

## Assignment 2 : Implementing a Bitcoin Network using Bitcoin RPC

### Instructions:

1. Can setup colab and/or any linux environment
2. Install the Bitcoin Core software in the notebook by running the command  
!sudo apt-add-repository ppa:bitcoin/bitcoin -y  
!sudo apt-get update  
!sudo apt-get install bitcoind -y
3. Start the Bitcoin daemon by running the command
4. !bitcoind -daemon
5. Once the Bitcoin daemon is running, you can interact with it using the Bitcoin RPC. To do this, you will need to enable the Bitcoin RPC interface and set a username and password for authentication.
6. Use the bitcoin-cli command to perform the following operations:
  - Create a new wallet by running the command
    - !bitcoin-cli createwallet <wallet\_name> true
  - Get the balance of the wallet by running the command
    - !bitcoin-cli getbalance <wallet\_name>
  - Create a new transaction by running the command
    - !bitcoin-cli sendtoaddress <address> <amount>
  - Start mining by running the command
    - !bitcoin-cli generate 1

(this will mine one block, adjust the number to mine more blocks)
  - Use libraries like bitcoin-python or pybitcointools to interact with the Bitcoin daemon in a more convenient way.

### Deliverables:

Submit the notebook with the code with the results and the summary of your findings

You can drop email at [sureshpro@gmail.com](mailto:sureshpro@gmail.com) if you have any further queries or confusion.