### **DA51 Lab Session 3: Smart Contract**

#### Question 4:

The purpose of NPM is to manage all dependencies of a node project.

#### **Question 7:**

One the command is executed I get a package.json that hold all information I entered during the command process

```
"version": "1.0.0",
"main": "index.js",
"scripts": {
                         "test": "echo \"Error: no test specified\" && exit 1"
                       },
"author": "",
                       "license": "ISC",
"description": ""
PS C:\dev\DA53\TP3\Lab3> npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.
See `npm help init` for definitive documentation on these fields
and exactly what they do.
Use `npm install <pkg>` afterwards to install a package and
save it as a dependency in the package.json file.
Press ^C at any time to quit.
package name: (lab3)
version: (1.0.0)
description:
entry point: (index.js)
test command:
git repository:
keywords:
author:
license: (ISC)
About to write to C:\dev\DA53\TP3\Lab3\package.json:
  "name": "lab3",
  "version": "1.0.0",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  "author": "",
"license": "ISC"
  "description": ""
Is this OK? (yes) yes
```

### Question 8:

It contains all information of my project

```
{
  "name": "lab3",
  "version": "1.0.0",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "author": "",
  "license": "ISC",
  "description": ""
}
```

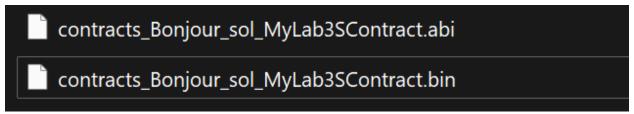
#### **Question 14:**

Npm is used to install dependencies. Option -g means that this package is installed for all project.

After this question, all answer will be from WSL.

### Question 19:

The command make two different files, one for with the .abi extension and another for the .bin extension.



## Question 20:

```
jules@TABLET-TQGU8LI5:/mnt/c/dev/DA51_TP/Lab session 3$ ls
combined.json contracts_Bonjour_sol_MyLab3SContract.abi package.json
contracts_Bonjour_sol_MyLab3SContract.bin
```

#### Ouestion 22:



#### Question 23:

It includes the three different output formats, which we had specified. It includes the following fields: abi, bin, and metadata

## Question 24:

There is the abi output which is a descriptor of the functions and the data within a contract which will allow us to interact with it.

### Question 25:

Then there is the binary byte code for the contract.

# Question 26:

And finally, there is a metadata field which includes various details about the contract itself.

## Question 29, 30, 31 et 32:

## Queston 34:

```
"name": "lab-session-3",
  "version": "1.0.0",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
    },
    "author": "",
    "license": "ISC",
    "description": "",
    "dependencies": {
        "ganache-cli": "^6.12.2",
        "mocha": "^10.8.2",
        "solc": "^0.8.28",
        "web3": "^4.14.0"
    }
}
```

# Question 35:

In the package-lock.json, there are all the dependencies required for the dependencies added with the command.

## Question 40:

## Question 44:

There is no output in the terminal because we comment the line that print in the terminal.

### Question 50:

```
PS C:\dev\DA51_TP\Lab session 3> npm test

> lab-session-3@1.0.0 test

> mocha

MyLab3SContract

[
'0x358bC94DeF0f9C34355ce926930F8028fbB2CC47',
'0x4FAD93Ded19D225920610A1407083F7844930801',
'0x6Cea4457c61E943907908feDb57852D54b4CC5bd',
'0x6BBF361CdeB695913Cf8133553FB204996e321B7',
'0x7f4a0054221b7334B2C07AbDCfd37ABBe594564C',
'0xf88Ee7967F40347Bf1Dd11e88a081ef51c204812',
'0xeA522a0FC2e5CcA9e7914cb683113bd89b97C41e',
'0x2cF965731a09F7D4dc4A61B2947A97cbeFcd23e6',
'0x530E971718Df725D753d8fa7680264fD3737Bd2f',
'0xbd11F71Ad494Ba9B9d3346f368430DD1Ca81B6D6'

]

Deploy a contract

1 passing (232ms)
```