

Hardhat Smart Contract Lottery

```
2
3 pragma solidity ^0.8.7;
4
5 import "@chainlink/contracts/src/v0.8/interfaces/VRFCoordinatorV2Interface.sol";
6 import "@chainlink/contracts/src/v0.8/VRFConsumerBaseV2.sol";
7 import "@chainlink/contracts/src/v0.8/interfaces/KeeperCompatibleInterface.sol";
8 import "hardhat/console.sol";
9
10 error Raffle__UpkeepNotNeeded(uint256 currentBalance, uint256 numPlayers, uint256 raffleState);
11 error Raffle__TransferFailed();
12 error Raffle__SendMoreToEnterRaffle();
13 error Raffle__RaffleNotOpen();
14
15 /**@title A sample Raffle Contract
16  * @author Patrick Collins
17  * @notice This contract is for creating a sample raffle contract
18  * @dev This implements the Chainlink VRF Version 2
19  */
20 contract Raffle is VRFConsumerBaseV2, KeeperCompatibleInterface {
21     /* Type declarations */
22     enum RaffleState {
23         OPEN,
24         CALCULATING
25     }
26     /* State variables */
27     // Chainlink VRF Variables
28     VRFCoordinatorV2Interface private immutable i_vrfCoordinator;
29     uint64 private immutable i_subscriptionId;
30     bytes32 private immutable i_gasLane;
31     uint32 private immutable i_callbackGasLimit;
32     uint16 private constant REQUEST_CONFIRMATIONS = 3;
33     uint32 private constant NUM_WORDS = 1;
34
35     // Lottery Variables
36     uint256 private immutable i_interval;
37     uint256 private s_lastTimeStamp;
38     address private s_recentWinner;
39     uint256 private i_entranceFee;
```