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 : Blockchain Dev Tools – Setting Up Environment

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

ALGORITHM:

1.Start
2.Install Node.js and npm on the system.
3.Verify installations using command prompt (node -v and npm -v).
4.Install Visual Studio Code for coding.
5.Install and set up Git for version control.
6.Install MetaMask browser extension and create/import a wallet.
7.Create a new project folder and initialize it using npm init -y.
8.Install Web3.js using npm install web3.
9.Verify the complete setup by running a sample Web3 connection script.
10.End

* Software used

1.Node.js
2.npm (Node Package Manager)
3.Git
4.Visual Studio Code
5.MetaMask
6.Web3.js

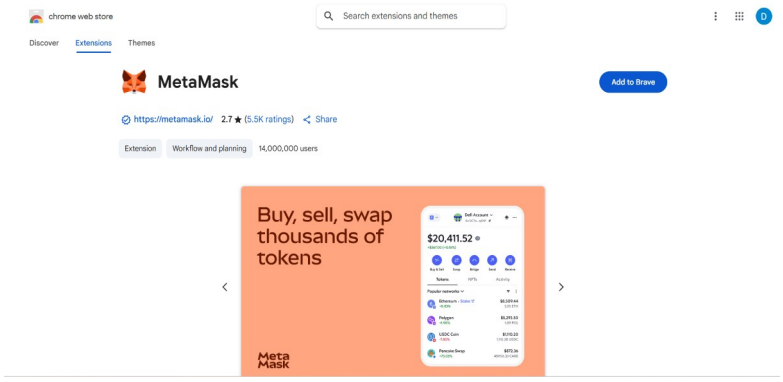
*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

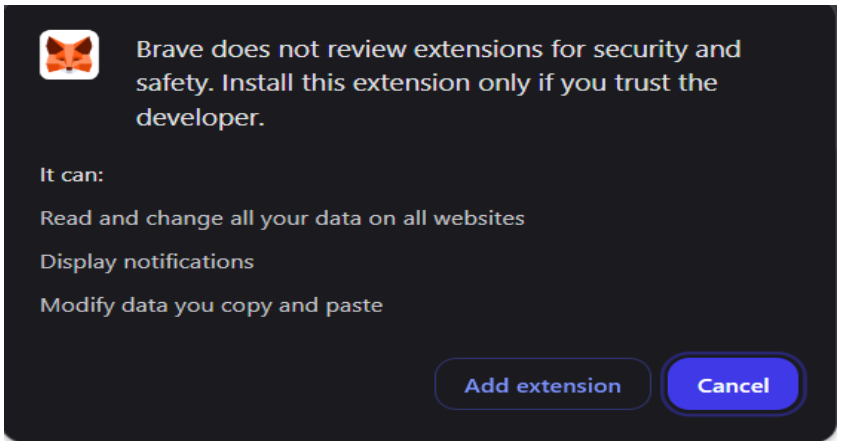
* Testing Phase: Compilation of Code (error detection)

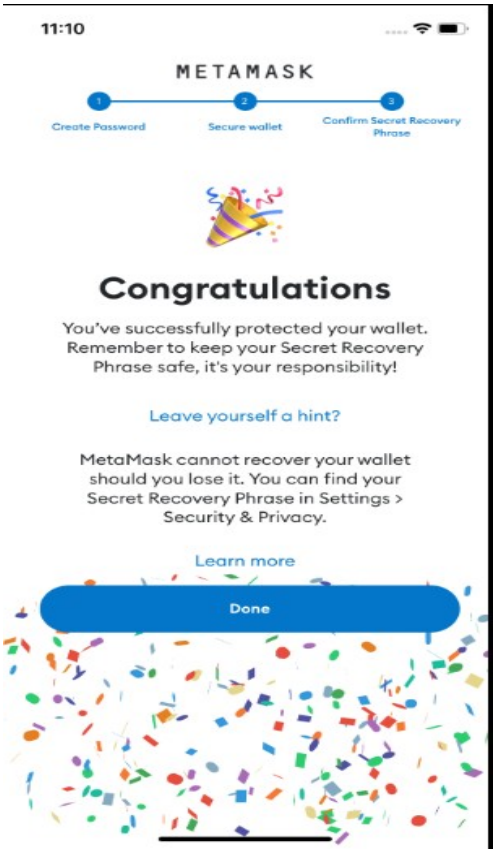
1.Node.js & npm Verification:
Open terminal → Type node -v and npm -v
If version numbers appear, installation is successful.
2.Git Installation:
Open terminal → Type git --version
Confirms Git is properly installed.
3.VS Code Setup:
Open Visual Studio Code → Create new workspace → Save as "BlockchainSetup".
4.MetaMask Setup:
Add MetaMask extension → Create or import wallet → Select test network.
5.Web3.js Installation:
Inside your project folder run npm install web3.
If no errors, Web3.js is installed successfully.

*Implementation Phase: Final Output (no error)

1.Successfully set up complete blockchain development environment.
2.Node.js, npm, Git, VS Code and MetaMask, all working correctly.
3.Web3.js able to connect to local blockchain and fetch accounts.







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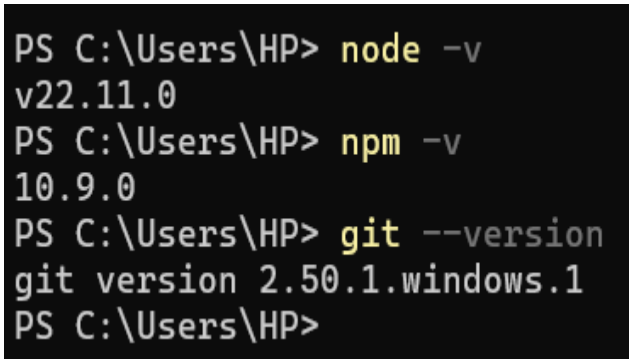
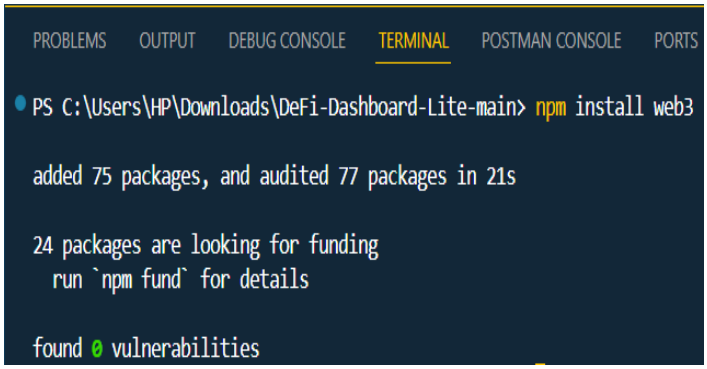
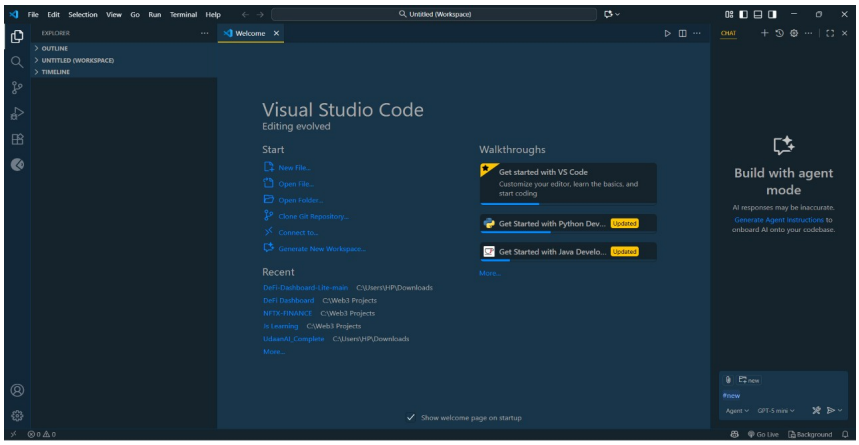
* Implementation Phase: Final Output (no error)







* Observations

1.Understanding how to configure a blockchain dev setup is crucial before smart contract deployment.

2. The initial environment setup for blockchain development was successfully completed without errors.

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.