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 : Mint it Yourself _ NFT Creation and Deployment

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

- **Deploy Contracts**
  - Deploy an ERC721 NFT contract (for minting NFTs).
  - Deploy a Marketplace contract that allows listing, buying, cancelling, and updating NFT prices.
- **Connect Wallet**
  - Connect MetaMask on Sepolia Testnet to the frontend DApp.
- **Approve Marketplace**
  - Call setApprovalForAll(marketplaceAddress, true) from NFT contract to allow the marketplace to manage NFTs.
- **List NFT**
  - Call listItem(nftAddress, tokenId, price) → NFT is listed in marketplace with a unique listingId.
- **Buy NFT**
  - Buyer calls buy(listingId) while sending ETH equal to the listing price.
  - Ownership of NFT transfers to the buyer.
- **Cancel Listing**
  - Seller can call cancel(listingId) to remove their NFT from sale.
- **Update Price**
  - Seller can call updatePrice(listingId, newPrice) to change the price of a listed NFT.
- **Withdraw Proceeds**
  - Seller calls withdrawProceeds() to claim ETH earned from NFT sales.

* Software used

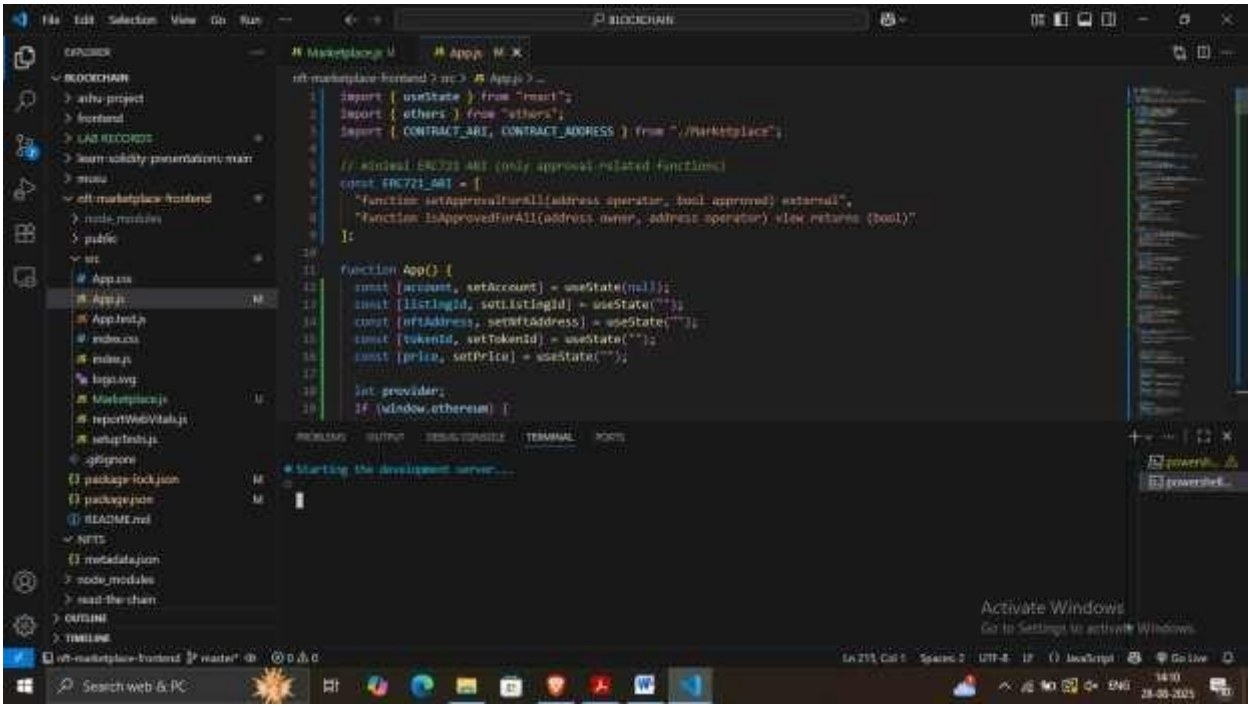
1. MetaMask Wallet
2. Remix IDE.
3. MS Word.
4. Brave for researching.

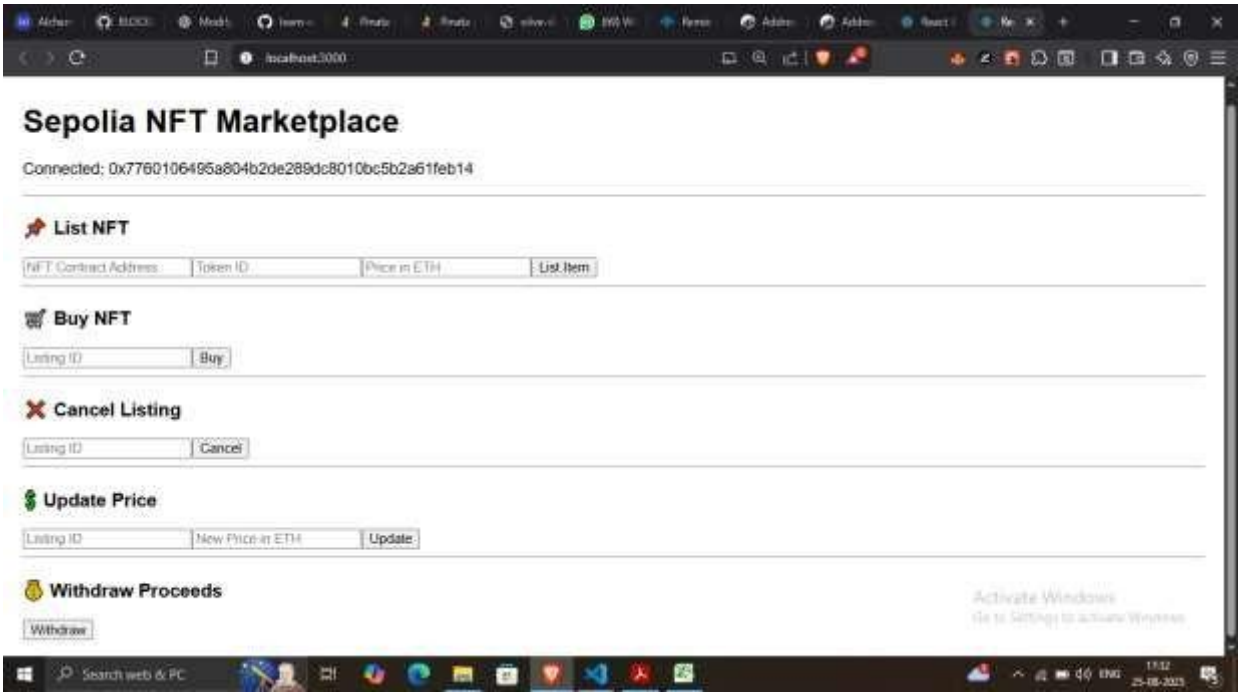
*As applicable according to the experiment.

Two sheets per experiment (10-20) to be used.

* Implementation Phase: Final Output (no error)

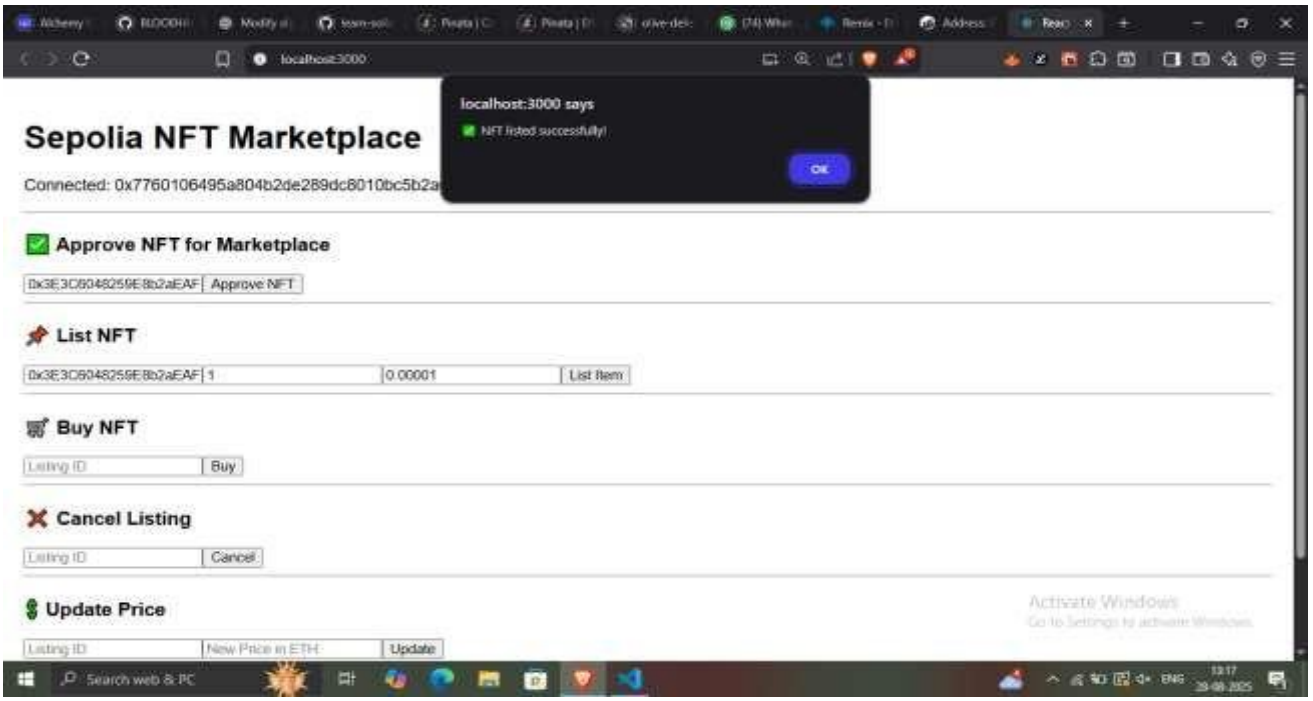
- NFTs can be listed, purchased, cancelled, or updated on Sepolia Testnet.
- Transactions trigger success messages in the DApp UI (NFT listed successfully, Price updated!, etc.).
- ETH proceeds are stored securely until withdrawn by sellers.
- Ownership of NFTs correctly transfers between accounts after purchase.

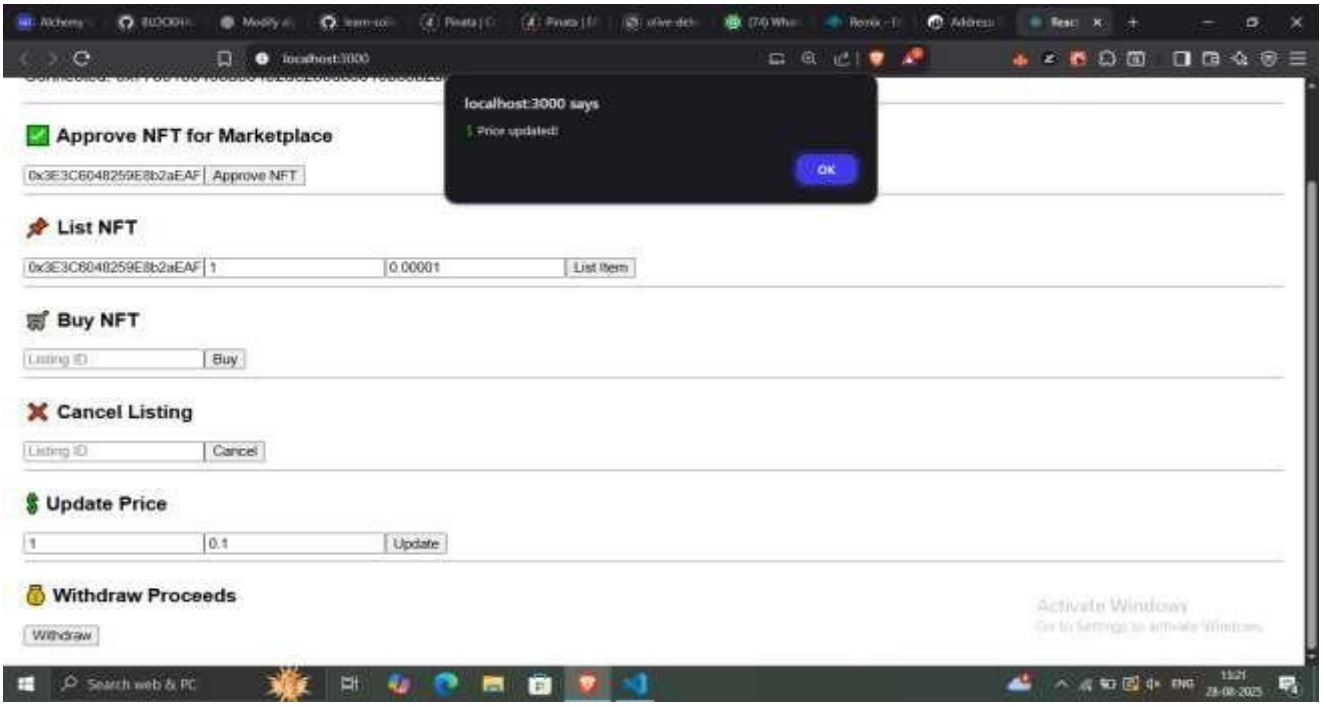




*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Implementation Phase: Final Output (no error)





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

* Observations:

- Marketplace requires **approval** before listing NFTs.
- Each NFT listing is tracked by a unique listingId.
- Buyers must pay **exact ETH** price, otherwise transaction fails.
- Smart contract prevents self-purchase by the seller.
- Sellers can cancel or update their NFT listings anytime.
- Proceeds are not sent instantly — instead they are **withdrawn securely**.
- Marketplace ensures **trustless peer-to-peer NFT trading** using blockchain logic.

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.