

CSIT 6000Q- Blockchain and Smart Contracts

Assignment #3

(Due: 11:59pm on Sun Day, Dec. 6, 2023)

November 15, 2023

1 Problem 1

40 points

Write test cases for all smart contracts you designed in the last assignment (Assignment 2). And verify them for vulnerabilities using any verification tool. Also, verify with etherscan after successful deployment in your testnet.

2 Problem 2

15+15=30 points

Design your Token (ERC20) and NFT (ERC721) with OpenZeppelin. Add some additional specifications to make your Token and NFT unique. Verify them for vulnerabilities using any verification tool before deploying. Also, verify with etherscan after successful deployment in your testnet.

- Note: Grading will be on additional specifications.

3 Problem 3

30 points

Create a Dune dashboard for the following:

- Inflow, Outflow and Netflow of the ERC20 token Tether in the last seven days of any particular account of your choosing with non-zero trading activity.
- Count the number of sales and get the total trade volume for NFT BoredApeYachtClub (BAYC) between the beginning of July 2021 to the end of June 2022.