Problem description

SpiritChain is a non-profit organization involved in spreading awareness about spirituality. They conduct large awareness sessions throughout the year in different cities. During these camps there are a large number of visitors who attend these sessions. To cater to the visitors' needs, there several ad hoc stalls/kiosks setup where daily use items and food and beverages are sold at highly subsidised rates. To manage the inventory and smooth operations of the stalls, Point-of-Sale (POS) terminals (PCs) are provided at each stall/kiosk.

1. Cash card PoS terminals: They allow the users to buy and recharge the cash cards with money. The cash cards are passive smartcards that can store some data securely.
2. Retail PoS terminals: They run an application which can read the balance on a cash card, and also update the balance on it. The application can also talk to other services such as inventory management systems.
3. All PoS terminals are connected to the ad hoc LAN, and are able to talk to each other. However, there may be network disruptions experienced by some of the PoS terminals.

We would like to implement a blockchain based solution to ensure that the cash card based transactions are securely captured by the PoS terminals. You can create a custom blockchain, or use an existing blockchain framework such as Hyperledger Fabric, Corda or Ethereum etc.

What you need to submit

1. A user guide about how to build and use your program.
2. A well documented shell script that completely automates the building of your program.
    a. Output of the build script should be an executable file that can be used to run the program.
    b. When running the program, input should be taken as command line arguments instead of interactively asking the user to supply them.
3. Complete source code which must be well documented.

NOTE: The project is to be done individually.