

UJIAN AKHIR SEMESTER PRAKTIK SISTEM KEAMANAN DATA

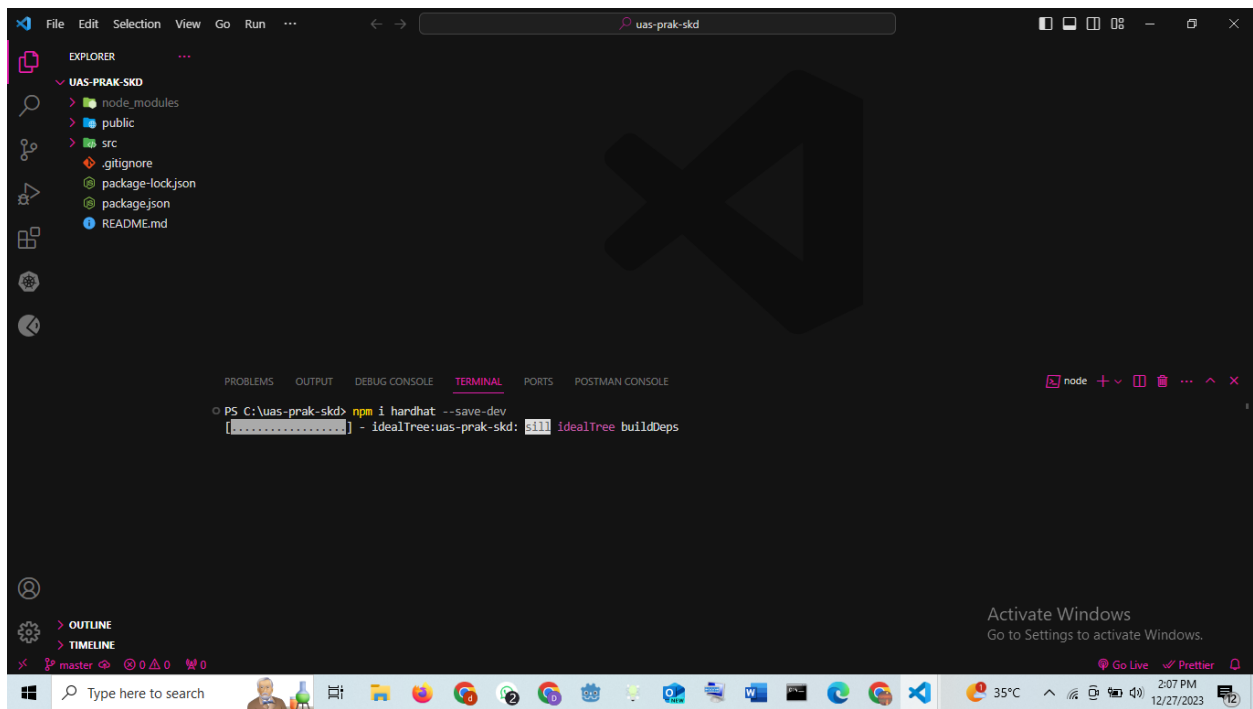


Disusun oleh :
DIAH MUNICA NAWANG
V3922015 / TI D

Dosen
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**PS D-III TEKNIK INFORMATIKA
SEKOLAH VOKASI UNIVERSITAS
SEBELAS MARET
2023**

The screenshot shows the Visual Studio Code editor with a dark theme. The Explorer sidebar on the left displays the file structure of a project named 'uas-prak-skid', including folders like 'node_modules', 'public', and 'src', and files like '.gitignore', 'package-lock.json', 'package.json', and 'README.md'. The main editor area is currently blank, showing a large, faint watermark of the Visual Studio Code logo. At the bottom, the TERMINAL panel is active, showing a PowerShell prompt with the command 'npm i hardhat --save-dev' entered. The status bar at the very bottom indicates the current branch is 'master' and shows various icons for debugging and testing. The Windows taskbar is visible at the bottom of the screen, showing the search bar and several open applications.



```
PS C:\uas-prak-skd> npm i hardhat --save-dev

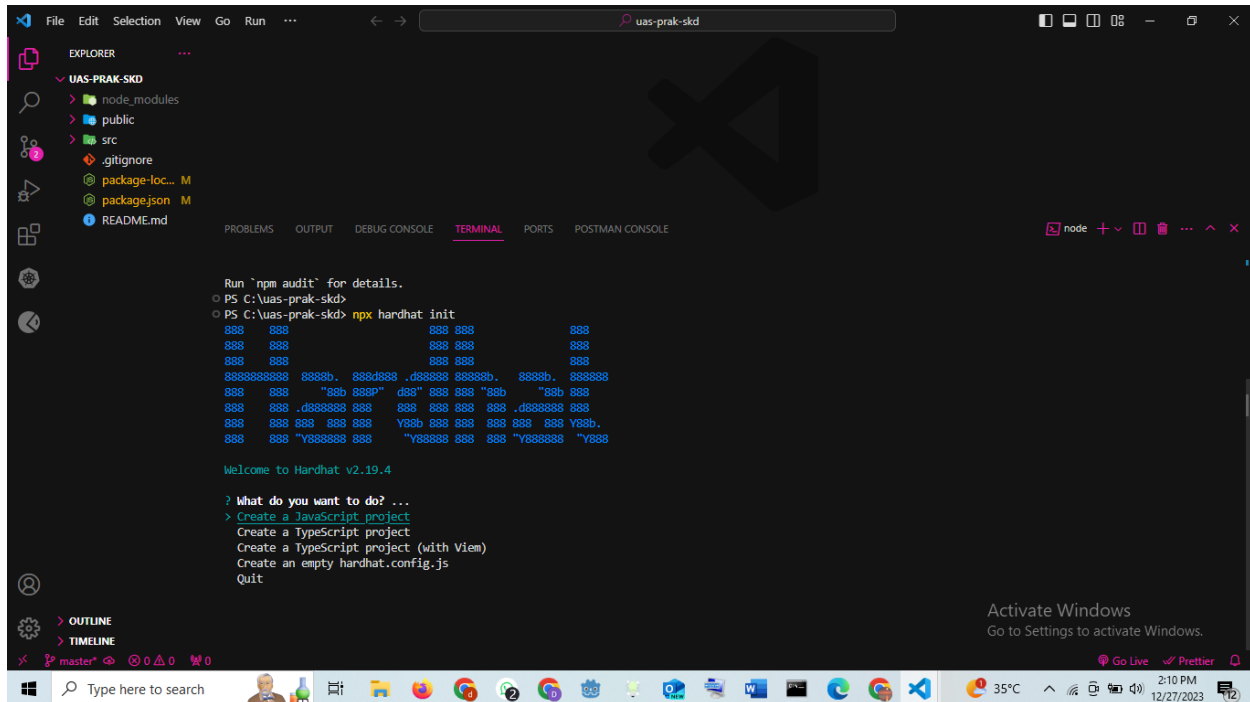
added 224 packages, and audited 1779 packages in 2m

304 packages are looking for funding
  run `npm fund` for details

8 vulnerabilities (2 moderate, 6 high)

To address all issues (including breaking changes), run:
  npm audit fix --force
```

3. *npx hardhat init*

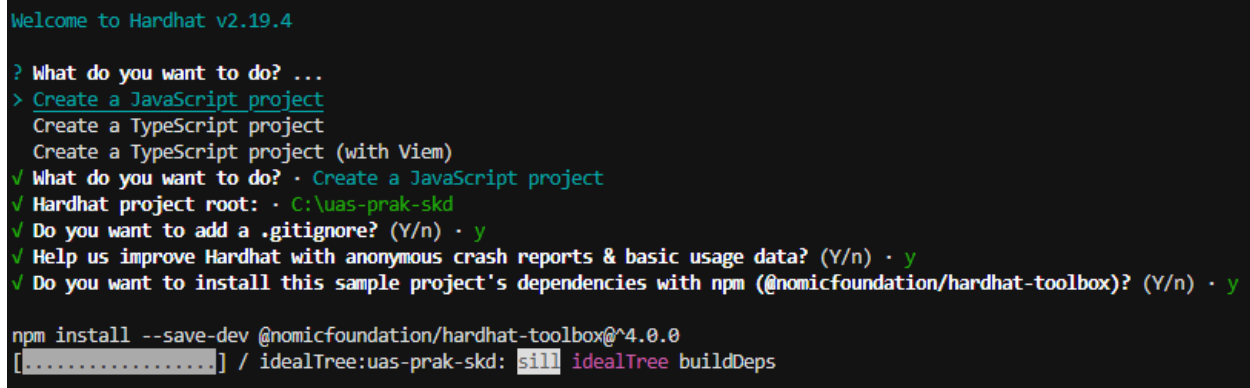


The screenshot shows the Visual Studio Code interface with a terminal window open. The Explorer sidebar on the left shows the project structure for 'uas-prak-skd', including folders like 'node_modules', 'public', and 'src', and files like '.gitignore', 'package-lock.json', 'package.json', and 'README.md'. The terminal window displays the command 'npx hardhat init' and its output, which includes a welcome message and a list of options to create a project. The Windows taskbar at the bottom shows the system clock as 2:10 PM on 12/27/2023.

```
Run `npm audit` for details.
PS C:\uas-prak-skd> npx hardhat init
888 888 888 888 888
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888 888 .d888888 888 888 888 888 .d888888 888
888 888 888 888 888 Y88b 888 888 888 Y88b.
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Welcome to Hardhat v2.19.4

? What do you want to do? ...
> Create a JavaScript project
Create a TypeScript project
Create a TypeScript project (with Viem)
Create an empty hardhat.config.js
Quit
```



This screenshot shows the continuation of the Hardhat initialization process in a terminal. It displays the prompts for creating a project, the selection of 'Create a JavaScript project', and the subsequent prompts for adding a .gitignore file, improving crash reports, and installing dependencies. The terminal shows the successful installation of the Hardhat toolbox and the creation of the project files.

```
Welcome to Hardhat v2.19.4

? What do you want to do? ...
> Create a JavaScript project
Create a TypeScript project
Create a TypeScript project (with Viem)
✓ What do you want to do? · Create a JavaScript project
✓ Hardhat project root: · C:\uas-prak-skd
✓ Do you want to add a .gitignore? (Y/n) · y
✓ Help us improve Hardhat with anonymous crash reports & basic usage data? (Y/n) · y
✓ Do you want to install this sample project's dependencies with npm (@nomicfoundation/hardhat-toolbox)? (Y/n) · y

npm install --save-dev @nomicfoundation/hardhat-toolbox@^4.0.0
[.....] / idealTree:uas-prak-skd: sill idealTree buildDeps
```

```

npm install --save-dev @nomicfoundation/hardhat-toolbox@^4.0.0

added 194 packages, changed 2 packages, and audited 1973 packages in 2m

314 packages are looking for funding
  run `npm fund` for details

8 vulnerabilities (2 moderate, 6 high)

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.

Project created

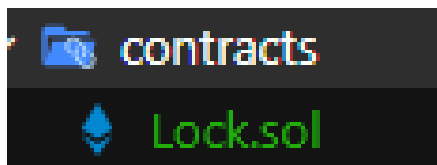
See the README.md file for some example tasks you can run

Give Hardhat a star on Github if you're enjoying it!

https://github.com/NomicFoundation/hardhat

Please take a moment to complete the 2023 Solidity Survey: https://hardhat.org/solidity-survey-2023
PS C:\uas-prak-skd>

```



```

PS C:\uas-prak-skd> npm install -g hardhat
[#####.....] \ idealTree:ethereumjs-abi: sill placeDep node_modules/hardhat bn.js@5.2.1 OK for: @ethersproject/bignumber@5.7.0 want: ^5.2.1

```

```

Please take a moment to complete the 2023 Solidity Survey: https://hardhat.org/solidity-survey-2023

PS C:\uas-prak-skd> npm install -g hardhat

added 311 packages in 1m

69 packages are looking for funding
  run `npm fund` for details
PS C:\uas-prak-skd> npx hardhat compile
Downloading compiler 0.8.19
Compiled 1 Solidity file successfully (evm target: paris).
PS C:\uas-prak-skd>

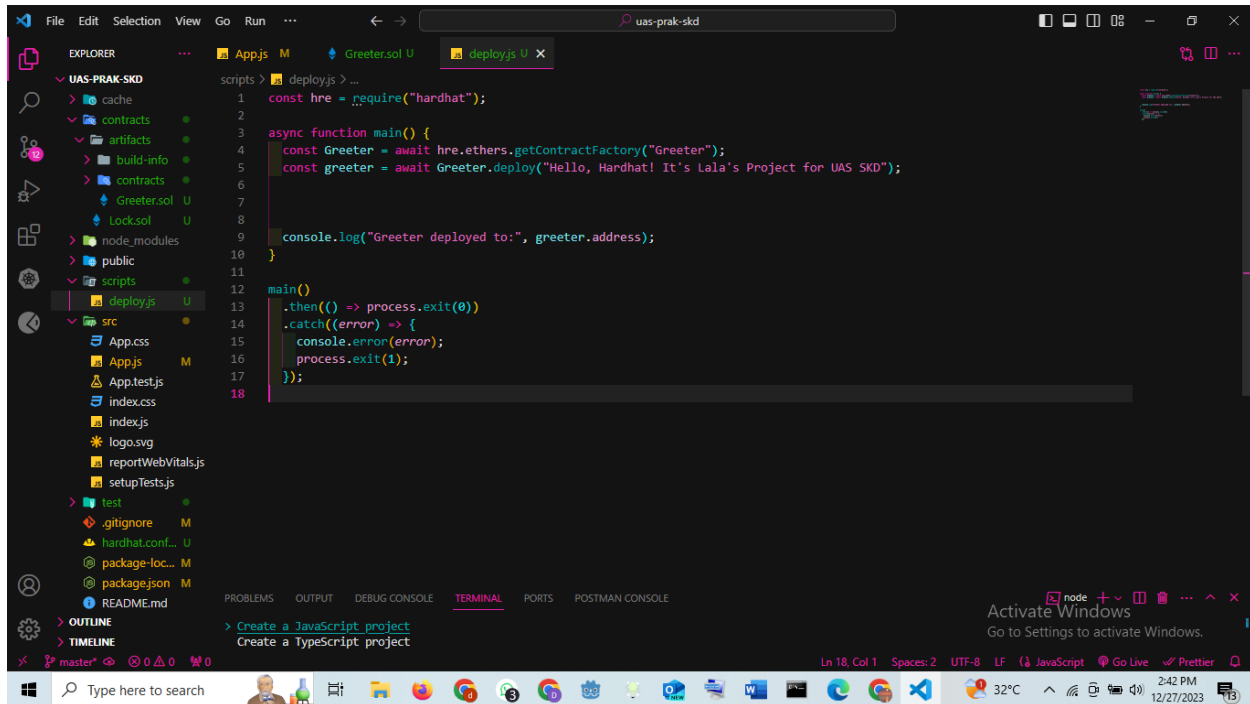
```

4. Tulis script

contracts/Greeter.sol

```
1 //SPDX-License-Identifier: Unlicense
2 pragma solidity ^0.8.0;
3
4 import "hardhat/console.sol";
5
6 contract Greeter {
7     string private greeting;
8
9     constructor(string memory _greeting) {
10         console.log("Deploying a Greeter with greeting:", _greeting);
11         greeting = _greeting;
12     }
13
14     function greet() public view returns (string memory) {
15         console.log("Entering greet function");
16         // ... rest of the code ...
17         console.log("Exiting greet function");
18         return greeting;
19     }
20
21     function setGreeting(string memory _greeting) public {
22         console.log("Changing greeting from '%s' to '%s'", greeting, _greeting);
23         greeting = _greeting;
24     }
25 }
26
27
28
```

script/Deploy.js



```
1 const hre = require("hardhat");
2
3 async function main() {
4   const Greeter = await hre.ethers.getContractFactory("Greeter");
5   const greeter = await Greeter.deploy("Hello, Hardhat! It's Lala's Project for UAS SKD");
6
7   console.log("Greeter deployed to:", greeter.address);
8 }
9
10
11
12 main()
13   .then(() => process.exit(0))
14   .catch((error) => {
15     console.error(error);
16     process.exit(1);
17   });
18
```

5. *npx hardhat compile* (untuk mengcompile solidity)

```
PS C:\uas-prak-skd> npx hardhat compile
Compiled 3 Solidity files successfully (evm target: paris).
```

6. *npx hardhat node*

```
PS C:\uas-prak-skd> npx hardhat node
Started HTTP and WebSocket JSON-RPC server at http://127.0.0.1:8545/

Accounts
=====

WARNING: These accounts, and their private keys, are publicly known.
Any funds sent to them on Mainnet or any other live network WILL BE LOST.

Account #0: 0xf39Fd6e51aad88F6F4ce6aB8827279cFfFb92266 (10000 ETH)
Private Key: 0xac0974bec39a17e36ba4a6b4d238ff944bacb478cbed5efcae784d7bf4f2ff80

Account #1: 0x70997970C51812dc3A010C7d01b50e0d17dc79C8 (10000 ETH)
Private Key: 0x59c6995e998f97a5a0044966f0945389dc9e86dae88c7a8412f4603b6b78690d

Account #2: 0x3C44CdDdB6a900fa2b585dd299e03d12FA4293BC (10000 ETH)
Private Key: 0x5de4111afa1a4b94908f83103eb1f1706367c2e68ca870fc3fb9a804cdab365a

Account #3: 0x90F79bf6EB2c4f870365E785982E1f101E93b906 (10000 ETH)
Private Key: 0x7c852118294e51e653712a81e05800f419141751be58f605c371e15141b007a6
```

7. *buat interface react*

UAS SKD

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Fetch Greeting

Set Greeting

Set Greeting Message

Greeting:

8. jika fetch greeting maka akan menampilkan greeting yang telah dibuat

