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Research Interests

My interests lie in strengthen the digital realm, aiming to contribute to the ongoing enhancement of digital security practices. Research revolves around cybersecurity, particularly in the exploration and exploitation of vulnerabilities embedded within Operating Systems.

Education

Punjab University College of Information Technology Bachelor of Science - Information Technology <ul style="list-style-type: none">Expected graduation: July 2024GPA: 3.10/4.0	October, 2020 – Present Lahore, Punjab, Pakistan
Superior College Burewala FSC - Pre Engineering <ul style="list-style-type: none">Grade: A+	September, 2018 – July, 2020 Burewala, Punjab, Pakistan

Professional Experience

Teaching Assistant (Operating System) PUCIT - University of the Punjab <ul style="list-style-type: none">Designed exam papers for the lab.Designed material and coursework for the newly introduced lab component of the subject.Assisted students in the lab + other TA responsibilities.	August, 2023 – present Lahore, Punjab, Pakistan
Teaching Assistant (Object Oriented Programming) PUCIT - University of the Punjab <ul style="list-style-type: none">Assisted students in the lab + other TA responsibilities.	January, 2023 – May, 2023 Lahore, Punjab, Pakistan

Skills

Programming Languages: C/C++, Java, Javascript, Python, x86-64 Assembly
Secuirty: Reverse Engineering, Binary Exploitation
Tools: GDB, IDA, Radare Cutter
OS: GNU/Linux, Windows

Final Year Project

Linux Kernel Exploitation & Docker Escape (Continue...) PUCIT - University of the Punjab <ul style="list-style-type: none">Supervisor: Dr. Muhammad Arif ButtFormulated the idea and initiated the research projectWorked on problems related to memory errors in binariesWorked on reversing binaries using IDA FreewareWill analyze CVE-2022-0185 (Heap based Buffer Overflow)	C, Python, x86-64 Assembly August, 2023 – Present
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Projects

Socket Programming

Python, Java

<https://github.com/meharehsaan/socketprogramming>

- In java sockets Simple java sockets are implemented using streams in java.
- In Python sockets File Transfer Protocol (FTP), Stop and Wait and Go-back-N protocols are implemented in UDP sockets.

Exploits Scripts

Python, x86-64 Assembly

<https://github.com/meharehsaan/bufferoverflow>

- Basic scripts that I have written to solve some exploitation challenges.

Student Feedback System

Php, Mysql

<https://github.com/meharehsaan/feedbacksystem>

- Its a secure feedback system for the college faculty and students. All records are properly managed in database. All entites login on the same space.

Extracurriculars & Volunteering

Study Coordinator

PUCIT - University of the Punjab

Helping Hands - unofficial PUCIT Society

December, 2023 – Present

- Organized Study Sessions and webinars
- E.g. Problem Solving and FYP guidance etc

Collaborative Workshop Organizer

PUCIT - University of the Punjab

with GDSC (Google Developer Student Club)

December, 2023 – Present

- Organized tech workshops
- E.g. Memory Corruption and Buffer Overflows etc
- <https://github.com/meharehsaan/cybersec-workshop>