



Monnaies numériques

ESILV 2018/2019



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 concert object (2 pts)
 - Include date of concert
 - Include artist and venue id
 - A concert object can be created by anyone
 - Before happening, a concert needs to be validated/confirmed by the artist and the venue

Tasks list

- Create functions to emit tickets and use tickets (2 pts)
 - Artists can emit tickets that they own
 - Ticket owner can use tickets in the 24h before the concert
- 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 !



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