

Product Engineer Take Home

Intended duration: 4 hrs

You are at a company, ACME, that wants to issue their own stablecoin on the Tempo network (AcmeUSD).

Your task is to design and implement a system that lets your end users Onramp / Offramp AcmeUSD on Tempo.

Requirements

- A user can pay USD to ACME and get AcmeUSD in their wallet
- A user can ask ACME to offramp from AcmeUSD, get a set of instructions on how to do so, and receive USD to an attached payment method
- The supply of AcmeUSD on Tempo is fully backed by user deposits
- A user can use AcmeUSD to pay fees on Tempo

You can assume that

- ACME has liquidity to fund the purchase of linkingUSD. You do not need to solve for how to acquire it. See appendix for a reference
- All users are legitimate / no fraud in onramp purchasing. Once a payment is recognized the funds are guaranteed to land with ACME.
- All users will be using Tempo passkey wallets

There are many possible ways to approach this problem. We will be assessing

- Can a company rely on / operationalize the money movements in the project? What guarantees do they have around their users not losing any funds?
- Design approach
- End to end functionality
- Ease of use
- Code quality

You can complete this using any language, though we recommend TypeScript so you can use the [tempo.ts](#) package. AI tooling is allowed. You may use any service provider for any part of this problem

At the end of the four hours, please send us

- A design artifact that goes over your considerations and choices for your approach to this problem
- A technical artifact with your solution (link to github repo, link to solution if it's deployed)

After submitting, we will schedule a 30 minute call to go over the solution via zoom and discuss your design document.

Appendix

Tempo docs: docs.tempo.xyz

Docs password: curious-mozart

Testnet credentials: dreamy-northcutt:recurring-payne@rpc.testnet.tempo.xyz

Explorer url: explore.tempo.xyz

Explorer credentials: eng:zealous-mayer

How to fund an address with linkingUSD from the testnet faucet in Wagmi/Viem

```
JavaScript
client.request({
  method: "tempo_fundAddress",
  params: [account.address]
});
```