Centurion University
Shaping Lives... Empowering Communities...

School: ..... Campus: .....

Academic Year: ..... Subject Name: ..... Subject Code: .....

Semester: ..... Program: ..... Branch: ..... Specialization: .....

Date: .....

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiement : Hash Your First Block – Blockchain Basics and Setup

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

ALGORITHM:

1.Start
2.Search for blockchain simulator on brave browser
3.Enter the block details like data in block 1 where the nonce is auto-generated after mining
4.After entering the data, click the mine button
5. The simulator repeatedly changed the nonce until it found a hash starting with a required pattern
6. Observe the output this hash is a unique fingerprintof the block's data, block number, nonce, and other metadata.
7. Changing any part of the data resulted in a completely different hash, proving the avalanche effect of hashing.
8.End

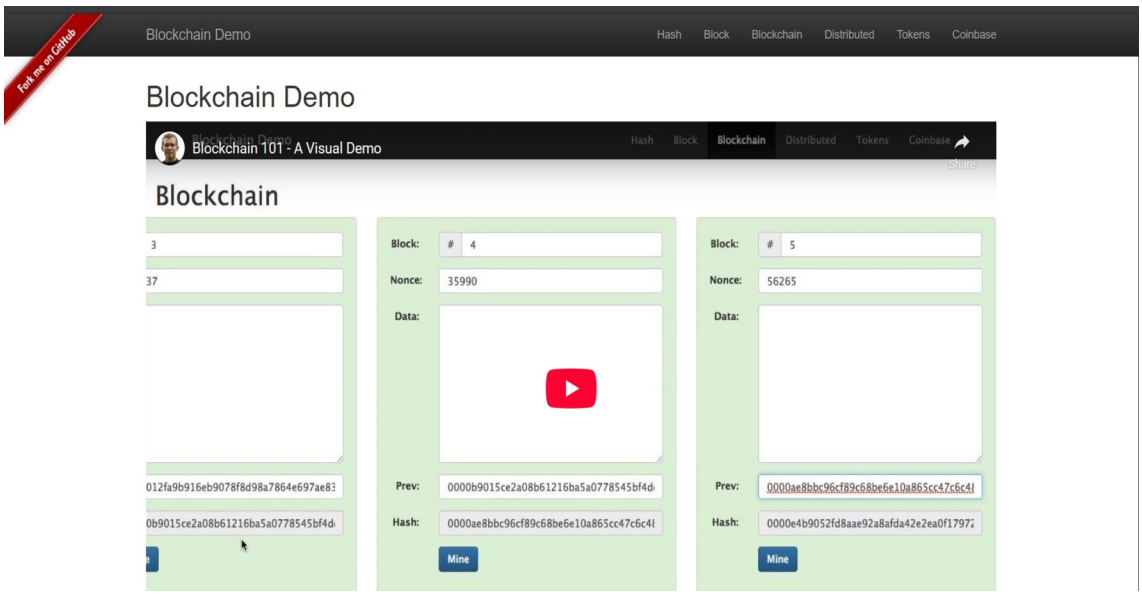
* Software used

Brave browser

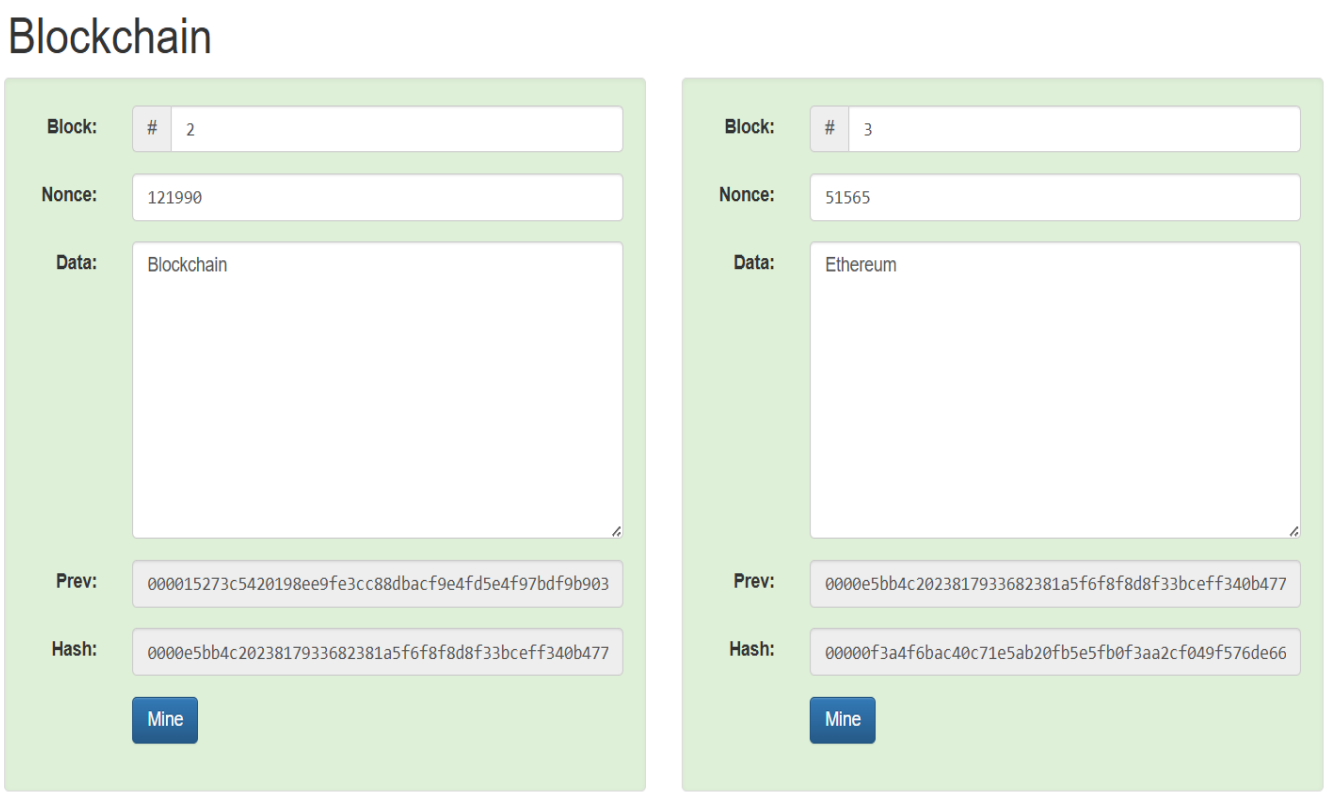
*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Testing Phase: Compilation of Code (error detection)

Open blockchain simulator



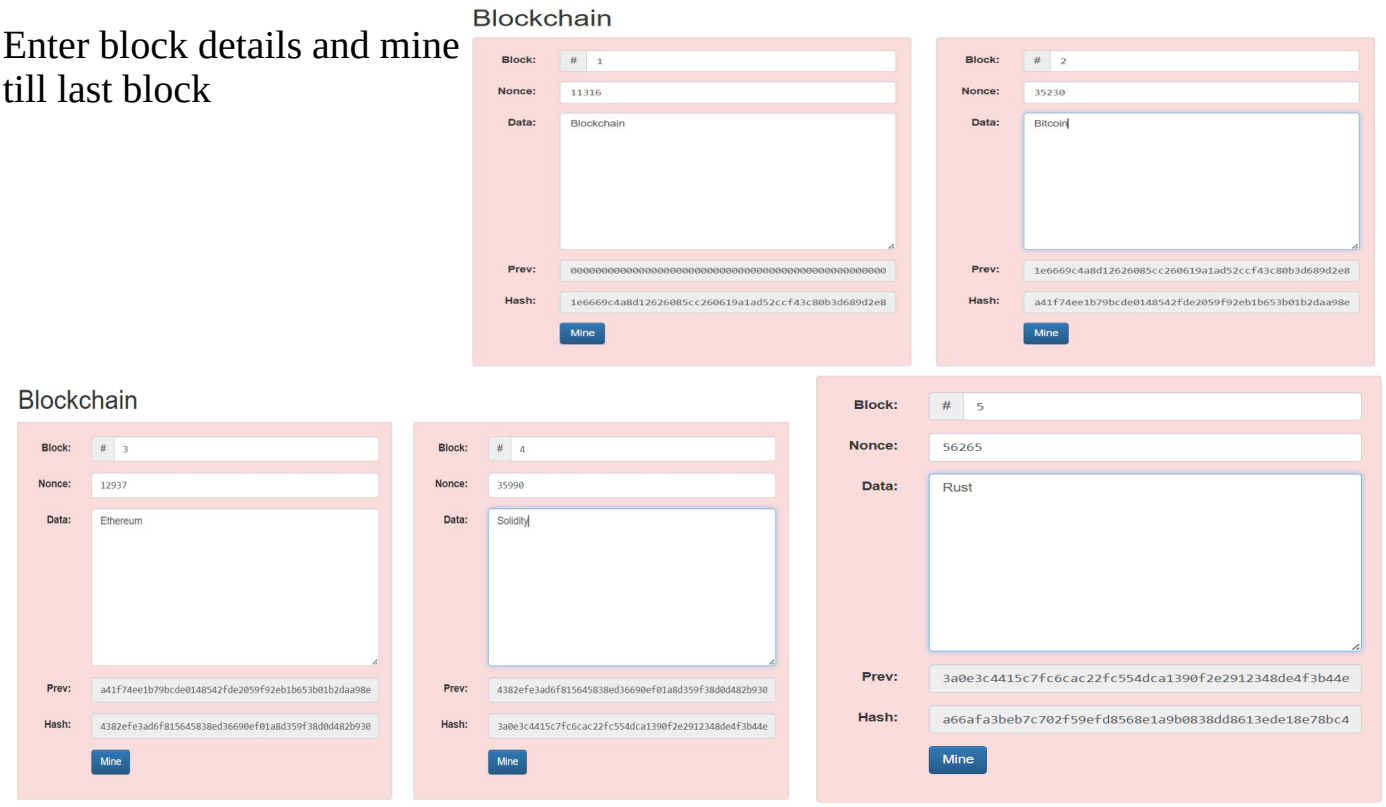
Experiment by changing any part of data



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

* Implementation Phase: Final Output (no error)

Enter block details and mine till last block



* Observations

1.The hash changes drastically even with a small change in data.
2.Mining is essentially trial and error to find a nonce that produces a valid hash.
3.This process ensures data integrity and prevents tampering in blockchain.

ASSESSMENT

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

Signature of the Student:

Name :

Regn. No. :

Signature of the Faculty:

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