Polaris

BLOCKCHAIN LOTTERY

Group 30 - Polaris

Contents

OUR TEAM - One team, best team!

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Undergraduate
Computer Science
USA

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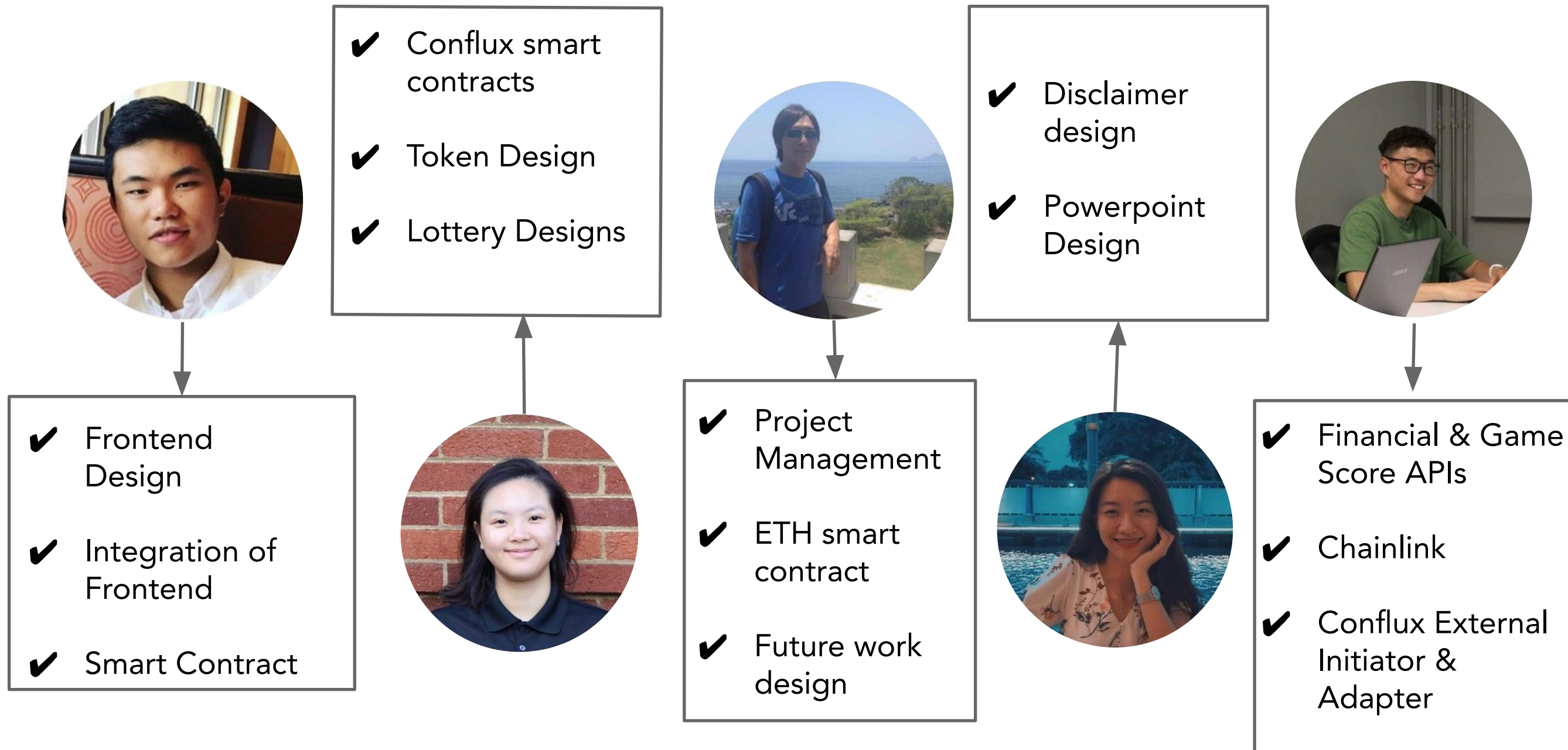**K.Y. Shen**

PhD
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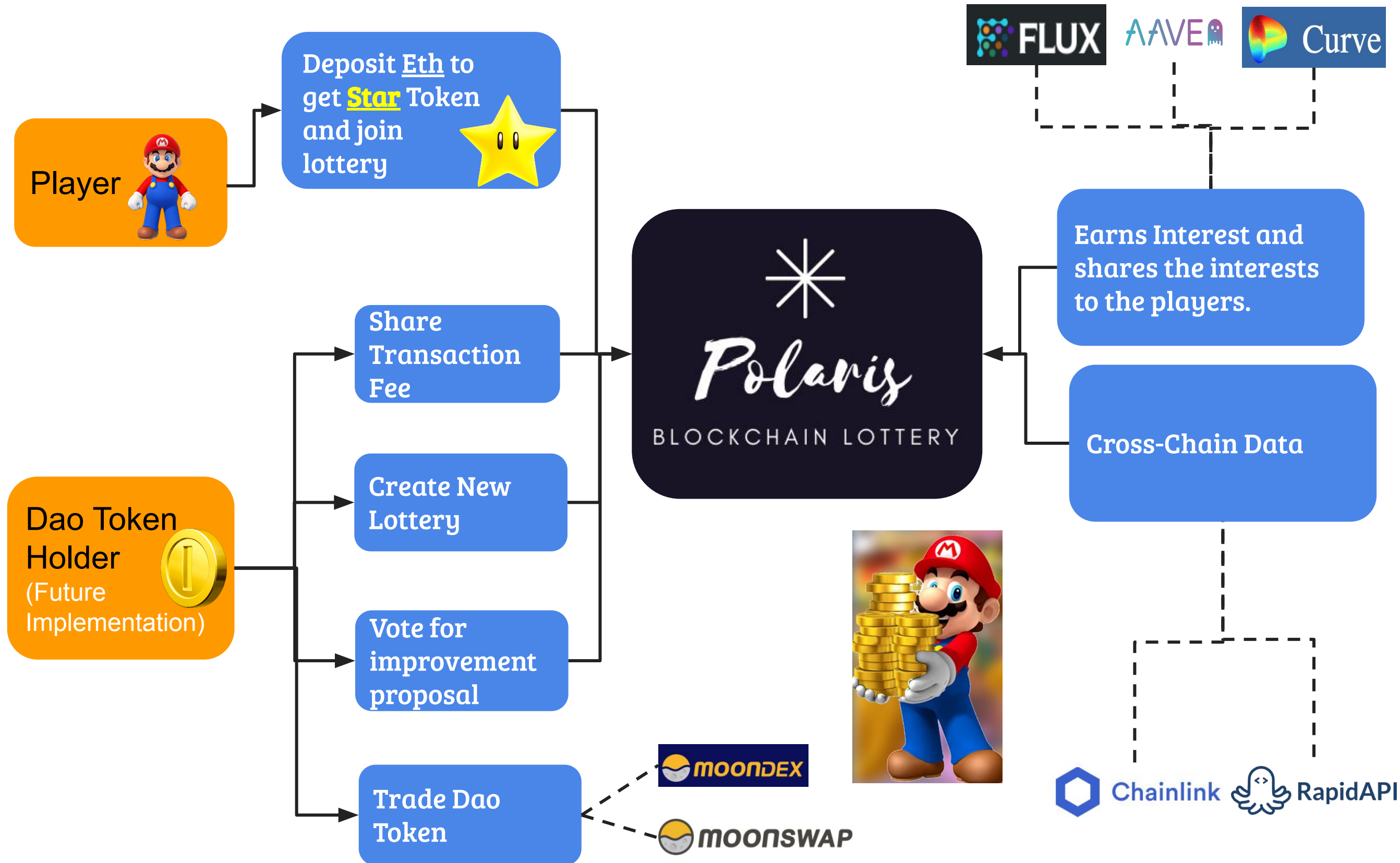Undergraduate
Computer Science
South Korea

ROLES OF THE TEAM MEMBERS

- ✔ Conflux smart contracts
- ✔ Token Design
- ✔ Lottery Designs

- ✔ Disclaimer design
- ✔ Powerpoint Design

- ✔ Frontend Design
- ✔ Integration of Frontend
- ✔ Smart Contract

- ✔ Project Management
- ✔ ETH smart contract
- ✔ Future work design

- ✔ Financial & Game Score APIs
- ✔ Chainlink
- ✔ Conflux External Initiator & Adapter

Summary of Project

‣ A platform that provides a transparent, fair, and diverse lottery with low cost (low gas fee).

　‣ Low gas fee on Conflux network allows sponsorships

　‣ Lower gas fee=>higher expecting return=>more users (Positive Feedback Loop!)

‣ Also a platform that allows users to create their own lotteries.

　‣ Using Factory Design for Different Lottery games.

‣ Implemented with Cutting Edge Technologies

　‣ Conflux, Aave, Chainlink, RapidAPI

‣ Long Term Goal: Liquidity Mining Lottery, Cross-chain Communication, DAO token.

User Story

FLUX AAVE Curve

Player

Deposit **Eth** to get **Star** Token and join lottery

Share Transaction Fee

Dao Token Holder
(Future Implementation)

Create New Lottery

Vote for improvement proposal

Trade Dao Token

Polaris
BLOCKCHAIN LOTTERY

Earns Interest and shares the interests to the players.

Cross-Chain Data

MOONDEX

MOONSWAP

Chainlink RapidAPI

PROBLEMS

The Nature of Lottery

‣ Market:

  ‣ The spend on lotteries in the U.S. alone is 71 billion (2017)

‣ Lottery is an illogical, money-losing game:

  ‣ Chance of winning Powerball ~ 1 in 292.2 million

  ‣ Chance of becoming the president of the U.S. ~ 1 in 32.6 million

  ‣ Chance of being hitted by a asteroid ~ 1 in 1.6 million

‣ Tax, transaction fee, etc.

* Source: Insider, 17 things more likely to happen to you than winning the lottery.

Problem with the Existing Lottery

‣ Lack of Transparency in the existing Lottery

Home / **About Us** / Lottery Scams

Lottery Scams

Some scammers falsely use Mega Millions name

March 2020 Adv

"You've won the
from scammers
themselves as b
mail anyone abc

October 25, 2016

FBI Warns of Mega Millions Lottery Scam Using FBI and FDIC Letterhead

Lottery on Blockchain?

PoolTogether is a protocol for no-loss prize game on Ethereum.

Problem with PoolTogether:

‣ Limited variety of lotteries

‣ Lack of business model

‣ Extreme high gas fee for lottery on ETH network

   ‣ Difficulties:
      ‣ Place a bet
      ‣ Hard for DAO to vote for improvement proposals
      ‣ Hard to share profit to DAO token holder
      ‣ Hard to adjust your portfolio
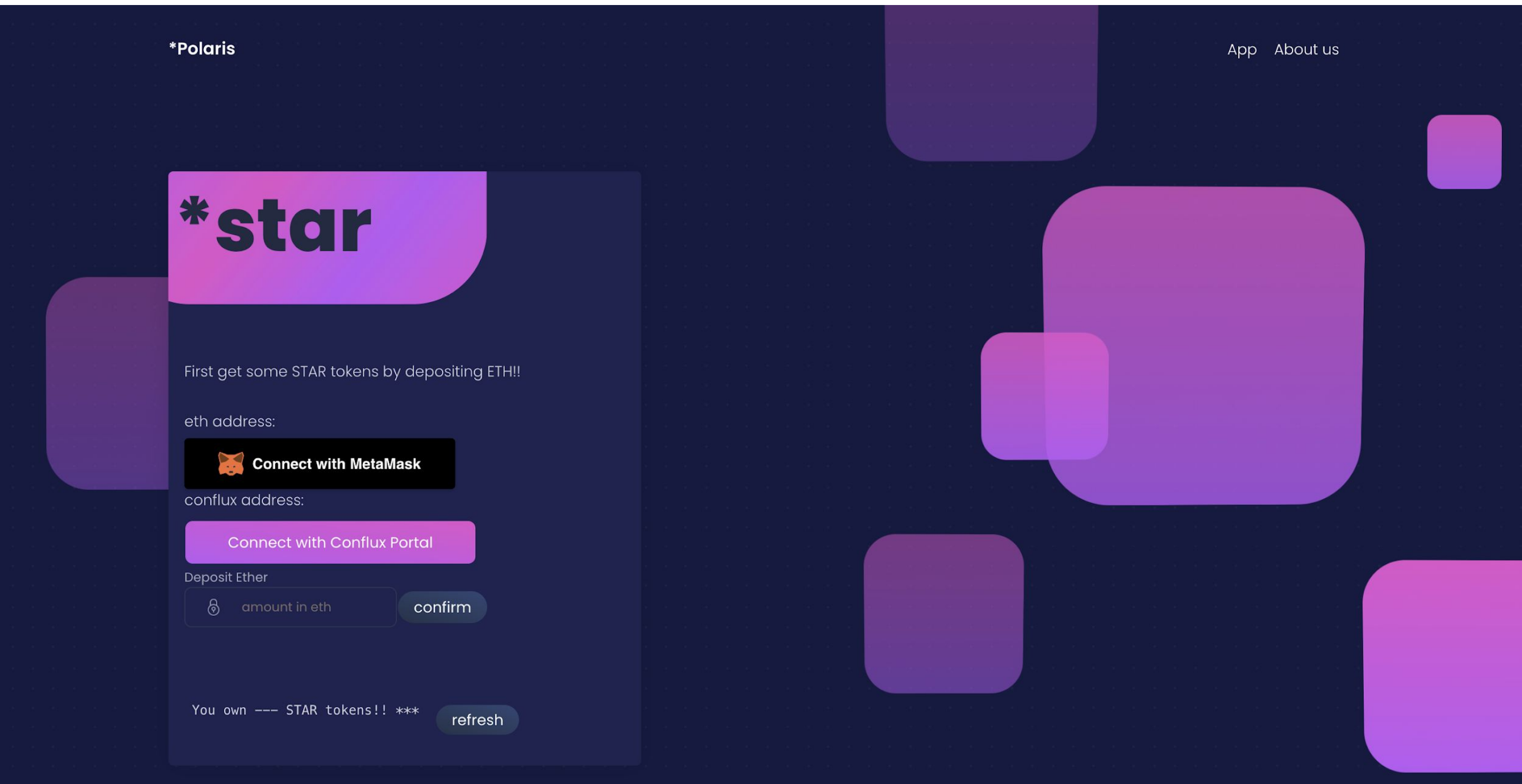
Last but the most important of all

Because of "<u>COVID19</u>":

‣ No more Macau

‣ No more Vagas

‣ No more Going to shops to purchase Lottery

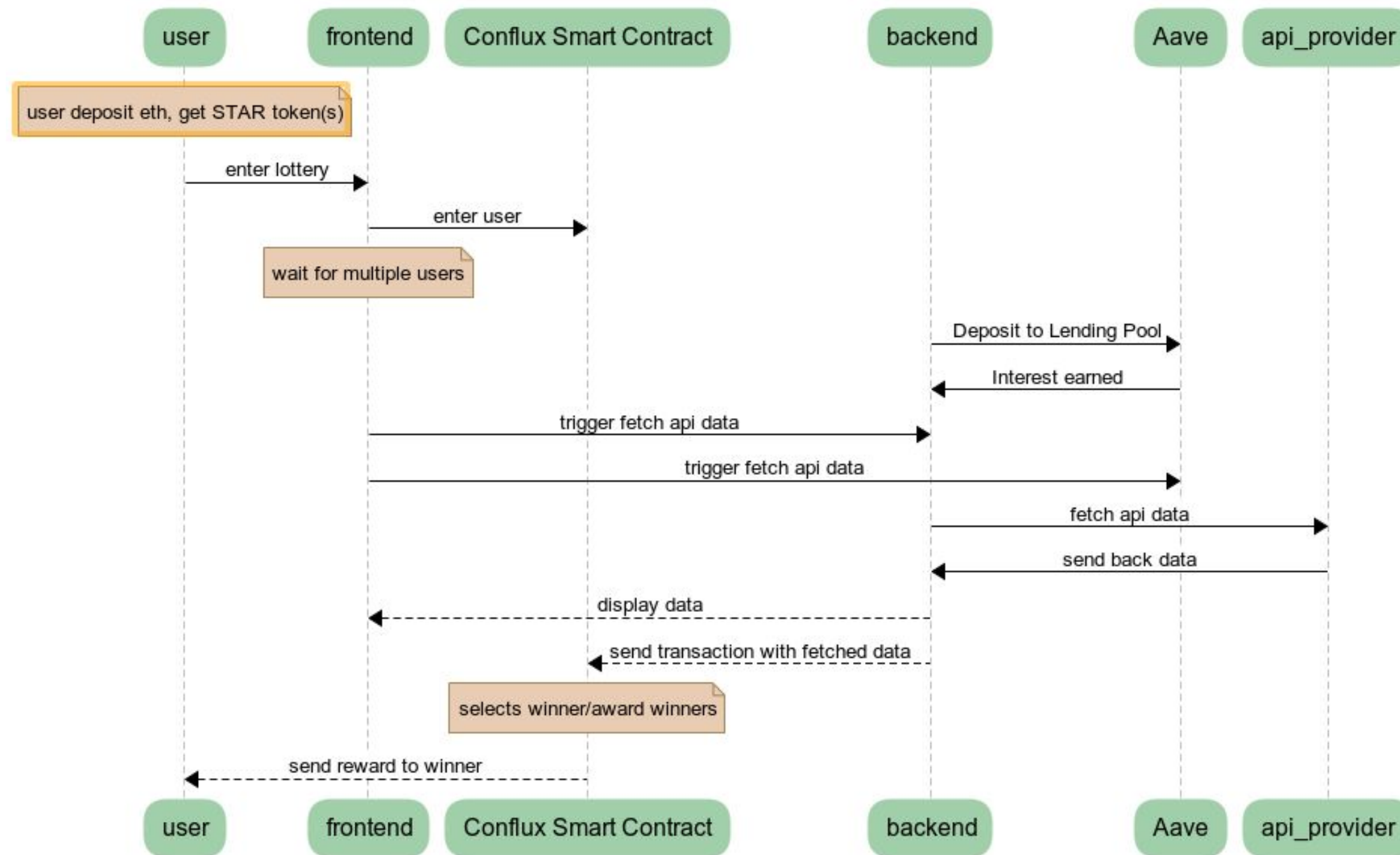‣ No more Offline Lottery Game

Solutions + Demo

Solutions

‣ ## A DApp built on Conflux!

  ‣ Low transaction fee = higher expected return for users

  ‣ Transparency in selecting winners

‣ ## Version 2 of our dapp: No-loss Lottery!

  ‣ The world's biggest money-losing game could be replaced by a system that incentivises people to save money by depositing to DeFi pools.

    ‣ e.g. Lending pool, stable coin yield farming …etc

‣ ## Expand the variety of lotteries using cross-chain techniques

  ‣ Sports

  ‣ Election

  ‣ Financial Products

Version 2.0

Version 2.0 - Architecture

Version 2.0 - Star Tokens

‣ Star Tokens are our own Eth stable tokens used in lottery

‣ 1 Star = 0.01 Eth

‣ Distribution

　‣ Users deposit Ethers into our platform, corresponding amount of Stars will be minted to users' address.

　‣ Users withdraw Ethers, corresponding amount of Stars will be burnt from users' address.
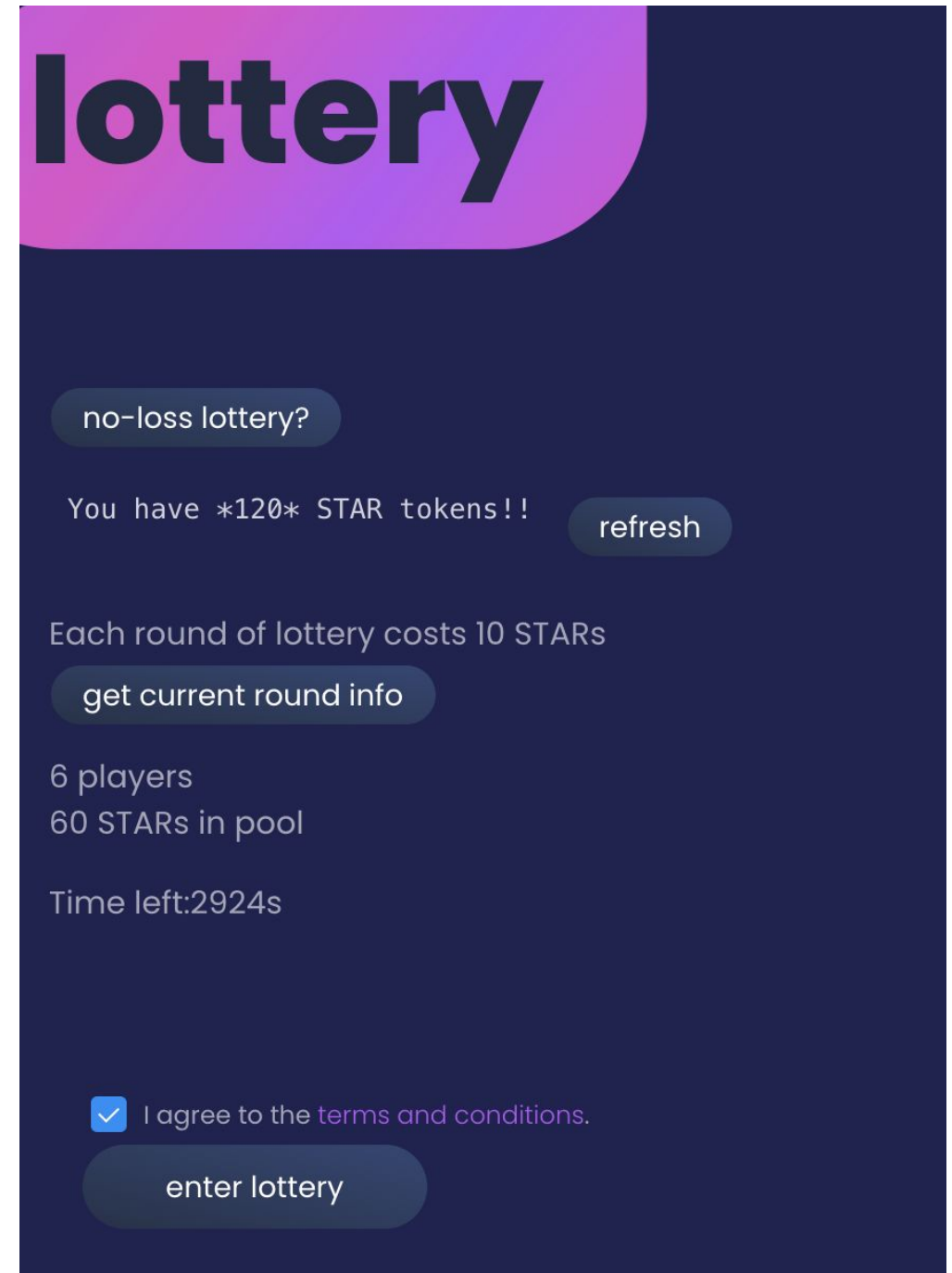
‣ Verification

　‣ Eth transaction hash

Version 2.0 - Features

‣ Anyone can enter our lottery

‣ Using Factory Design Pattern

‣ Types of lottery offered:

    ‣ No-Loss Lottery

        ‣ Aave Lending Pool

    ‣ Zero-Sum Lottery - Using Off-Chain APIs

        ‣ Sports Lottery

        ‣ Financial Lottery
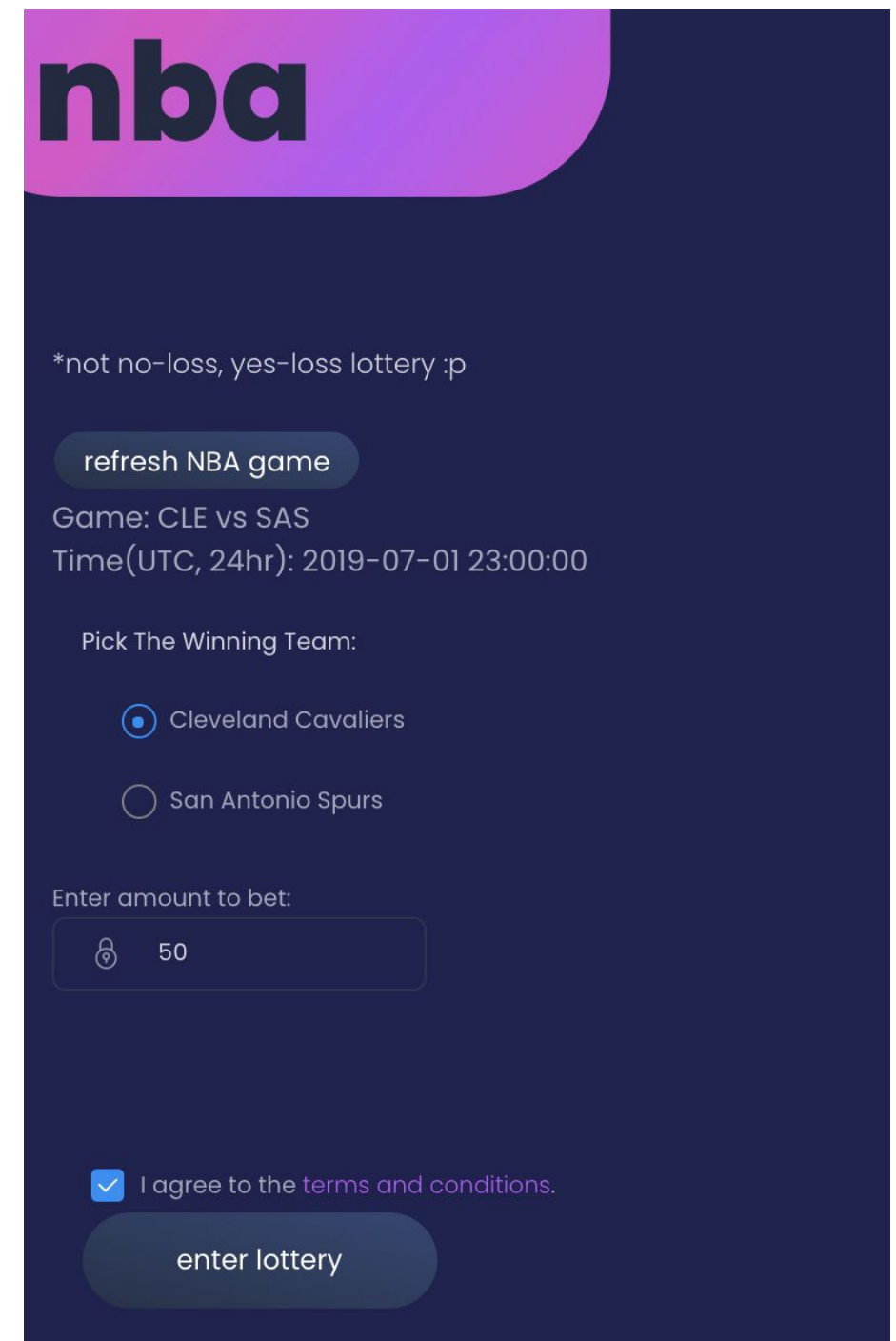
‣ Anyone can create their own zero-sum lottery!

Version 2.0 - No-Loss Lottery

‣ Unlimited Entries

  ‣ Players may enter as many times as they'd like

‣ 10 Stars per game

‣ Only 1 Winner:

  ‣ Picked by a random number generator

  ‣ Prize earned from Aave Lending Pool

  ‣ Awarded in Stars

‣ All players get initial bets back

  ‣ Hence, no-loss!

AAVE

lottery

no-loss lottery?

You have *120* STAR tokens!!   refresh

Each round of lottery costs 10 STARs

get current round info

6 players
60 STARs in pool

Time left:2924s

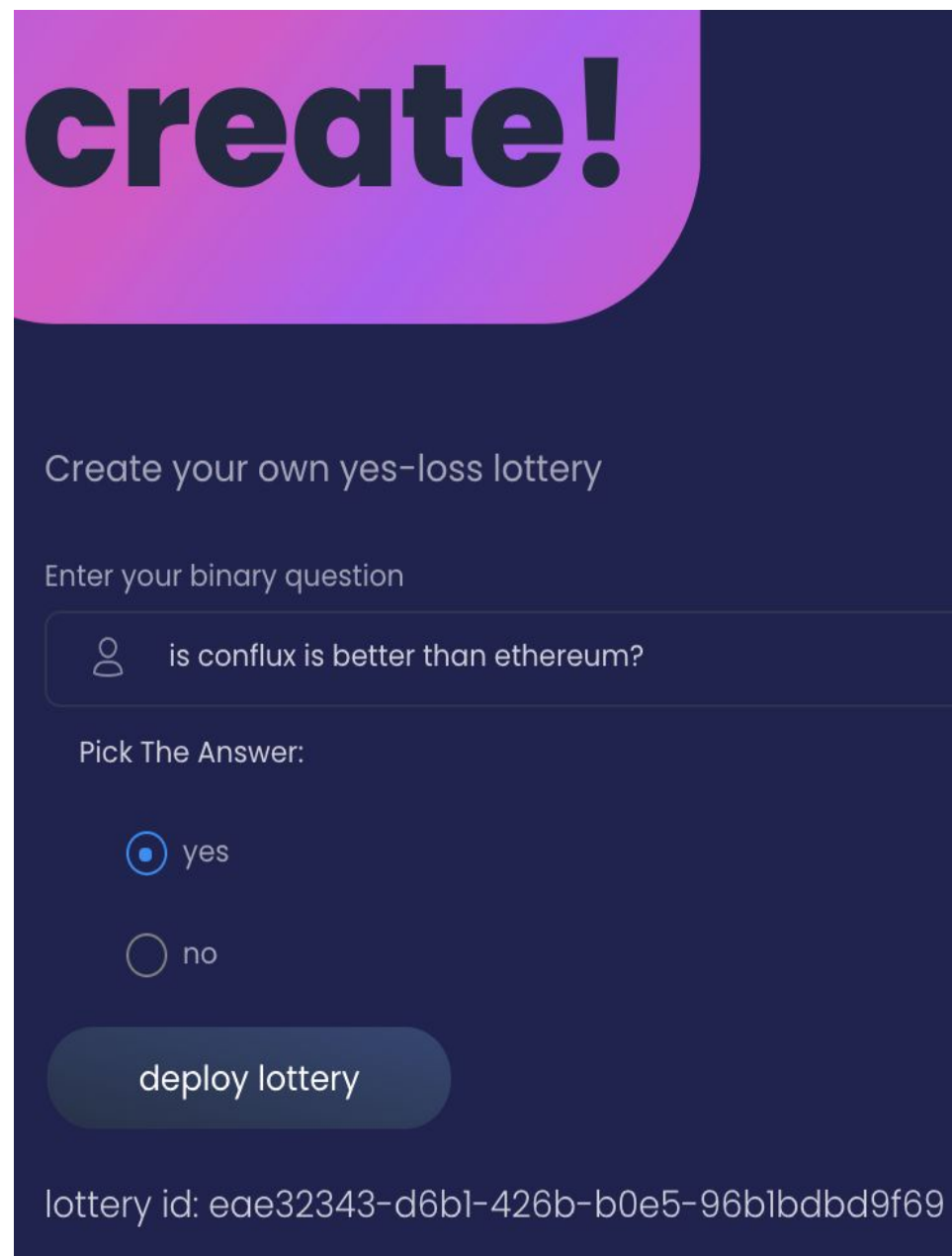☑ I agree to the terms and conditions.

enter lottery

Version 2.0 - Zero-Sum Lottery

‣ Lottery types:
  ‣ Sports and Financial Betting

‣ Single Entry

‣ Unbounded betting amount

‣ Prize Distribution:
  ‣ Prize = (winnerBet/winnerBetPool) * prizePool
    ‣ Proportional to their bets in pool.

‣ Zero-Sum:
  ‣ Entire lottery pool is returned to players

nba

*not no-loss, yes-loss lottery :p

refresh NBA game

Game: CLE vs SAS
Time(UTC, 24hr): 2019-07-01 23:00:00

Pick The Winning Team:
  ⦿ Cleveland Cavaliers
  ○ San Antonio Spurs

Enter amount to bet:
  50

☑ I agree to the terms and conditions.

enter lottery

Version 2.0 -Own Zero-Sum Lottery

▸ Users can create their own interactive lottery!

create!

Create your own yes-loss lottery

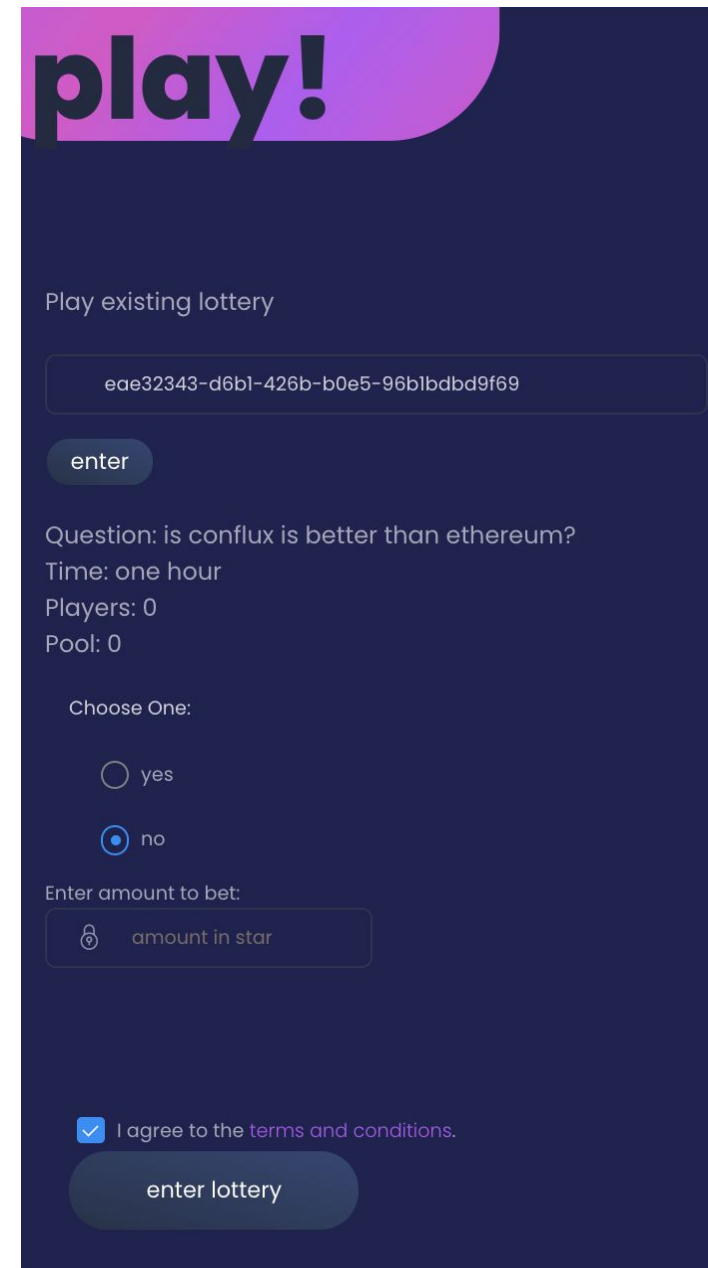Enter your binary question

👤 is conflux is better than ethereum?

Pick The Answer:

◉ yes

◯ no

deploy lottery

lottery id: eae32343-d6b1-426b-b0e5-96b1bdbd9f69

play!

Play existing lottery

eae32343-d6b1-426b-b0e5-96b1bdbd9f69

enter

Question: is conflux is better than ethereum?
Time: one hour
Players: 0
Pool: 0

Choose One:

◯ yes

◉ no

Enter amount to bet:

🔒 amount in star

☑ I agree to the terms and conditions.

enter lottery

FUTURE WORKS

Chainlink Implementation

‣ Cross chain communication security:

  ‣ Extend ShuttleFlow

  ‣ Chainlink to capture cross chain information

‣ Use Chainlink Oracles and Coordinators to:

  ‣ Provable random number generation:

    ‣ Chainlink VRF

  ‣ Expand on lottery varieties:

    ‣ Elections, games, Financial Products, any kind of competitions, etc.

    ‣ Derivatives of Financial Products: (Margin、Liquidation…...etc)

Increase Lottery Yield Farming Income

‣ Expand No-Loss Lottery On Different Yield Farming Platforms

  ‣ Aave

  ‣ Curve

  ‣ Flux

‣ Expand Our Platform on Both Ethereum and Conflux network(e.g. Mirror Protocol Swap in two blockchain network)

‣ Sports and Finance Communities

‣ Luxury e-commerce with Star or DAO token

DAO Token and Profit Sharing

‣ Issue DAO token for voting improvement proposal and

  ‣ Low gas fee
  ‣ High TPS

‣ Lottery Yield Farming with low gas fee

  ‣ Share the Transaction Fee of the Lottery
  ‣ Join other Yield Farming
  ‣ Deposit in Lending platform

‣ Lottery platform for users to create lotteries and share the profit

  ‣ Share profits with lottery creators

‣ Market Strategy

  ‣ PoolTogether token(ticket) holder can get our token. Deposit PoolTogether ticket can farm our token.
  ‣ Through Conflux Community

Legal Issue

‣ Anonymous project even grow faster (e.g. UniSwap v.s. SushiSwap, e.g. Empty Set Dollar)

‣ Put the servers or startup a company in a country where gambling is legal

‣ Design better disclaimer with lawyer

Thank you!