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	Date	

## **Applied and Action Learning**

(Learning by Doing and Discovery)

# Name of the Experiment: Mint it Yourself – NFT Creation and Deployment \*Objectives/Aim:

The objective of this experiment is to understand and implement the complete lifecycle of an NFT (Non-Fungible Token) by creating metadata, hosting it on IPFS using Pinata, deploying an ERC-721 smart contract using Remix IDE, and minting the NFT to a wallet address with the associated metadata.

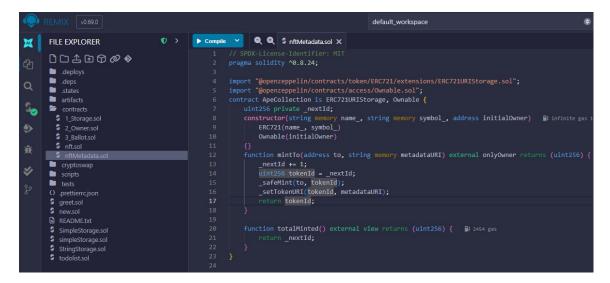
## \*Coding Phase: Pseudo Code / Flow Chart / Algorithm

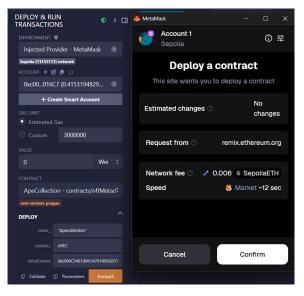
- 1. First we need to create a metadata.json file on our system with keys name,description, image and attributes.
- 2. Then we login to our pinata cloud system and open an .jpg or .png file and copy its url
- 3. In .json file with key as image we need to paste the image url and save the file
- 4. Then we need to upload the .josn file on pinate and open it and copy the meatadata uri
- 5. Then we need to go to the remix ide and create a smart contract and compile it
- 6. Upon successful compilation we need to deploy the contract by setting up the development environment to Injected Provider-MetaMask and by initializing the name("Apecollection"), symbol("APEC") and initial owner("our metamask wallet address")
- 7. Then we need to deploy our transaction by confirming through metamask popup
- 8. After successful deployment under deployed contract section for minting we should go to the MINTTO section
- 9. Under this section we should input data to "to" and "metadataURI" field i.e in 'to' field our wallet address and in metadataURI filed our pinata metadata.json URI
- 10. Then click on transact and click on confirm by metamask popup
- 11. Then our contract will be minted successfully
- 12. In MetaMask wallet under NFTs section we can discover our NFTs tokens.

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

#### **NO ERROR**

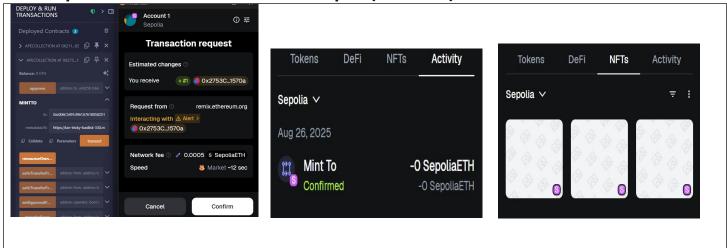
\* Implementation Phase: Final Output (no error)







\* Implementation Phase: Final Output (no error)



### \* Observation:

#### From this experiment we observed that:

- The NFT creation process integrates both off-chain (Pinata) and on-chain (smart contract) components.
- Manual metadata and URI management are essential steps before minting.
- Remix IDE and MetaMask provide a beginner-friendly environment for smart contract deployment.
- ➤ Pinata ensures reliable and decentralized storage of NFT assets.
- > Successful NFT minting requires accurate input of wallet address and metadata URI.
- MetaMask acts as both a deployment tool and wallet for holding the minted NFTs.
- The entire process demonstrates a clear workflow for self-minting NFTs without third-party platforms.

## **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		

Name:

Signature of the Faculty: Regn. No. :

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