	School:	Campus:				
	Academic Year: Subject Name:	Subject Code:				
Centurion UNIVERSITY Shaping Lives Empowering Communities	Semester: Program: Brand	ch: 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**

- Start the program or open the hash tool
- Input a string or message
- Use the SHA-256 algorithm to convert the message into a hash
- Display the hash
- Change the input message slightly
- Hash again and compare with the previous hash
- End

## **Apparatus/Software Used:**

- Online SHA-256 Tool
- Brave browser
- Internet Connection

## **Testing Phase:**

### Test case1:

Input:-swornapriya

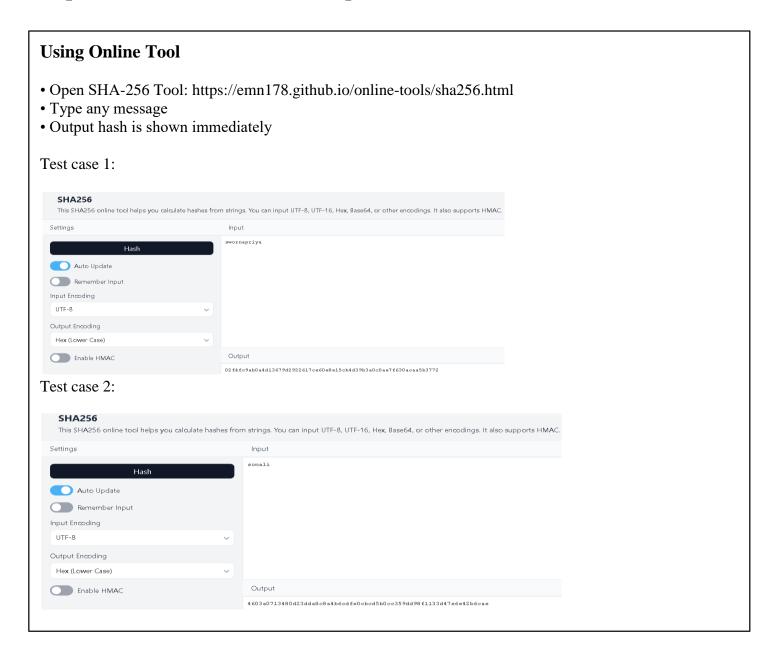
Hex: 02f4fc9ab0a4d13679d2922617ce60e8e15cb4d39b3a0c0ae7f630acaa5b3772

Test case 2:

Input: sonali

Hex: 4603a0713480d23dda8c8a4b6cdfe0cbcd5b0cc359dd98f1133d47e6e42b6cae

# **Implementation Phase: Final Output (no error)**



## **Observations**

<ul> <li>SHA-256 always gives a fixed 64-c</li> </ul>	c <b>haracter</b> hash.
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- A minor change in input gives a completely different output.
- It is a **one-way function** original data **can't be reversed**.
- Commonly used in **blockchains**, **digital signatures**, **file verification**, and **password storage**.
- Highly secure, fast, and deterministic

#### **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		

Signature of the Student:

Name:

Signature of the Faculty: Regn. No. :

Page No....

\* As applicable according to the experiment. Two sheets per experiment (10-20) to be used.