	School: Campus:			
Centurion UNIVERSITY	Academic Year: Subject Name: Subject Code:			
	Semester: Program: Branch: Specialization:			
	Date:			
	Applied and Action Learning (Learning by Doing and Discovery)			
Name of the Experiement: SHA-256 in Action – Cryptographic Hashing Coding Phase: Pseudo Code / Flow Chart / Algorithm				

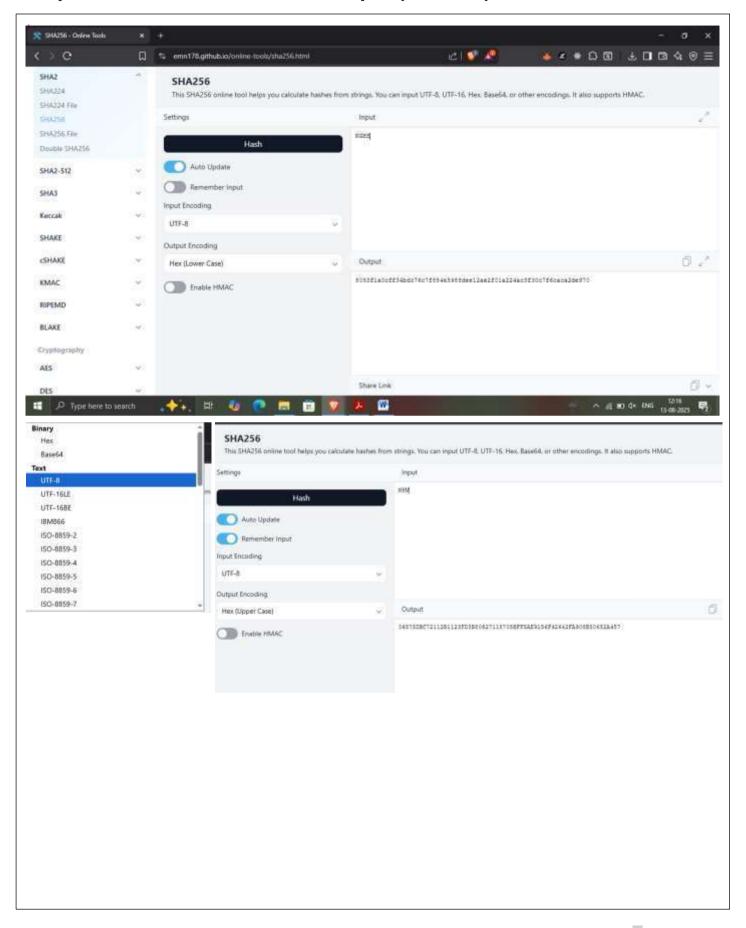
- Open the SHA-256 online tool: https://emn178.github.io/online-tools/sha256.html.
- Enter the desired text/message into the input box.
- Keep input encoding as **UTF-8**.
- Select output encoding as **Hex** (**Lower Case/Upper Case**).
- The tool automatically generates the SHA-256 hash (64 hex characters).
- Slightly modify the input text and check the new hash value.
- Compare both outputs to observe the avalanche effect.

* Software used

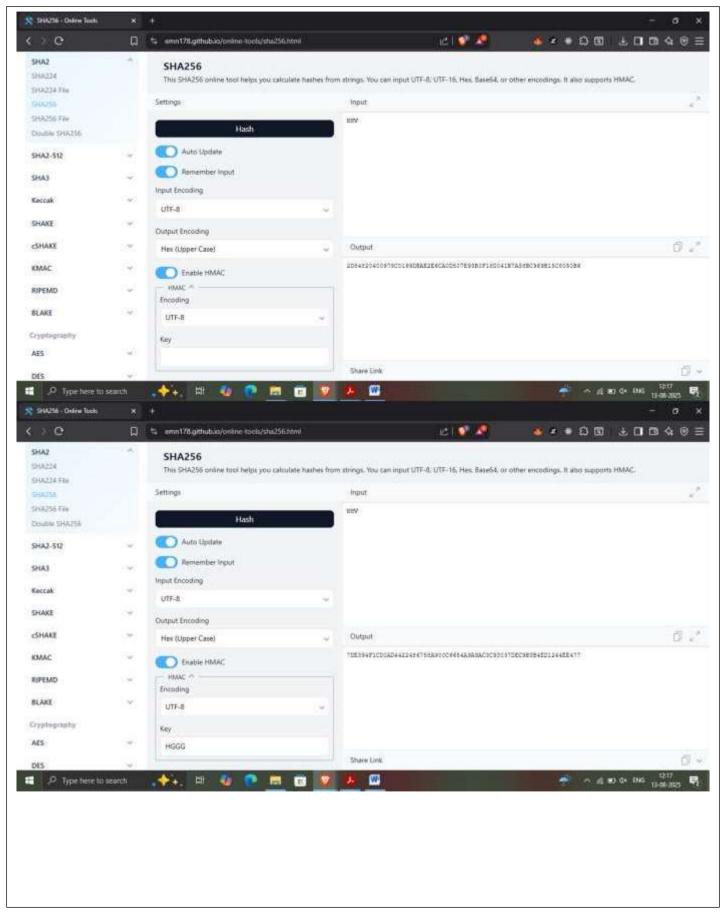
1.	W	eb	Browser -	– Brave
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- 2. Online Tool https://emn178.github.io/online-tools/sha256.html
- 3. Word for documentation

* Implementation Phase: Final Output (no error)



* Implementation Phase: Final Output (no error)



* Implementation Phase: Final Output (no error)

Applied and Action Learning

*Observations:

- Each input string generates a unique and fixed-length 256-bit (64-character) hash.
- A tiny modification in input leads to a completely different output (avalanche effect).
- Hashing is **one-way**: original input cannot be retrieved from the hash.
- The tool supports different encodings and HMAC for additional security.

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/	10		
Practical Simulation/ Programming			
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	50		

Sig	mati	ure c	of tl	he S	itud	ent:

Name:

Signature of the Faculty: Regn. No. :