



Pimpri Chinchwad Education Trust's
Pimpri Chinchwad College of Engineering

Lab Manual

Department: IT

Academic Year: 2022-23

Year: BE Sem II

Subject: Smart Contracts & Crypto currency Laboratory HIT6992

Name of Faculty: Mrs. Rohini Pise

Assignment No. 1 :

Aim : Install and Get Started with the Bitcoin core client. Write a program to get Bitcoin and create transactions.

Theory:

- What is Bitcoin core client?
- Install and demonstrate Bitcoin core client. (Include screenshots of installation and demonstration)
- Simple code with output to demonstrate the transactions.

Conclusion:

Assignment No. 2 :

Aim : Setup the Ethereum development environment. Generate addresses and create transactions

Theory:

- How Ethereum Blockchain Network works , explain with diagram.
- What are the tools needed to set up the Ethereum development environment.
- Demonstrate the execution of transactions.

Conclusion:

Assignment No. 3 :

Aim : Write a program to create smart contracts and implement applications on Ethereum.

Theory:

- What is Smart contract.
- How it gets executed?
- Demonstration of execution of smart contract.(Screenshots)

Conclusion:**Assignment No. 4 :**

Aim : Create smart contract and test the contract (against smart contract vulnerabilities)

Theory:

- What are various smart contract vulnerabilities?
- Explain any two.
- Installation and demonstration of any vulnerability testing tool. (Include screenshots)
- Demonstration of testing of smart contract on that tool. (Include screenshots)

Conclusion:

Assignment No. 5 :

Aim : Case studies on Cognitive computing

Theory:

- What is Cognitive computing and applications? Explain its purpose.
- What are the advantages and disadvantages of it.
- Is Blockchain is cognitive technology? How both are related?

Conclusion:**Assignment No. 6 :**

Aim : Create your own cryptocurrency.

Theory:

- What is cryptocurrency?
- Demonstration to create your own cryptocurrency. Include screenshots)

Conclusion: