literature survey :-

→ We found a research article titled "A Decentralized COVID-19 Vaccine Tracking system Using Blockchain Technology".

⇒ The article proposes a of Vaccine tracking scheme called Vacchain. Our Vacchain allows users (USERS) to tack and trace the route of vaccines.

⇒ We propose three mechanisms, namely, a system manager (SYS-MAN), a mutual agreement concerning Vaccine ownership and Vaccine passports, to enhance the security and reliability of data recorded in the Vacchain Ledger.

⇒ We develop this system on the substrate platform with Rust language.

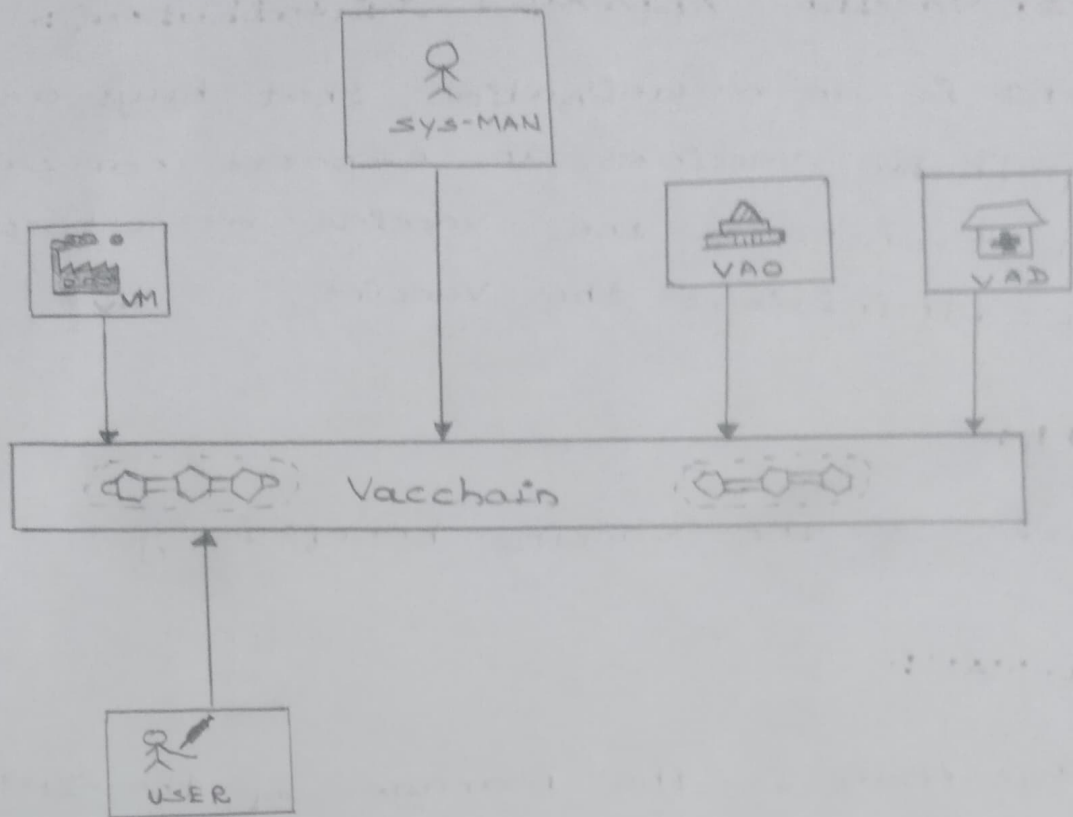⇒ Our implementation evaluation and analysis have shown that Vacchain can trace and track Vaccines smoothly.

⇒ Vaccine Tracking system named "Vacchain" by utilizing the characteristics of block chain technology, such as dencentralization, immutability and transparency.

⇒ The notable feature of our proposed system is that it is able to not only prevent the circulation of counterfeit vaccines but also trace the origin and route of transactions relating to a vaccine before it is even used.

⇒ our Vacchain also provides a turst worthy vaccine passport solution to prevent the circulation of fake vaccine passport.

system overview:-

- SYS-MAN ⇒ system manager.
- VM ⇒ Vaccine Manufacture.
- VAO ⇒ Vaccine Approved organization.
- VAD ⇒ Vaccine Approved Distributor.

VM (vaccine Manufacture):-

⇒ VM represents the company that manufactures the vaccine.

⇒ VM able to record information on vaccines such as vaccine name, type and ingredients into an vacchain.

VAO (Vaccine Approved organization):-

⇒ VAO is organization that approves the vaccine and is assumed to be a government agency of a country.

VAD (Vaccine Approved Distributer):-

⇒ VAD is an organization that buys and distributes vaccines, an express company that transports the vaccine or a hospital that administers the vaccine.

USER:-

⇒ user is the vaccine beneficiary.

Sys-MAN:-

⇒ sys-man is the manager of the system which verifies the trust of other entities such as the VM, VAO, VAD......

⇒ sys-MAN acts as guardian that protects the reliability of the data recorded in the vacchain and plays an important role in securing the network.