Blockchain Project

Q1. George is weak in calculations and managing his account. Write a smart contract named as 'Wallet' for performing basic operations like withdrawing, depositing and displaying the balance every time the transaction is made.

Note: Use the concept of view function

Q2. Alice is planning to conduct a technical fest in his college on the occasion of Engineer's Day. Write a smart contract for the fest where participants can buy tickets and Alice (organizer) can set a maximum limit on number of participants as well as provide refunds. The smart contract must have following features:

a) name of the contract as Fest
b) Events: Deposit and Send in the contract events that can be logged in the Ethereum Virtual Machine logs
c) function buyTicket() should use 'throw' to revert ticket buyer's transaction if maximum limit is reached
d) function refundTicket in case maximum participant limit is reached
e) function destroy () to ensure funds are not locked in the contract forever

Q3. Ram owns a car rental agency. A car rental, hire car, or car hire agency is a company that rents automobiles for fixed duration. Write a rental smart contract with basic four elements: variables and data structures to hold the values in the blockchain, a constructor which is executed whenever the contract is deployed and whoever deploys it becomes the owner of the agency, getters to read values from the blockchain anytime, functions confirmAgreement, payRent, and terminateContract.

Q4. Write the smart contract for the following situation.

"P" is a seller and wants to sell his bike, "Q" is a buyer who wants to buy "P"'s bike, so they contact "R" (an arbiter) which hold the asset until "Q" receives the car. When this condition will be met, "R" will release the fund to "P". This solves the issue of trust and prevents any discrepancy.

Q5. Write the smart contract with the following features:

a) assign key/value pair so one can look up credit integers with an ETH address
b) a function for funds to be added to the contract, sender will be credited amount sent
c) a function to show ether credited to address
d) a function to withdrawal ether from contract