**ASSIGNMENT FOR WEEK 5 DAY 1**

**FAMILIARIZE YOURSELF AND WRITE A ONE PAGE REPORT ON INTERFACES, ORACLES AND LIBRARIES IN SOLIDITY**

Solidity is a popular programming language used for developing smart contracts on the Ethereum blockchain. In this report, we will focus on three key features of Solidity - interfaces, oracles, and libraries.

Interfaces are a way of defining a contract's external API. They are used to declare the functions and events that a contract should implement without providing their implementation. Interfaces allow different contracts to communicate with each other without revealing their implementation details. This can help simplify the code and make it more modular.

Oracles are external agents that provide data to smart contracts. Since smart contracts are executed on the blockchain, they cannot access off-chain data directly. Oracles act as intermediaries between the smart contracts and the outside world, providing real-world data to the smart contracts. Oracles can be used to access data from a variety of sources, including APIs, IoT devices, and databases.

Libraries are reusable pieces of code that can be shared across different contracts. They are similar to traditional software libraries, allowing developers to avoid writing the same code repeatedly. Libraries can be used to implement commonly used functionality, such as mathematical operations, data structures, and encryption algorithms. By using libraries, developers can save time and reduce the risk of bugs and errors.

In summary, interfaces, oracles, and libraries are important features of Solidity that enable developers to write more efficient and modular code. Interfaces provide a way for contracts to communicate with each other without revealing implementation details, oracles allow smart contracts to access off-chain data, and libraries help developers reuse code and avoid repetition. These features are critical for the development of complex smart contracts and decentralized applications on the Ethereum blockchain.