<u>Objective</u>:
-> Create ERC20 Token Smart Contract
-> Deploy on Ropsten
-> Build API:
1. Transfer Token
2. Check Balance
3. Create Wallet

<u>Requirement</u>:
        Tools:
                -> Remix IDE, Ropsten Network, Metmask Wallet, infura, Postman.
                -> nodeJs v14.15.2
                -> Npm v6.14.10

ERC20 Token
https://ropsten.etherscan.io/tx/0x97d29bcbcabd674e219a2e225ff3b0ba13a72df33e5aa5ee4516a5a9ba61b885

Smart Contract Address: 0x37b8e13f85b4f395bcd53ca247df629b987332fa
DeployerAddress: 0xFaCf24F52AaAD0c5D9d48B728f20aF81f60A93b9(A2)
        key:5fbe41f01b7c5909c81bc47858584f7051d3d7af7f65cf559696e6719da94be0

Total Token: 6000 TKT
Decimal: 8
Token Name: Task Token
Symbol: TKT

Procedure To Run:
1. Download source file taskToken
2. Open in terminal and command to run -> **npm install**
    a. It will download all necessary package module
3. Run -> **node app.js**
    a. It will start server at port: 3000
4. Now open Postman to test Below API:
    a. Import API Collection using given file
        -> **"TaskToken.postman_collection.json"**

I). GetTokenDetails
INPUT: GET
http://localhost:3000/version1/getTokenDetails

OUTPUT:
```
{
    "message": "Success",
    "data": {
```

```
        "name": "Task Token",
        "symbol": "TKT",
        "decimals": "8"
    }
}
```

II) CheckTokenBalance
INPUT: GET
http://localhost:3000/version1/checkTokenBalance/0xFaCf24F52AaAD0c5D9d48B728f20aF81f60A9
3b9

OUTPUT:
```
{
    "message": "Success",
    "data": {
        "address": "0xFaCf24F52AaAD0c5D9d48B728f20aF81f60A93b9",
        "tokenBalance": 3920,
        "totalSupply": 6000
    }
}
```

III) TransferToken
INPUT: POST method
http://localhost:3000/version1/transferToken

Set bellow parameters in Body part in raw form
```
{
    "sender": "0xFaCf24F52AaAD0c5D9d48B728f20aF81f60A93b9",
"key": "5fbe41f01b7c5909c81bc47858584f7051d3d7af7f65cf559696e6719da94be0",
    "receiver": "0xbe427917D346524410CE7Ad18f9e8Fb30451A351",
    "tokenAmount": 5000000000
}
```

-> You may Test other address to receive Token:
Just put at **receiver** field

0x0fc52152041b7341f6e2868e42a7266b6fd528cc
0x916cD51D53C4FDb6683050C21F29d25AD0F394FE
0xbe427917D346524410CE7Ad18f9e8Fb30451A351

OUTPUT:
```
{
    "message": "Success",
    "data": {
        "blockHash":
"0x8498a2508968a9b18edf437b367e4c48939490212c5bca6b61a3107eb6e4d753",
        "blockNumber": 9415217,
```

```
        "contractAddress": null,
        "cumulativeGasUsed": 36969,
        "from": "0xfacf24f52aaad0c5d9d48b728f20af81f60a93b9",
        "gasUsed": 36969,
        "logs": [
            {
                "address": "0x37b8e13F85B4f395bCd53cA247Df629b987332fA",
                "blockHash":
"0x8498a2508968a9b18edf437b367e4c48939490212c5bca6b61a3107eb6e4d753",
                "blockNumber": 9415217,
                "data":
"0x00000000000000000000000000000000000000000000000000000012a05f200",
                "logIndex": 0,
                "removed": false,
                "topics": [

"0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",

"0x000000000000000000000000facf24f52aaad0c5d9d48b728f20af81f60a93b9",

"0x000000000000000000000000be427917d346524410ce7ad18f9e8fb30451a351"
                ],
                "transactionHash":
"0x5b3ef1302da3de950f475d3c0ad94d4665b5028fef20e44bbb5628f9c4d546ed",
                "transactionIndex": 0,
                "id": "log_bcc21a07"
            }
        ],
        "logsBloom":
"0x00000000000000000000000000000000000001000000000000004000000000000000400000000
00000000000000000000000000000040000000000000000000000000000000000000000000000000
00800000000000000000000000000000000000000000000000000000800000200000000000000000
00000000000000000000010000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000800000000000000000000
00000000000000020000000000000000000000000000000000000000000000000000010000000000
0000000000000000000000000000000000000000000000000000000000000000000",
        "status": true,
        "to": "0x37b8e13f85b4f395bcd53ca247df629b987332fa",
        "transactionHash":
"0x5b3ef1302da3de950f475d3c0ad94d4665b5028fef20e44bbb5628f9c4d546ed",
        "transactionIndex": 0
    }
}
```

IV) CreateWallet

INPUT: POST method

http://localhost:3000/version1/createWallet

OUTPUT:

```json
{
    "message": "Success",
    "data": {
        "publicKey": "0xbe427917D346524410CE7Ad18f9e8Fb30451A351",
        "privateKey": "0x9fcb99d5416055c685b1e0b8ddb07f03fbcb56d387ee3edabac0050675e83615"
    }
}
```