**Name:** Mansoor Tariq

**Roll No:** 20L-1369.

# **Blockchain and Cryptocurrency**

# **Assignment # 2**

# **Task 1:**

## **Install Virtual Box:**

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## **Install Ubuntu Linux:**

A screen shot of a computer

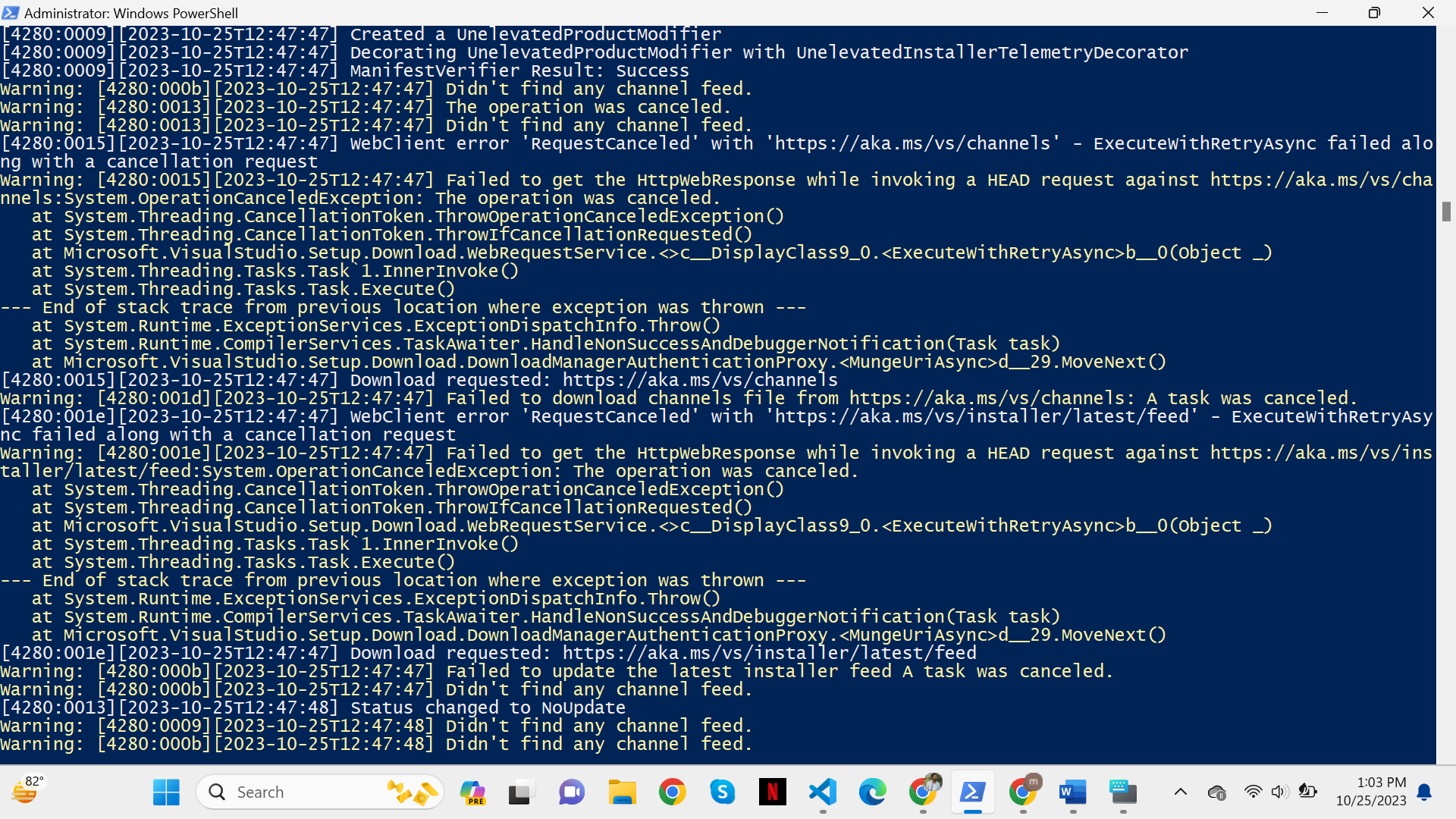
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# **Task 2:**

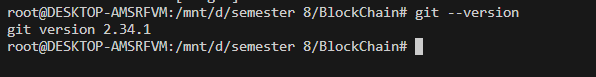
## **Setting up the development environment:**

### **1st Step:**

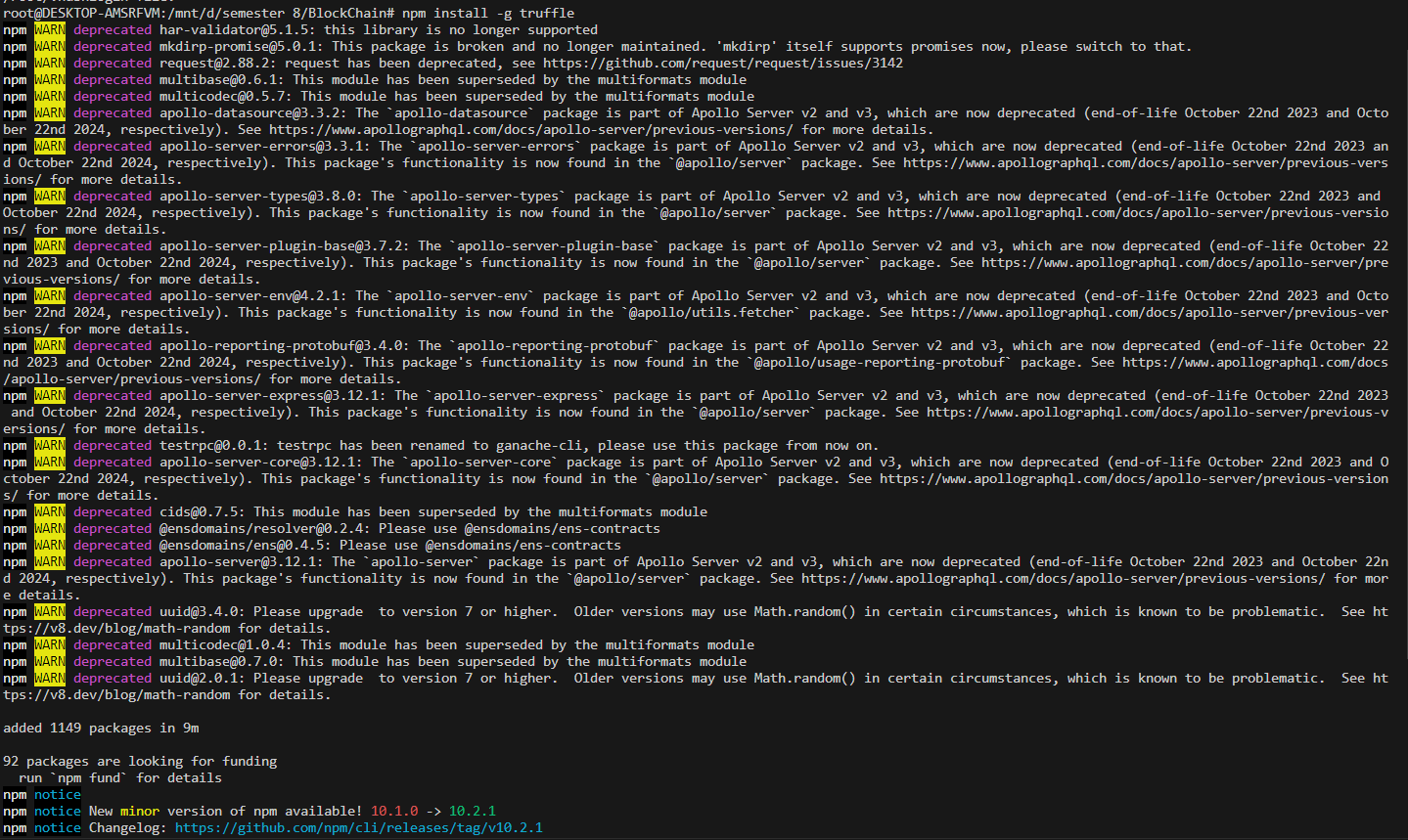
Installing Node.js v8+ LTS and npm.



Installing Git:



Installing truffle:



Truffle --version

A screen shot of a computer code

Description automatically generated

## **Creating a Truffle project using a Truffle Box**

Create a directory in the development folder and then move inside it.

A screenshot of a computer screen

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Using the truffle unbox command to unpack the Truffle Box

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# **Task # 3:**

### **Writing the smart contract**

A computer screen shot of a program

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### **Compilation**

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### **Migration**

Creating 2\_deploy\_contracts.js and writing content

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Installing Ganache

A screenshot of a computer

Description automatically generated

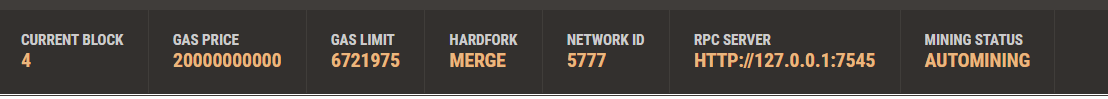
Migrating the contract to the blockchain

A screenshot of a computer program

Description automatically generated



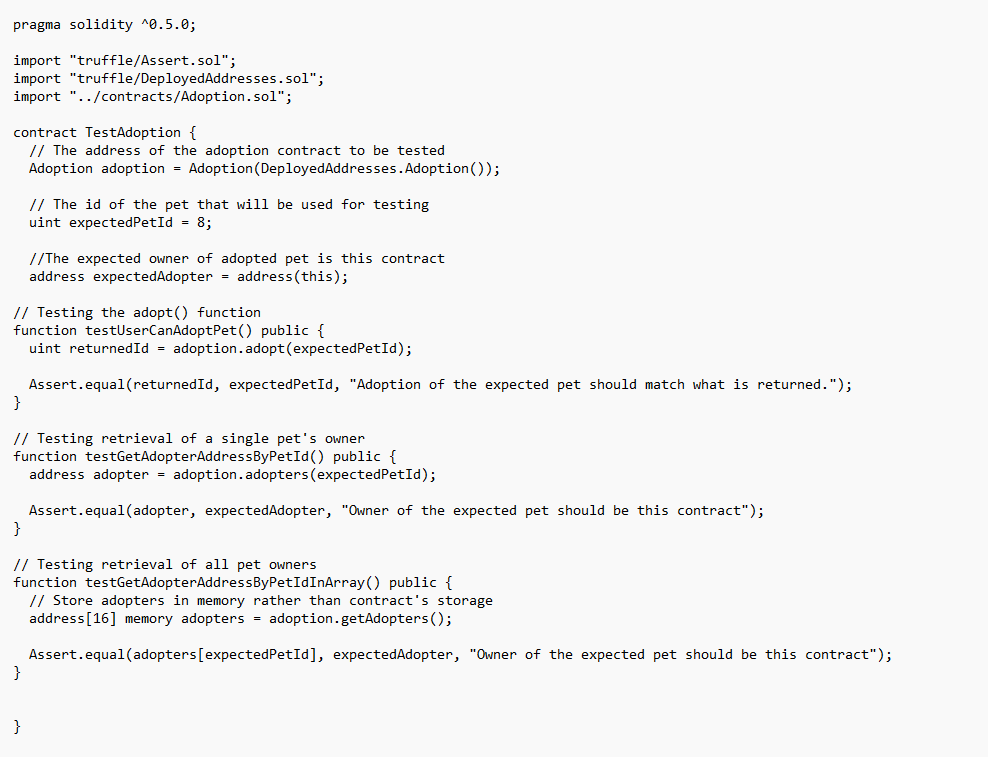
The state of Blockchain changed.



### **Testing the smart contract**

Creating two files in Test Directory

1. TestAdoption.sol



1. testAdoption.test.js

A screenshot of a computer program

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Back in the terminal, run the tests:

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# **Task 4:**

Instantiating web3: Done all the changes in the file app.js

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A screenshot of a computer program

Description automatically generated

MetaMask

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Description automatically generated

Creating new network

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Description automatically generated

Adding money

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Interacting with the dapp in a browser

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Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a phone

Description automatically generated

Link to video:

<https://drive.google.com/file/d/1RwpS24e3McMCTEjP_1ULHgJnJ14E_Kpt/view?usp=sharing>