



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 Experiment :

### \* Coding Phase: Pseudo Code / Flow Chart / Algorithm

#### Flow of a DID System:

- 1 Create DID → Generate and register DID on blockchain.
- 2 Issue Credential → Issuer signs a verifiable credential for holder.
- 3 Store Credential → Save it securely (local or IPFS).
- 4 Verify Credential → Verifier checks authenticity using public key.
- 5 Confirm → Output verified identity and credential status.

### \* Softwares used

- 1.DID standards (W3C)
- 2.Verifiable Credentials Format
- 3.Ethereum or Polygon DID methods
- 4.Universal Resolver (optional concept)
- 5.DID Wallets (e.g., MetaMask, Microsoft Entra, Dock Wallet)

## \* Testing Phase: Compilation of Code (error detection)

- Open a DID platform such as Polygon ID or SpruceID Studio.
- Create a new DID for the user (e.g., did:polygonid:12345...).
- Generate a verifiable credential (e.g., student ID, KYC certificate).
- Store or publish the DID document on blockchain/IPFS.
- Use a verifier app to confirm credential validity.
- Check blockchain explorer for DID transaction record.
- Record DID and credential details in the observation table.
-

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

Applied and Action Learning

- DID (Decentralized Identifier): A unique identifier owned by the user, stored on blockchain or IPFS.
- VC (Verifiable Credential): Cryptographic proof that verifies a claim (like a certificate or license).
- Issuer: Entity that issues the credential.
- Holder: The person or organization who owns it.
- Verifier: The party that checks the credential's authenticity.
- 

## \* Observations

It was observed that decentralized identity (DID) allows users to create and control their digital identity without intermediaries. Verifiable credentials can be issued and validated using blockchain cryptography, ensuring trust, privacy, and authenticity.

## 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		
<b>Total</b>	<b>50</b>		

**Signature of the Student:**

Name :

Regn. No. :

Page No.....

**Signature of the Faculty:**

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