

Universal Decentralized Identification Service



Group: G'adir-budir
Group members: Mirjalol Aminov, Nadia Charef,
Asif Siddique, Diana Mustakhova, Chandan Singh



Task:

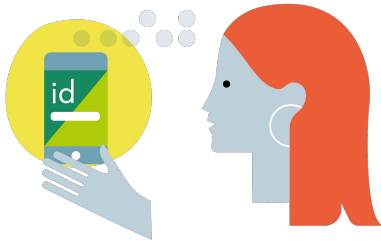
Propose and implement a universal decentralized identification service which works without third party

Requirements for the solution:

- solution should be decentralized and secure
- activities should be immutable and traceable
- users should have free access to join

Background

- According to World Bank study: 1 billion people do not have any proof of identity
- Many countries are adopting national digital identity systems since it gives quicker, easier and secure access



A digital identity is a collection of personal information about people that exists online and can be connected to their actual identity. Digital IDs can improve accuracy, security, and data protection for identifying customers in digital spaces.

Central and Federated Identification

Email address or phone number

Password

Log in

[Forgotten password?](#)

Create New Account

Create a Page for a celebrity, brand or business.

Please Login To Continue

Sign In

Sign Up

Username or email

Password

☒ Remember me [Forgot Password](#)

Sign In

or

G

Google

f

Facebook

in

LinkedIn

GH

GitHub

Why Create an Account?

By creating this account, you agree to our [Privacy Policy](#) & [Cookie Policy](#).

Problem Statement

1. Centralized Identity:

Digital identity are issued by centralized authorities.

Need Digital identity account for every platform.

2. Federated Identity:

A third-party is used to provide a single set of credentials to access multiple platforms.

Violate the privacy regulation of GDPR.



Solution

Self-sovereign identity is a digital identity that gives individuals control over the information they use to prove who they are to websites, services, and applications across the web.

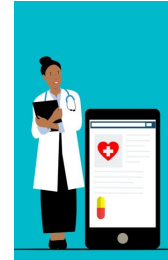


SELF-SOVEREIGN IDENTITY

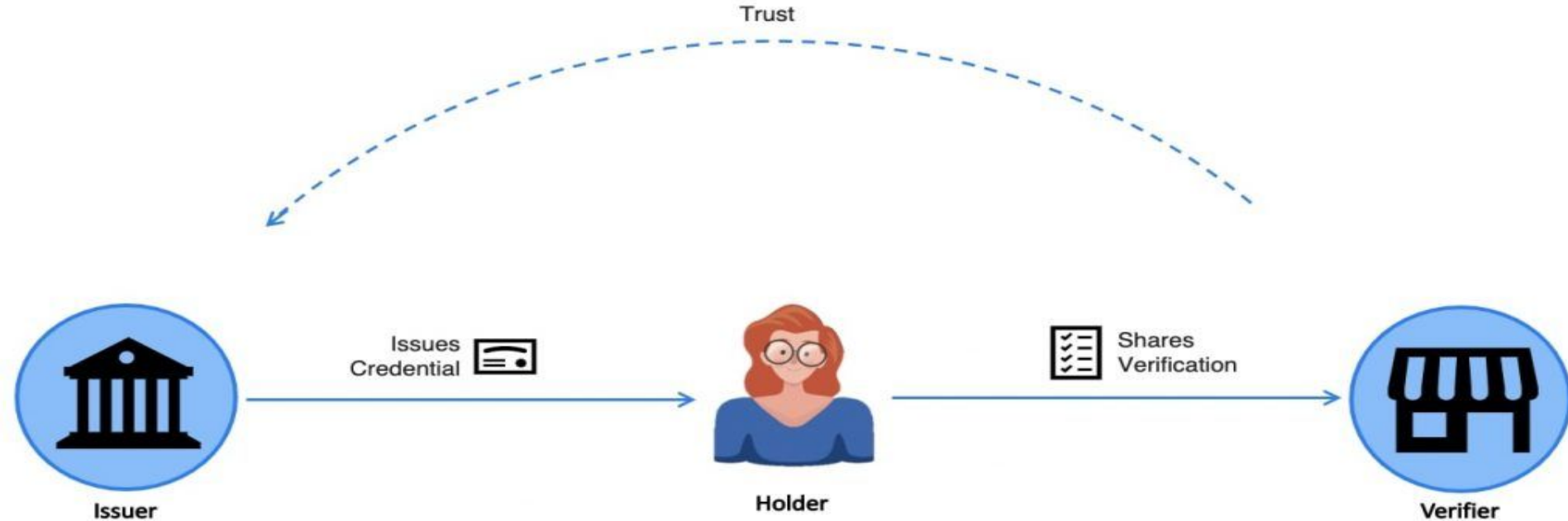
Use Cases of SSI

Create a unified ID to access different public services such as:

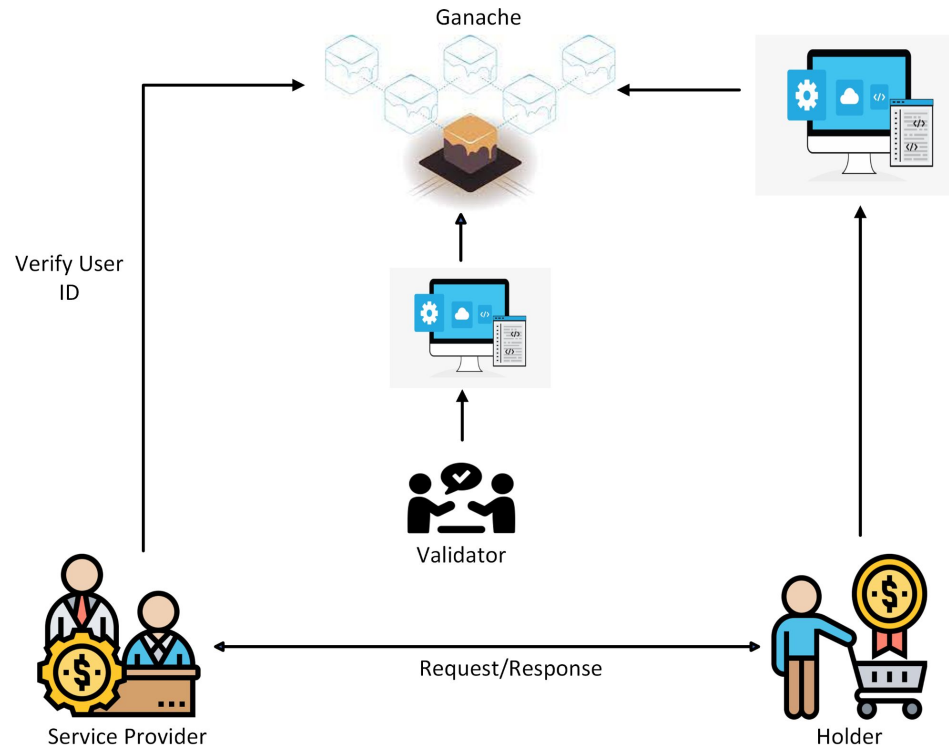
- Public Transportation.
- Access to Health care Services.
- Access to Education Services.



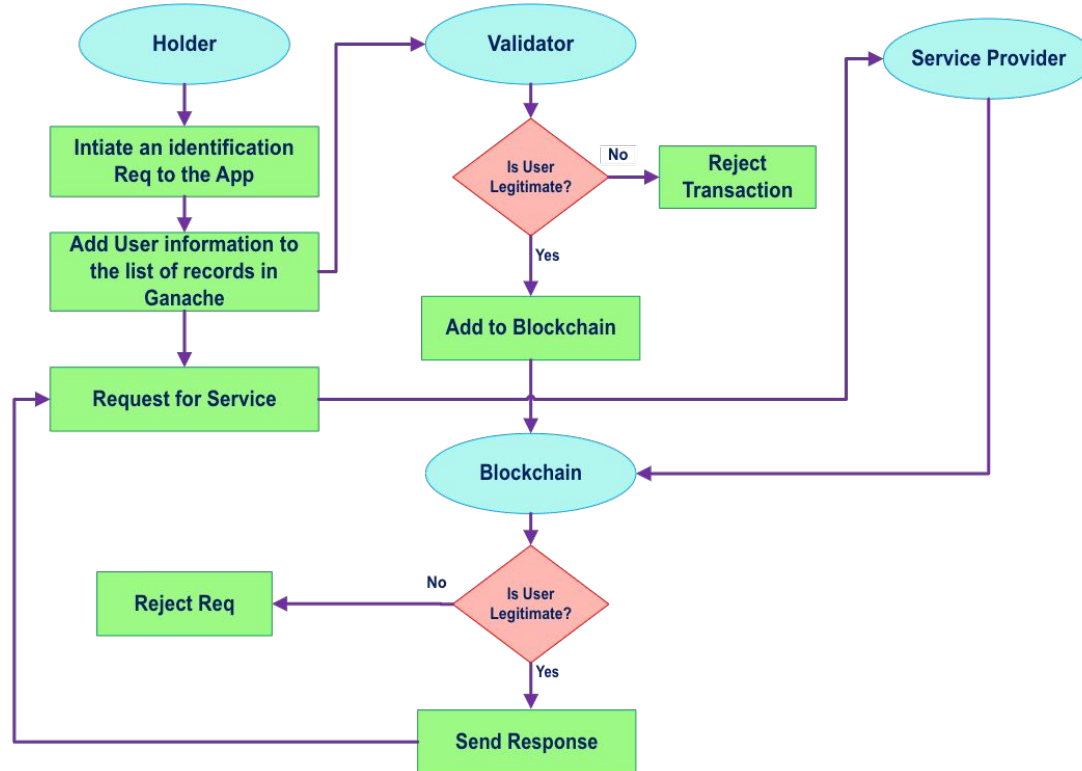
The trust Triangle in SSI



Solution Architecture



Flow Diagram



Challenges

- **Interoperability issue**



Self-sovereign identity will likely not replace existing all identity management systems but be used and coexist with them. It is also expected that various self-sovereign implementations will appear in the future. Therefore, interoperability with existing identity management systems and other self-sovereign identity systems is required.

- **Key management issue**



In self-sovereign identity, identity information may be held in a wallet held by the user, which makes key management more important than ever. Therefore, a user-friendly solution is required so that users can properly manage their private keys. It is also expected that a certain number of users will lose their keys, so a key recovery mechanism is also essential.

- **Trust on Blockchain**



Lack of user awareness and trust on blockchain might be a major challenge that keep user away from using our application.



Practical Demonstration

Future Scope

