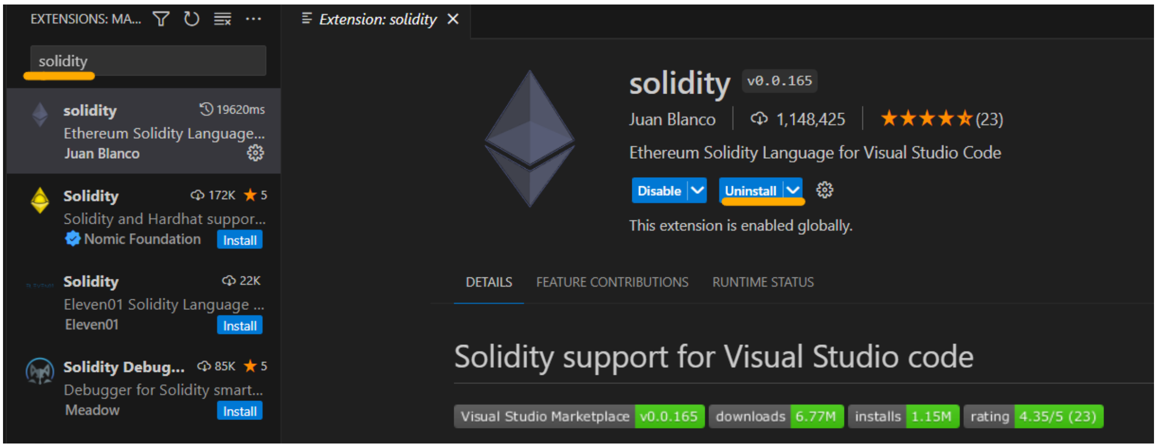
Master: Distributed Information Systems Engineering and Security
Teacher: Mrs. LOUDINI Souad
Subject: Blockchain for finance and banks

Tp N° 1

❖ Installation:

1- Install Visual Studio Code: If you don't already have VS Code installed, you can download it from the official website:([Visual Studio Code - Code Editing. Redefined](#))

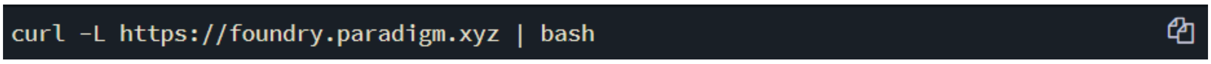
2- Install Visual Studio Code Extensions: You'll need to install some extensions in VS Code to enhance your Solidity development experience.


EXTENSIONS: MA...
solidity
solidity 19620ms
Ethereum Solidity Language...
Juan Blanco
Solidity 172K ★5
Solidity and Hardhat suppor...
Nomic Foundation Install
Solidity 22K
Eleven01 Solidity Language ...
Eleven01 Install
Solidity Debug... 85K ★5
Debugger for Solidity smart...
Meadow Install
Extension: solidity
solidity v0.0.165
Juan Blanco 1,148,425 ★★★★★(23)
Ethereum Solidity Language for Visual Studio Code
Disable Uninstall
This extension is enabled globally.
DETAILS FEATURE CONTRIBUTIONS RUNTIME STATUS
Visual Studio Marketplace v0.0.165 downloads 6.77M installs 1.15M rating 4.35/5 (23)

Solidity support for Visual Studio code

3 - Install foundry : to learn more visit this website : [Introduction - Foundry Book (getfoundry.sh)](#)

Foundryup is the Foundry toolchain installer.Open your terminal and run the following command:



```
curl -L https://foundry.paradigm.xyz | bash
```

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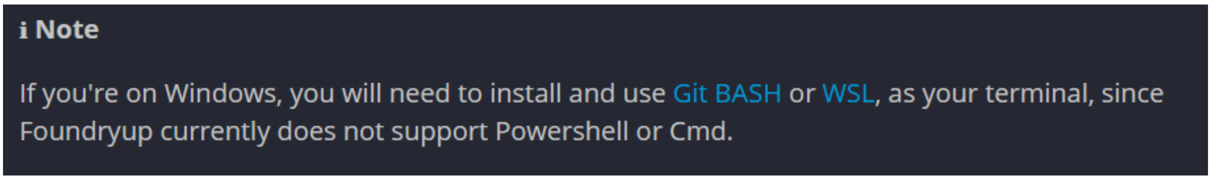
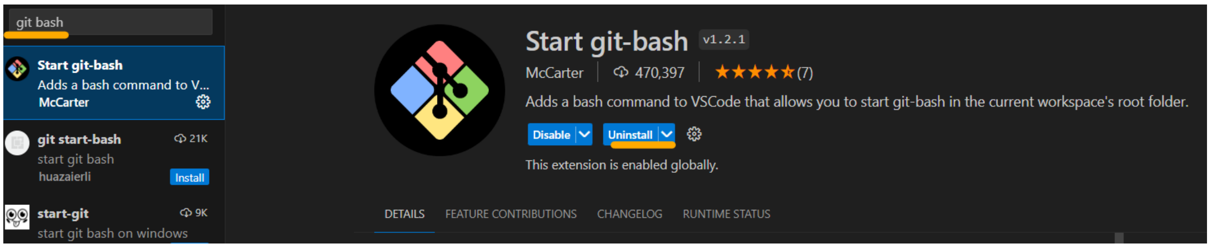


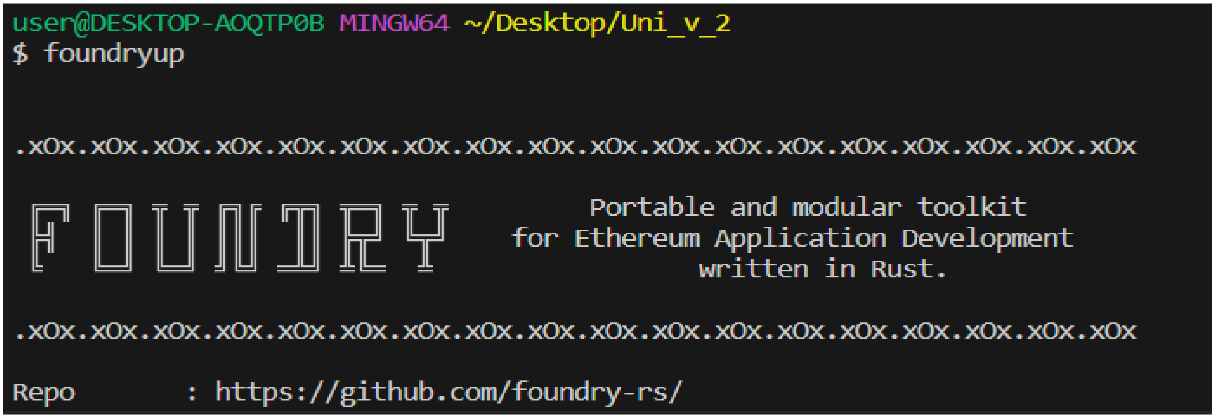
i Note

If you're on Windows, you will need to install and use Git BASH or WSL, as your terminal, since Foundryup currently does not support Powershell or Cmd.

I also recommend to install Git Bash as an extension in your VS Code :



To make sure that you have installed foundry in a correct way , Run this line of Command : foundyup

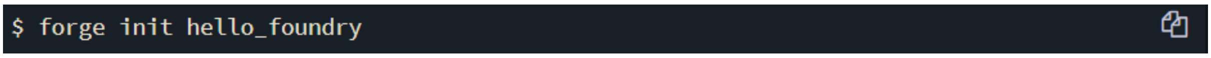


```
user@DESKTOP-AOQTP0B MINGW64 ~/Desktop/Uni_v_2
$ foundryup

.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx

 FOUNDRY                 Portable and modular toolkit
                    for Ethereum Application Development
                              written in Rust.

.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx.xOx

Repo          : https://github.com/foundry-rs/
```

- ❖ **Set your project:**

4 - Initialize a Foundry project :

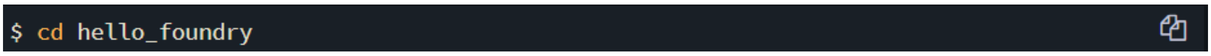
To start a new project with Foundry, use `forge init`:



```
$ forge init hello_foundry
```

- You can change the name of the folder 'hello_foundry' to any name you prefer.

To start dealing with your contract , you first have to access to your folder by running this command : cd Name_of_your_folder

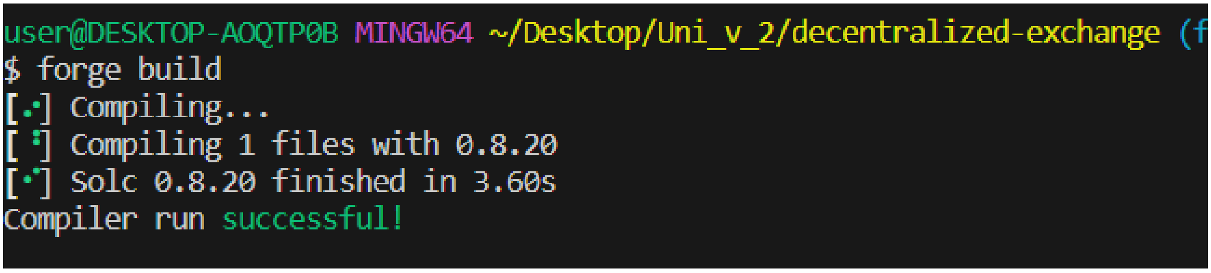


```
$ cd hello_foundry
```

- ❖ Question : Which folders do you find when initializing this project?

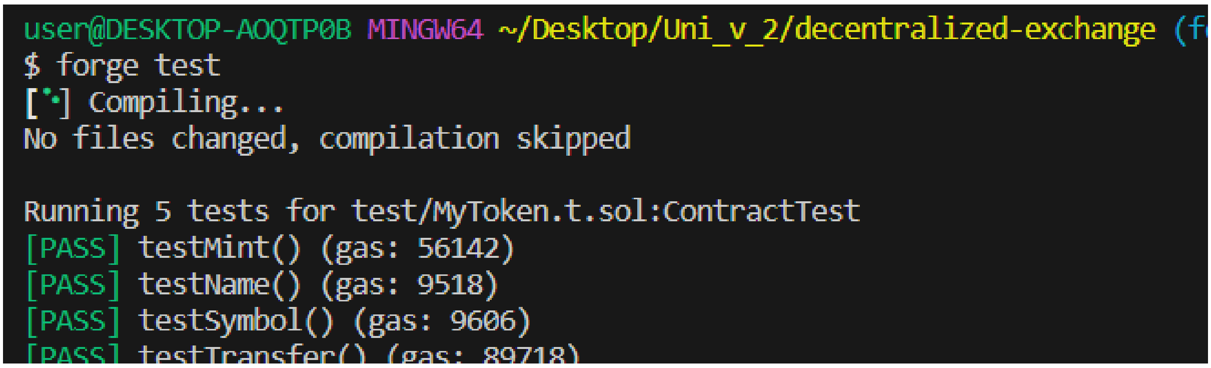
5 - Run and Test your contract :

- We can build the project with `forge build`: (To make sure that all your contracts work correctly) Run :



```
user@DESKTOP-AOQTP0B MINGW64 ~/Desktop/Uni_v_2/decentralized-exchange (f
$ forge build
[⠊] Compiling...
[⠒] Compiling 1 files with 0.8.20
[⠢] Solc 0.8.20 finished in 3.60s
Compiler run successful!
```

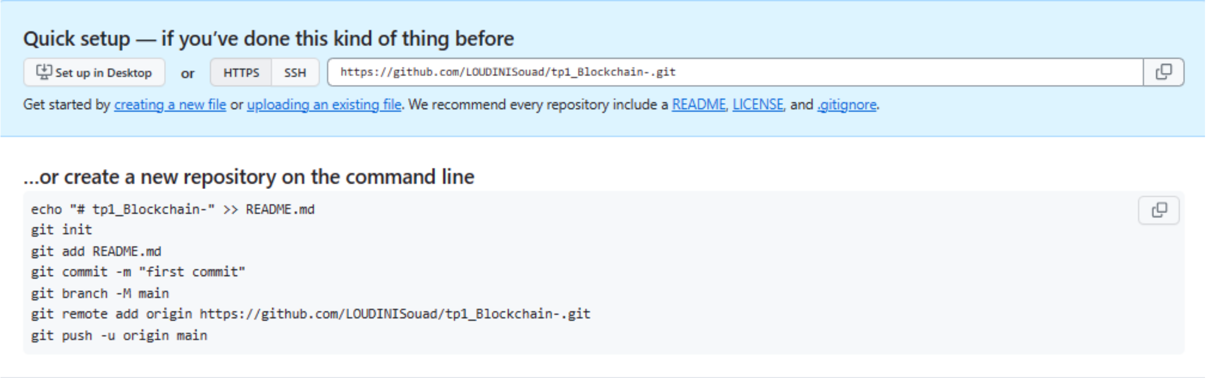
- And run the tests with `forge test`:



```
user@DESKTOP-AOQTP0B MINGW64 ~/Desktop/Uni_v_2/decentralized-exchange (f
$ forge test
[⠢] Compiling...
No files changed, compilation skipped

Running 5 tests for test/MyToken.t.sol:ContractTest
[PASS] testMint() (gas: 56142)
[PASS] testName() (gas: 9518)
[PASS] testSymbol() (gas: 9606)
[PASS] testTransfer() (gas: 89718)
```

❖ I recommend that you create a repository in your GitHub account and regularly push your project's updates to it.

➔ Create a New repository and Follow these steps :



Quick setup — if you've done this kind of thing before

https://github.com/LOUDINISouad/tp1_Blockchain-.git

Get started by creating a new file or uploading an existing file. We recommend every repository include a README, LICENSE, and .gitignore.

...or create a new repository on the command line

```
echo "# tp1_Blockchain-" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/LOUDINISouad/tp1_Blockchain-.git
git push -u origin main
```

Good Luck