIVERSITY

Somaiya TRUST

K J Somaiya School of Engineering

Department of Computer Engineering

List of Experiments

Course: Information Security (I16UOIL602)

Semester: VI Year: 2024-2025

Course Outcome	After completion of this course students should be able to
CO1	Explain various security goals, threats, vulnerabilities and controls
CO2	Apply various cryptographic algorithms for software security
CO3	Identify and analyze web attacks
CO4	Illustrate and Compare network security mechanisms
CO5	Interpret legal and ethical issues in security

Sr. No	Topic	CO Mapping
1	Encryption-Decryption programs using classical cryptography (Playfair cipher, Transposition cipher)	CO1,CO2
2	Application of RSA Algorithm for various security services like confidentiality, authentication, signature, non-repudiation and integrity	CO1,CO2
3	Implementation of CAPTCHA for Security of systems	CO4
4	Analysis of sample vulnerable web applications for Man-in-Middle Attack / SQL injection etc. using Burp Suite.	CO3
5	Introduction to Open Web Application Security Project and implementation of XSS.	CO3
6	Email security using PGP implementation (Pretty Good Privacy).	CO4
7	Implementation and configuration of Firewall using Iptable. Demo of Palo Alto Next Gen Firewall	CO4
8	Working with sample real life cases related to Network security and forensics using tool – Wireshark and Network Miner.	CO4
9	Digital Forensic investigation using Encase forensic tool	CO5
10	Report writing on legal issues and ethics with respect to some case study.	CO5
Virtual Lab Experiments - vlab.co.in		
1	Encryption Decryptions Virtual Laboratory Experiments- (http://cse29-iiith.vlabs.ac.in/) a. Breaking the Shift Cipher b. Breaking the Mono-alphabetic Substitution Cipher	CO2
2	Public-Key Cryptosystems (PKCSv1.5)	CO2
	Challenge Experiment	
	Explore Kali Linux Security and Forensics Tools	CO3,CO4

- Students can perform experiments of their choice other than this list with prior permission
- Students are also required to execute programs on IIT Virtual Laboratory

03 Jan 2025
Course Teachers