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USN – CSE 1BG19CS060

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ASSIGNMENT-5

LITE PAPER	WHITE PAPER
<ul style="list-style-type: none">• A light paper is a document that describes the architecture of an application. This type of documentation also provides general guidance for developers, which means it has to be easy to read and understand by non-technical team members.• A well-written light paper can help reduce project risks because everyone involved in development will know what's expected from them before they start working on the product or feature.• Examples: NFTX, Origin, Polkadot, Neufund, Blockbank.	<ul style="list-style-type: none">• A white paper is an in-depth, authoritative report on a specific issue or topic that you can use as a resource. It's intended to educate and persuade readers about your expertise and knowledge of the problem by explaining the issues around it and how they're being addressed.• A white paper can also provide company data that might not be included in another document. It's best if there is some kind of business goal tied to each document you produce, whether it's to increase membership or get more funding for an initiative. That way, people read what they need when they need it but still see how everything fits together as part of one program rather than several separate initiatives.• Examples: Well, HOQU, Sentigraph, Rentberry, Dribble.

Whitepaper vs Litepaper

Title	Whitepaper	Litepaper
Common sections	<ul style="list-style-type: none">• Executive summary• Business model and solution• Potential users and investors• Tokenomics• Market analysis• Competitive landscape• Development strategy• Marketing• Plans and forecasts for growth• Fund distribution• Team members	<ul style="list-style-type: none">• Introduction• Problem• The solution to the problem• Quick market figures• Details on the token• Team history and background• Website and contact details• Software details
Typical length	10 - 60 pages	3-12 pages
Writing style and tone	Technical, formal, informative	Conversational, non-technical, engaging

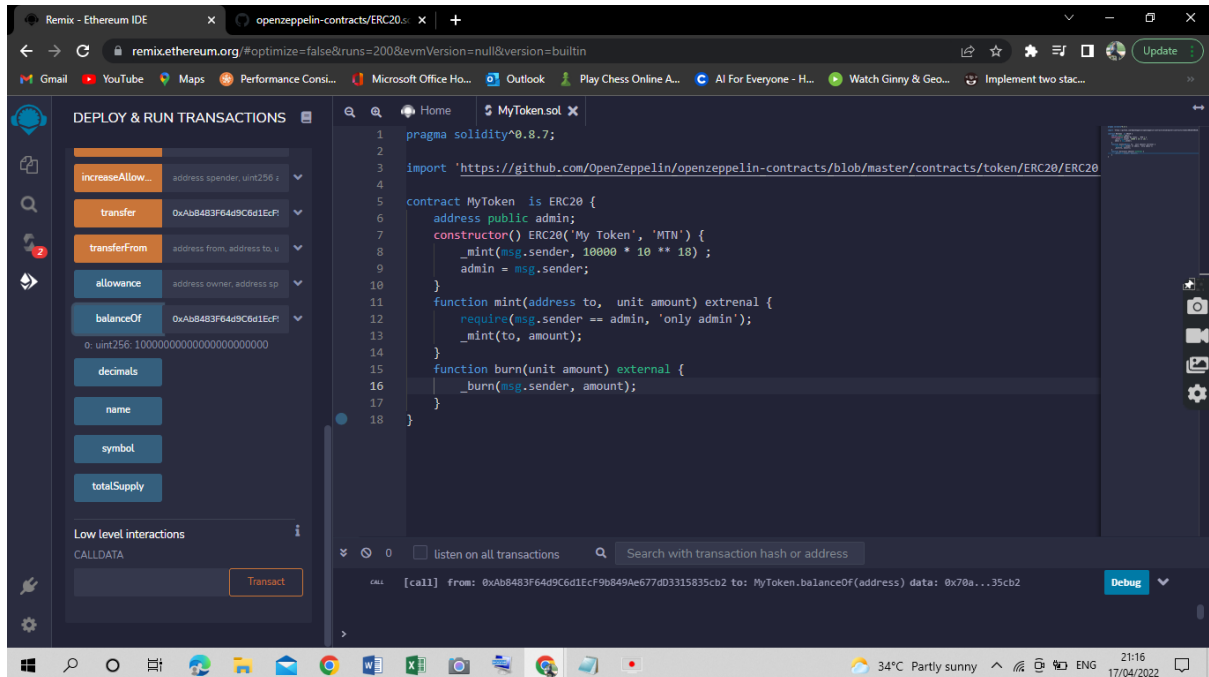
ASSIGNMENT-6

Creating a DeFi protocol

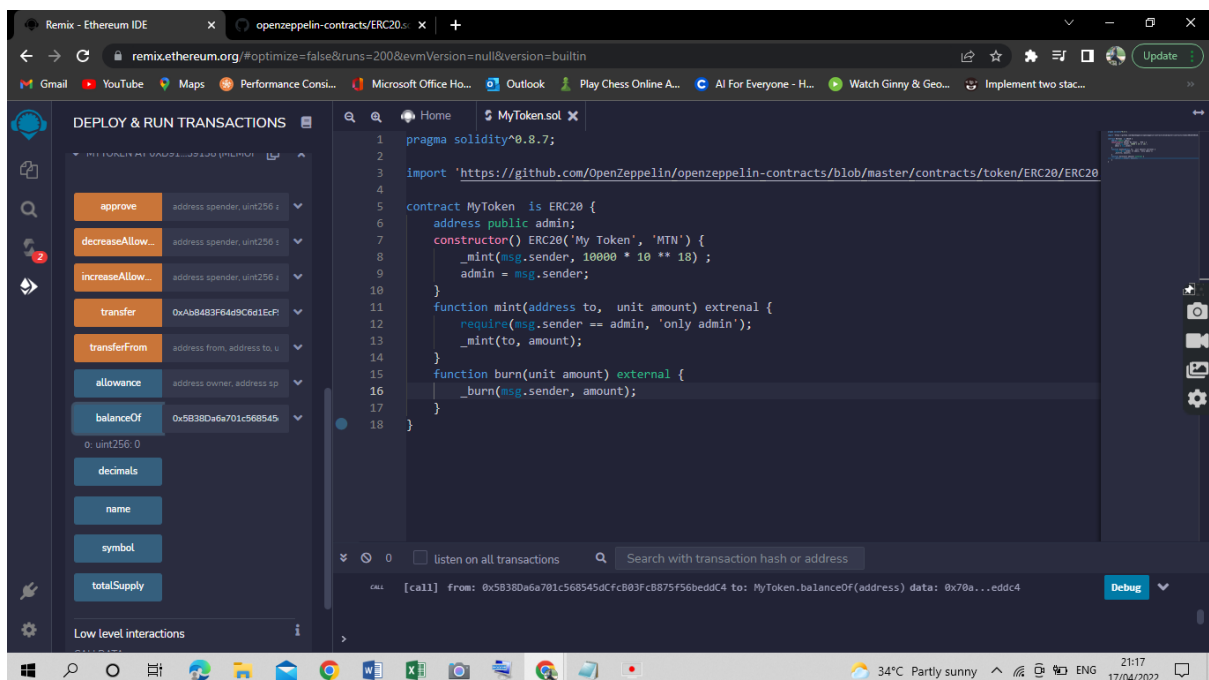
- i. ERC20 matters to DeFi, because it is an official protocol for proposing improvements to the Ethereum network.
- ii. Ethereum is able to support DApps, DApps are built on the existing Ethereum blockchain, piggybacking off of its underlying technology.

To create a ERC20 token on Ethereum:

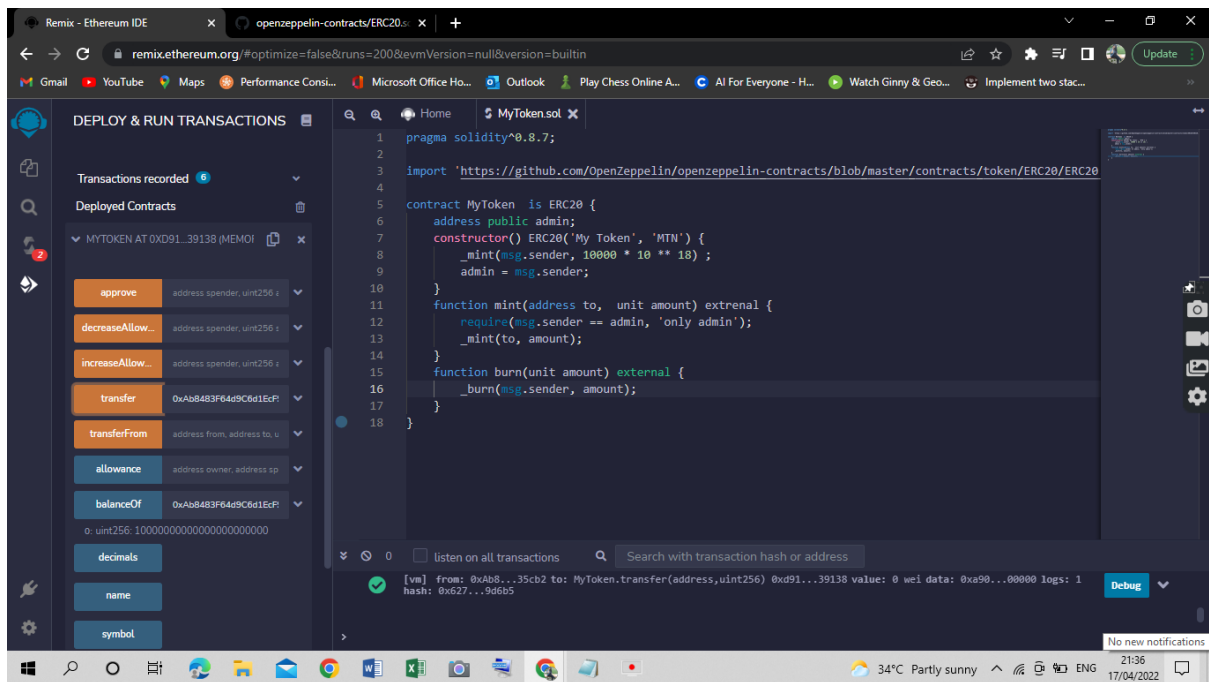
STEP 1: I have created a new file called “MyToken” and typed out the required code using the Zeppelin. There’s no error in the code so it has executed. In the picture below I am checking the balance and it shows 1000000000000000000 because in the code I’ve mentioned $100 * 10^{18}$.



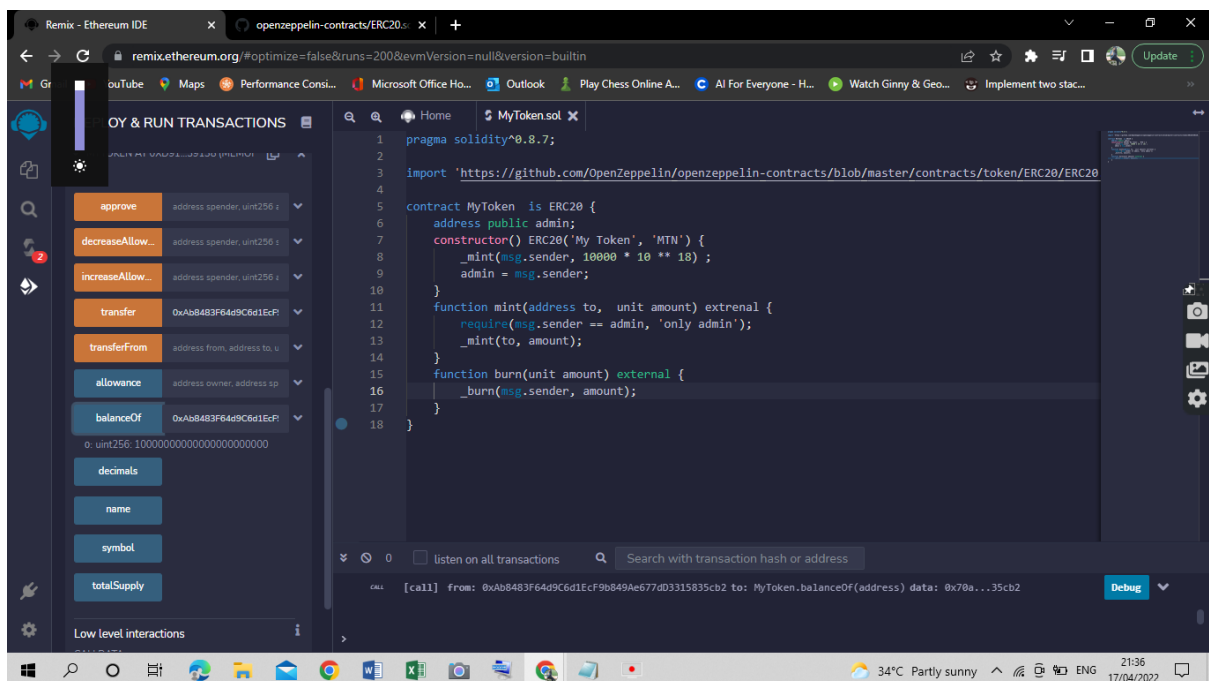
STEP 2: In the picture below I am checking the balance of the other account where I want to transfer the token. The current balance is 0.



STEP 3: In the transfer section copy pasting the address of the account from where I want to transfer the token followed by a comma and 10000000000000000000.



STEP 4: In the picture below the tokens have been transferred from first account to the second account. On entering the second accounts address to check the balance has been updated to 10000000000000000000 tokens.



STEP 5: In the picture below I can confirm that the token transfer is success. The first account form where I transferred the token currently has zero balance, whereas the second account has the tokens, this confirms the transaction was a success.

The screenshot displays the Remix Ethereum IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' sidebar is open, showing a list of transactions. The 'transfer' transaction is selected, with the 'from' address set to 0xab8483f64d9c6d1e6f and the 'to' address set to 0x4b20993bc481177ec7. The 'amount' is 0. The 'balanceOf' transaction is also visible, with the 'address' set to 0x70a...c02db. The main editor shows the Solidity code for the 'MyToken' contract, which is an ERC20 token. The code includes functions for minting, burning, and transferring tokens. The bottom status bar shows a successful transaction call: '[call] from: 0xab8483f64d9c6d1e6f to: MyToken.balanceOf(address) data: 0x70a...c02db'. The system tray at the bottom indicates the date and time as 17/04/2022, 21:37.

```
pragma solidity^0.8.7;

import 'https://github.com/OpenZeppelin/openzeppelin-contracts/blob/master/contracts/token/ERC20/ERC20.sol';

contract MyToken is ERC20 {
    address public admin;
    constructor() ERC20('My Token', 'MTN') {
        _mint(msg.sender, 10000 * 10 ** 18);
        admin = msg.sender;
    }
    function mint(address to, unit amount) external {
        require(msg.sender == admin, 'only admin');
        _mint(to, amount);
    }
    function burn(unit amount) external {
        _burn(msg.sender, amount);
    }
}
```

[call] from: 0xab8483f64d9c6d1e6f to: MyToken.balanceOf(address) data: 0x70a...c02db