Cardano - Build a smart contract in Marlowe Playground environment by Group 10

*Bob and Alice are planning a vacation and booked a hotel (called “Hotel Blockly”) that needs to be paid (total amount of 500 ada). Bob and Alice will split the costs for the hotel (50:50). The payment should be made from Bob’s account (account no. 1) to the hotel. However, before Bob can make the payment to the hotel / before the payment to the hotel will be executed, Alice needs to send him her share of the invoice (also in ada). Timeout should be after slot 15.*

1. Payment part of the smart contract

*"The payment should be made from Bob’s account (account no. 1) to the hotel.”*

*스크린샷이(가) 표시된 사진

자동 생성된 설명*

1) define type of contract (Contracts - Pay)

2) “Hotel Blockly” should get paid (Payee - Party - Role - "Hotel Blockly")

3) define the amount of currency 500 (Values - Constant - "500")

4) specify the currency as ada (Token - ada)

5) the account is come from "1" which is the owner, Bob's account (Party - Role - "Bob")

6) to complete the smart contract, add Close

2. Deposit part of the smart contract

*“before the payment to the hotel will be executed, Alice needs to send him her share of the invoice (also in ada).”*

*스크린샷이(가) 표시된 사진

자동 생성된 설명*

1) define actions (Actions - Deposit)

2) deposit should be done by Alice (Party - Role - "Alice")

3) Alice deposit to Bob 250 of any currency (Values - Constant - "250")

4) define currency as ada (Token - ada)

5) payment should be done into the account "1" which is Bob's account (Party - Role - "Bob")

3. Combine 1 and 2

스크린샷이(가) 표시된 사진

자동 생성된 설명

Now it says, when Alice deposits the amount of 250 ada(half of the costs for the hotel) to the account 1 with Bob as an account owner, the payment to “Hotel Blockly” with amount of 250 ada from account 1 with Bob as an account owner will be excuted.

And we added time slot about this combination part as 30.

4. Deposit part of the initial balance of Bob

스크린샷이(가) 표시된 사진

자동 생성된 설명

Bob should have received deposits from somewhere, therefore we temporarily set up the Bob’s initial balance as 300 ada.

1) define actions (Actions - Deposit)

2) deposit should be done by Alice (Party - Role - "Bob")

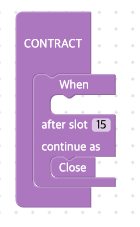
3) Bob deposit to Bob 300 of any currency (Values - Constant - "300")

4) define currency as ada (Token - ada)

5) payment should be done into the account "1" which is Bob's account (Party - Role - "Bob")

5. Set timeout slot

*“Timeout should be after slot 15.”*



6. Combine all together

스크린샷이(가) 표시된 사진

자동 생성된 설명

Now it says, when Bob deposits the amount of 300 ada himself, it means he should have less then 250 ada, added time slot part as 15 and continue the following. When Alice deposits the amount of 250 ada(half of the costs for the hotel) to the account 1 with Bob as an account owner, the payment to “Hotel Blockly” with amount of 250 ada from account 1 with Bob as an account owner will be excuted. And we added time slot about this combination part as 30.

7. Click the button “Send To Simulator”

Then we can get the smart contract easily.

When

[Case

(Deposit

(AccountId

1

(Role "Bob")

)

(Role "Bob")

(Token "" "")

(Constant 300)

)

(When

[Case

(Deposit

(AccountId

1

(Role "Bob")

)

(Role "Alice")

(Token "" "")

(Constant 250)

)

(Pay

(AccountId

1

(Role "Bob")

)

(Party (Role "Hotel Blockly"))

(Token "" "")

(Constant 500)

Close

)]

30 Close

)]

15 Close