

Cortez, Lawrence Neil M.
NW-301

EVEN Units (PC) only

Develop a Solidity smart contract that calculates a total service fee and generates a unique hash value based on specific input parameters(sample data).

First name: Jose

Middle Name: Balsa

Last name: Rizal

Service code: [1 or 2]

**1 : Consultation = 20,000 plus 15% tax

**2: Documents = 3,000 plus 8% service charge plus 15% tax

Service Fee:

Hash Generation requirements:

Message format = last character of the first name, first character of the middle name, last character of the Lastname, service code, first digit of the service fee

Service code =1 use abi.encode

Service code =2 use abi.encodePacked

Deploy the contract using first account of the ganche if the service code = 1

Deploy the contract using your MetaMask main account is the service code = 2.

Provide clear, high-resolution screenshots of the following:

1. Wallet Balances: Your Ganache or MetaMask account before and after deployment to show the gas deduction.
2. Contract Execution: The Remix (or IDE) console showing the calculated Service Fee and the resulting Hash Value.

Filename Format: Lastname_Unit#_Quiz1Lab.sol/ Lastname_Unit #_Quiz1Lab.docx/pdf

Cortez, Lawrence Neil M.
NW-301

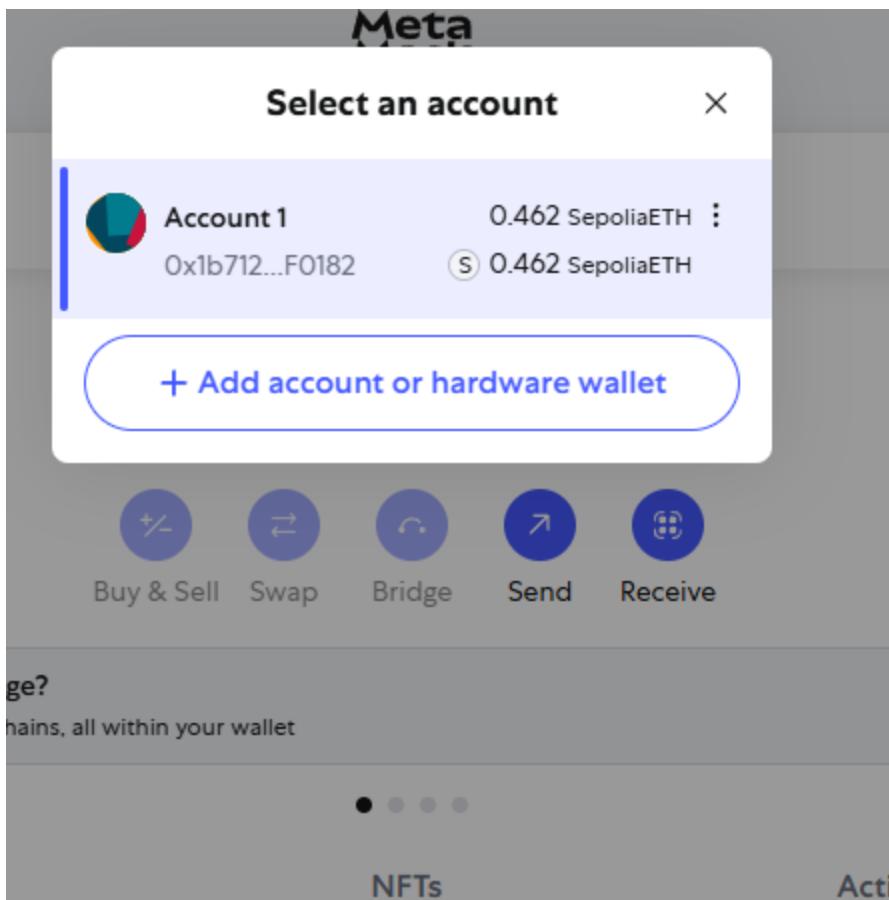
BEFORE DEPLOYMENT:

The screenshot shows the MetaMask wallet interface on the Sepolia network. At the top, it displays "Account 1" with the address "0x1b712...F0182". Below this, the balance is shown as "0.4624 SepoliaETH" with a green circular icon. A link to "Portfolio" is also present. A banner at the top says "Ready to bridge? Move across 9 chains, all within your wallet" with a close button "X" and a small profile picture.

Below the balance, there are five buttons: "Buy & Sell", "Swap", "Bridge", "Send", and "Receive".

The main content area has three tabs: "Tokens" (selected), "NFTs", and "Activity". Under "Tokens", it shows "SepoliaETH" with a balance of "0.46243 SepoliaETH". There is also a "MetaMask support" link.

Cortez, Lawrence Neil M.
NW-301



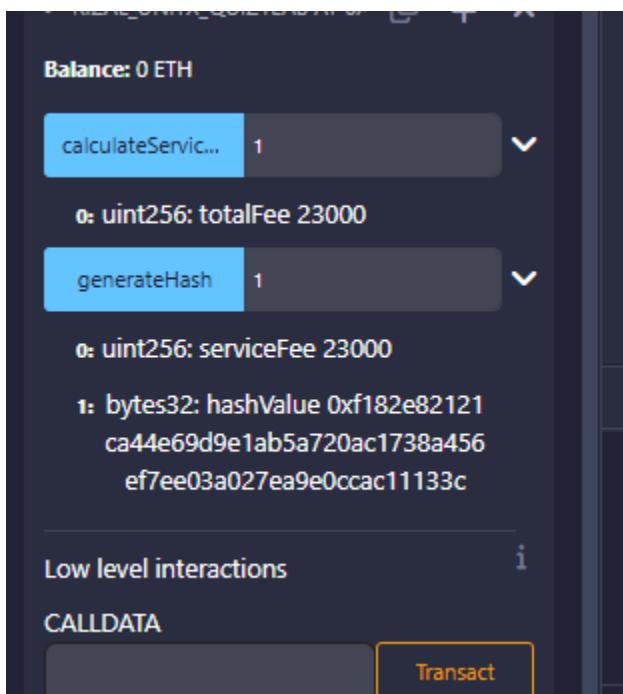
GENERATE HASH:

The screenshot shows the Truffle UI interface for interacting with a deployed contract. On the left, under "Deployed Contracts", there is one item: "RIZAL_UNITX_QUIZ1LAB AT 0x". Below it, the "Balance" is listed as "0 ETH". Under the contract, there are two buttons: "calculateServiceCode" (disabled) and "generateHash". The "generateHash" button is highlighted with a blue background and has the value "1" next to it. Below these buttons, transaction details are shown: "0: uint256: serviceFee 23000" and "1: bytes32: hashValue 0xf182e82121 ca44e69d9e1ab5a720ac1738a456 ef7ee03a027ea9e0ccac11133c". At the bottom of this section, there are buttons for "Low level interactions", "CALLDATA", and "Transact". On the right side, there is a "CALL" button followed by a detailed transaction log: "[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: Rizal_UnitX_Quiz1Lab.generateHash(uint256) data: 0x406...00001". Below this log, there are buttons for "Debug" and "AI copilot". At the very bottom, there are buttons for "Listen on all transactions" and "Filter with transaction hash or ad...".

Cortez, Lawrence Neil M.

NW-301

CALCULATE SERVICE FEE:



DEPLOYMENT:

Cortez, Lawrence Neil M.
NW-301

The screenshot shows the MetaMask wallet interface. At the top, it displays "Account 1" with the address "0x1b712...F0182". Below the account info are five buttons: "Buy & Sell", "Swap", "Bridge", "Send", and "Receive". A modal window titled "Ready to bridge?" with the sub-instruction "Move across 9 chains, all within your wallet" is visible. The main area is titled "Activity" and shows two entries:

- Feb 3, 2026**
Contract deployment (Unapproved) -0 SepoliaETH
-0 SepoliaETH
- Feb 3, 2026**
Contract deployment (Confirmed) -0 SepoliaETH
-0 SepoliaETH

At the bottom, there is a code editor window showing Solidity code related to a service contract. The code includes variables like `firstInitial`, `middleInitial`, etc., and a constructor definition. Below the code editor are several UI elements: "Explain contract", "AI copilot", "Listen on all transactions", "Filter with transaction hash or address", and a note about Etherscan verification.

```
54
55     firstInitial,
56     middleInitial,
57     lastInitial,
58     serviceCode,
59     firstDigit
60 );
```

Verification contract deployed. Checking explorers for registration...
Etherscan verification skipped: API key not provided.
Please input the API key in Remix Settings - Connected Services OR Contract Verification Plugin Settings.

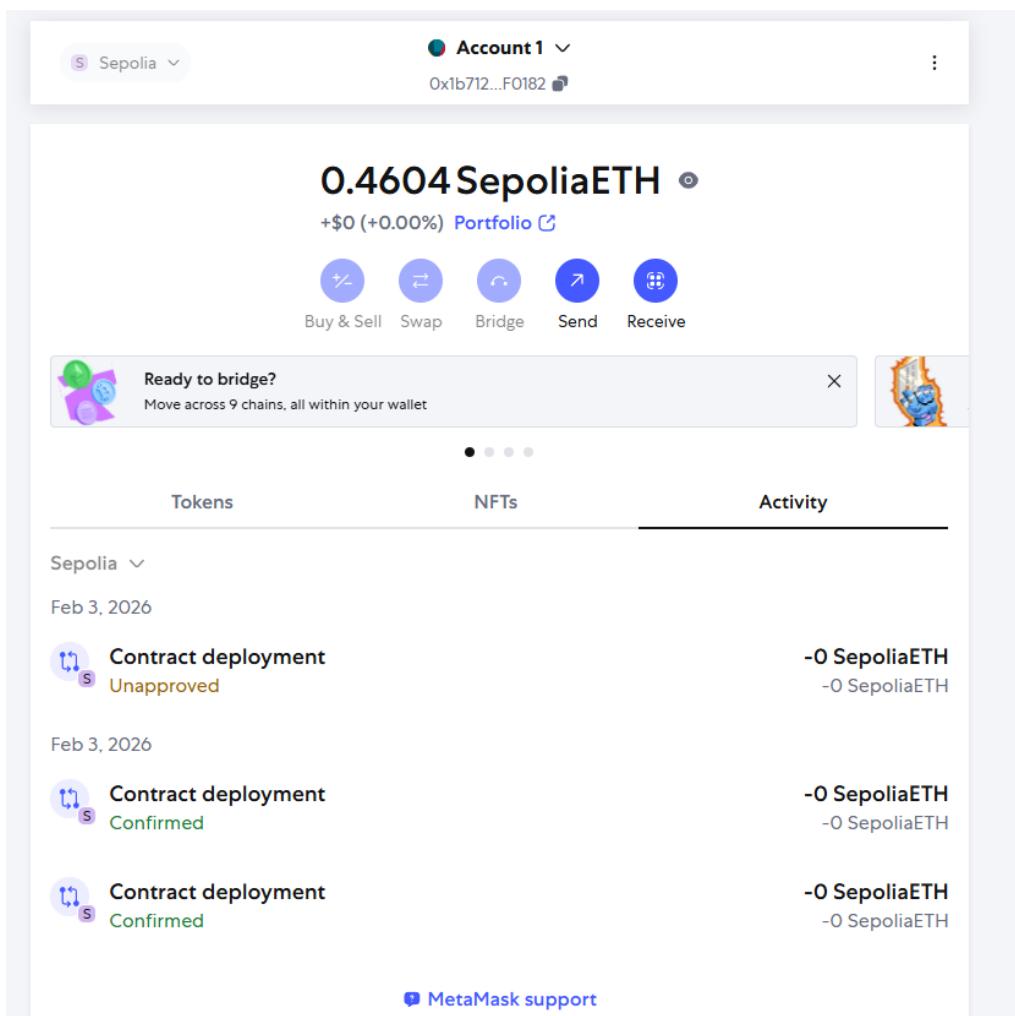
Cortez, Lawrence Neil M.

NW-301

```
[block:10180439 txIndex:11] from: 0x1b7...F0182
to: Rizal_UnitX_Quiz1Lab.(constructor) value: 0 wei
data: 0x608...f0033 logs: 0 hash: 0xf9e...f556f
Debug ▾

[Verification] Contract deployed. Checking explorers for registration...
Etherscan verification skipped: API key not provided.
Please input the API key in Remix Settings - Connected Services OR Contract Verification Plugin Settings.
[Sourcify] Verification submitted. Awaiting confirmation...
[Blockscout] Verification submitted. Awaiting confirmation...
[Routescan] Verification submitted. Awaiting confirmation...
[Sourcify] Verification Successful! View Code
[Blockscout] Verification Successful! View Code
call to Rizal_UnitX_Quiz1Lab.generateHash
```

AFTER DEPLOYMENT



The screenshot shows the MetaMask wallet interface. At the top, it displays "Account 1" with the address 0x1b712...F0182. Below this, the balance is shown as 0.4604 SepoliaETH. There are five buttons: Buy & Sell, Swap, Bridge, Send, and Receive. A notification bar at the top says "Ready to bridge? Move across 9 chains, all within your wallet". The main area shows a timeline of activity:

Date	Event	Value
Feb 3, 2026	Contract deployment Unapproved	-0 SepoliaETH -0 SepoliaETH
Feb 3, 2026	Contract deployment Confirmed	-0 SepoliaETH -0 SepoliaETH
Feb 3, 2026	Contract deployment Confirmed	-0 SepoliaETH -0 SepoliaETH

At the bottom, there is a link to "MetaMask support".

Cortez, Lawrence Neil M.
NW-301

The image shows the MetaMask wallet interface. A modal window titled "Select an account" is open, displaying "Account 1" with address 0x1b712...F0182 and balance 0.46 SepoliaETH. Below the account list is a button "+ Add account or hardware wallet". At the bottom of the modal are five icons: Buy & Sell, Swap, Bridge, Send, and Receive.

Below the modal, a banner says "Ready to bridge? Move across 9 chains, all within your wallet" with a close button (X) and a decorative icon.

The main interface shows a tab bar with "Tokens", "NFTs" (disabled), and "Activity". The "Activity" tab is selected, showing a list of recent events:

- Feb 3, 2026: Contract deployment (Unapproved) -0 SepoliaETH
-0 SepoliaETH
- Feb 3, 2026: Contract deployment (Confirmed) -0 SepoliaETH
-0 SepoliaETH
- Contract deployment (Confirmed) -0 SepoliaETH
-0 SepoliaETH

At the bottom of the activity list is a link "MetaMask support".