Monnaies numériques

Agenda

TD7: Ethereum

Creating a ticketing system

Concerts ticketing

- **A lot of tools exists today to facilitate the relationship between artists and their audience**
  - **Bandcamp/Society6 to sell mp3/merch**
  - **Distrokid/CD Baby to distribute digitally their music**
  - **Facebook/Instagram to promote content**
- **However, there are still few tools to help artists sell tickets for concerts**
- **This is true for smaller and bigger artists. Platforms like ticketmaster take a massive commission, sometimes up to 30%**
- **Your task is to design a ticketing system allowing an artist to sell their tickets directly to their audience**

Tools

Truffle V5.0

- **Update your version of Truffle!**
- **Npm uninstall –g truffle**
- **Npm install –g truffle**
- **Switching to Solidity 5.x . See breaking changes here**

  https://solidity.readthedocs.io/en/v0.5.0/050-breaking-changes.html

Truffle testing

- **Launch truffle on the desired network**
- **Run « test » command to run the js scripts in the test/ folder**
- **Run « test test/test_name.js » to run a single test file**
- **Functions prototypes for the TD can be found in the test routines written by the teacher**
- https://github.com/l-henri/truffle-testing
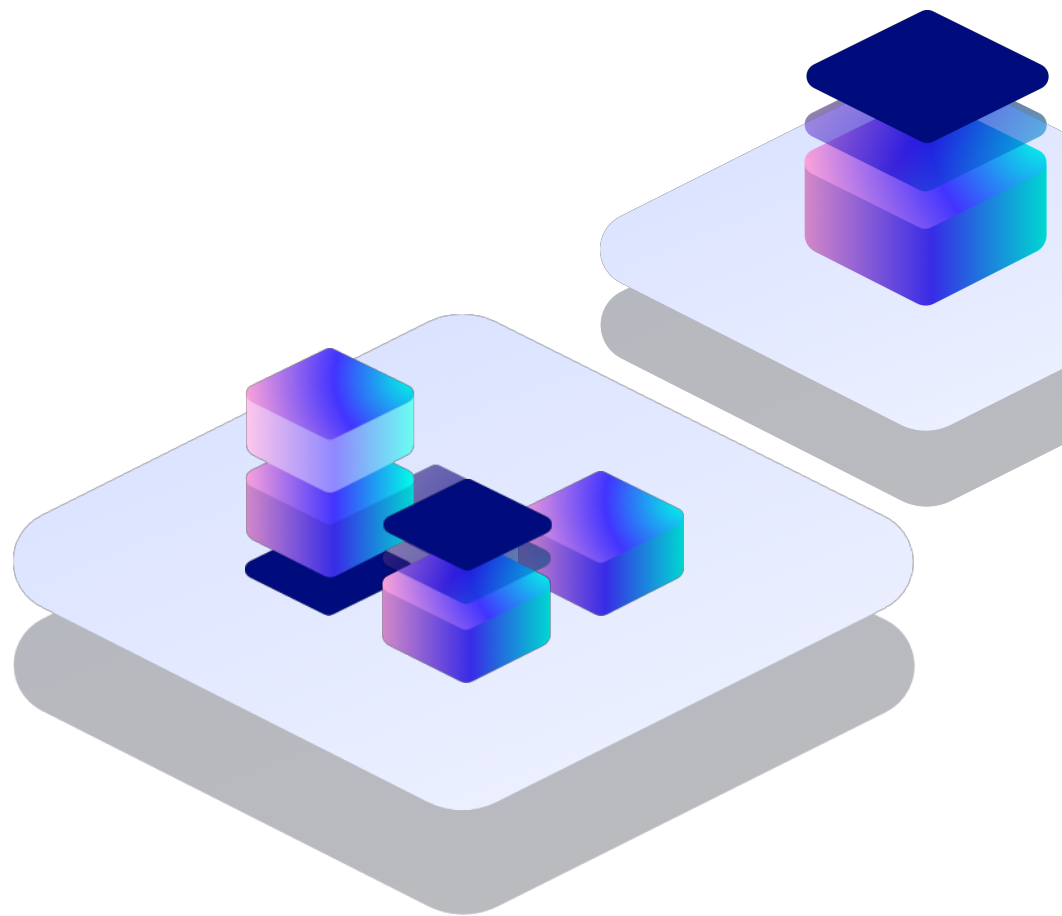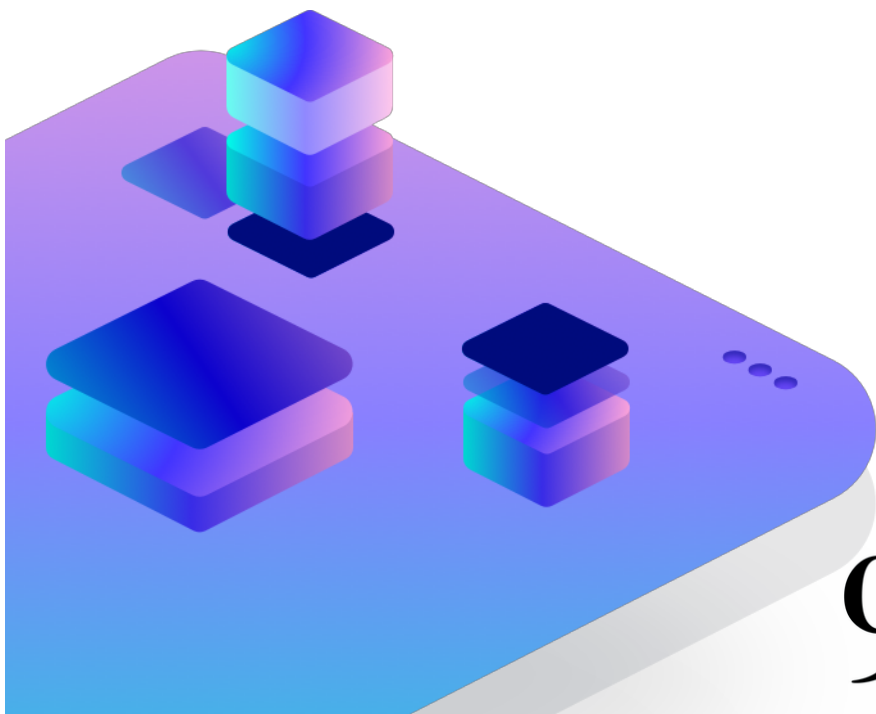
Tasks lists

Tasks list

- Create a Git repository & share it with the teacher
- Create a ticketing contract (2 pts)
- Create function to create/modify an artist profile (2 pts)
  - Name
  - Artist type
  - Total tickets sold
- Create functions to create/modify a venue profile (2 pts)
  - Name
  - Space available
  - % of ticket price going to venue
- Create a ticket object (2 pts)
  - Include date of concert
  - Include artist and venue id
- Create functions to create a concert, emit tickets and use tickets (2 pts)
  - Artists can emit tickets that they own
  - Ticket owner can use tickets on the day of the event

Tasks list

- Create functions to buy and transfer tickets (2 pts)
- Create a function for the artist to cash out after the concert (3 pts)
  - Make sure the concert has passed
  - Split the money between artist and venue
- Create a function to safely trade ticket for money (3 pts)
  - Forbid selling the ticket for more than it was bought
- Create a function to redeem distributed tickets (3 pts)
  - Tickets can be created but not sold
  - Users must be able to redeem their tickets with a chain of characters

Merci

pour votre attention !

klsn.io