WOMANIUM GLOBAL ONLINE QUANTUM MEDIA PROJECT

In this list, I accumulated all the articles written for <**W**|**Q**>23 media project. This project will help me to dive into the cryptographic world(From Classical to Quantum Approach). I am joining another project in the next cohort of the #Quantum30 challenge on another topic or maybe with this topic again with higher-level concepts and detailed content.

I want to take a moment to express my gratitude to **Marlou Slot, PRACHI V** and **Dr. Manjula Gandhi** for this initiative and encouragement and sincere thanks to **Moses Sam Paul Johnraj** for providing the 30-day schedule.

I also want to extend my thankfulness to <W|Q> team and QCI team and all other fellow learners for constantly encourage me and support me in this journey!

Joining My #Quantum30 Journey : A Voyage into the Quantum Cryptography World

Week 1

- 1. Introduction to Cryptography: Safeguarding Secrets in the Digital World
- 2. Modular Arithmetic: The Key to Unbreakable Secrets in Cipher

- 3. <u>Guarding Secrets: Understanding Stream Ciphers, Random Numbers, and</u> the One-Time Pad
- 4. Cryptographic Evolution: From Feistel Cipher to Triple DES and Beyond
- 5. <u>Introduction to Galois Fields: Exploring AES Fields and Finite Field</u>
 Arithmetic
- 6. The Lock and Key of the Digital Realm: Understanding AES Encryption
- 7. Week 1 Reflections: A Journey into the Fascinating World of Cryptography

Week 2

- 8. <u>Exploring Number Theory: Euclidean Algorithm, Euler's Phi Function, and</u> Euler's Theorem
- 9. RSA Cryptosystem and Efficient Exponentiation: Safeguarding Digital

 Communication
- 10. Exploring the Diffie-Hellman Key Exchange, Discrete Logarithm Problem, and the Significance of Cyclic Groups in Cryptography
- 11. Digital Signatures and Security Services: Ensuring Trust in the Digital Age
- 12. <u>Hash Functions: Unveiling the Key to Secure Digital Signatures and Data</u>

 <u>Integrity</u>
- 13. Man-in-the-Middle Attack, Certificates, PKI, and Asymmetric Key

 Establishment: A Comprehensive Analysis
- 14. Week Two Progress: Navigating the Depths of Cryptography and Entering the Quantum Frontier

Week 3

- 15. The Map of Quantum Computing
- 16. Exploring Quantum Computers: From Bits to Qubits and Superposition
- 17 Quantum Technology's Rise and its Implications for Internet Safety

- 18. <u>Unveiling the Enigma of Shor's Algorithm: From Quantum Mysteries to</u>

 Efficient Factorization
- 19. Grover's Algorithm: Quantum Leap in Search Efficiency
- 20. Navigating the Quantum Cryptanalysis Landscape
- 21. Week Three Progress: Journeying Through Quantum Realms

Week 4

- 22. Quantum Cryptography: Safeguarding Information with the Power of Quantum Mechanics
- 23. Quantum Key Distribution: Securing Communication in the Quantum Era
- 24. Quantum Secure Communication: Unleashing Unbreakable Connections
- 25. Embracing the Future: Navigating the Realm of Post-Quantum

 Cryptography
- 26.Quantum Error Correction and Fault Tolerance: Part 1
- 27. Quantum Error Correction and Fault Tolerance: Part 2
- 28. Week 4 Reflection: Diving Deeper into Quantum Cryptography and Beyond

Conclusion Days

- 29. <u>Securing the Quantum Future: Exploring Eavesdropping Strategies in</u>

 <u>Quantum Cryptography and Fault-Injection Attacks on Post-Quantum</u>

 <u>Cryptography</u>
- 30. <u>Securing the Future: Exploring Quantum Cryptography in the #Quantum30</u> Challenge

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#QuantumEnthusiast #Womanium #Cryptography
#QuantumCryptography #QuantumComputingIndia #QIndia
#QIran #QWorld #PQC #QKD #RSA