Contract

- Address: KT1TZTkhnZFPL7cdNaif9B3r5oQswM1pnCXB
- Link to contract
- The contract only has the operations described next, so it is easy to check them all

Some clarifications

Test cases 4, 5, 10 and 11 can not be done because you can only swap within the range the price is currently at. The swap only goes to other ranges if the current range runs out of either Y token or X token.

Test Cases		
ID	**Expected result**	**Test Case**
1	Liquity is added (just token X is added)	Add Liquity in the range 1TKX > 5 TKY <-> 10 TKY
2	Liquity is added (just token Y is added)	Add Liquity in the range 1TKX > 1 TKY <-> 5 TKY
3	Liquity is added (both tokens are added)	Add Liquity in the current exchange range
4	Swap works	Swap in the range 5 TKY <-> 10 TKY
5	Swap works	Swap in the range 1 TKY <-> 5 TKY
6	Swap works	Swap at the current exchange rate
7	Liquity is withdrawen	Remove liquity provided in test case 1
8	Liquity is withdrawen	Remove liquity provided in test case 2
9	Liquity is withdrawen	Remove liquity provided in test case 3
10	Should not be possible anymore	Swap in the range 5 TKY <-> 10 TKY
11	Should not be possible anymore	Swap in the range 1 TKY <-> 5 TKY
12	Should not be possible anymore	Swap at the current exchange rate

The title of each test will have its ID.

Origination with initial value of P=Y/X=5

- Operation hash: oo3YisFTGrhgP9vBD1p3Eafgv2SiQduxwhiP1A5kn8on3qrzs1j

- Link to operation

ID 1) Set position in a range above the current price range

- Operation hash: ooCoVPMHErZBxvfwmLKJm7tBY44GnzLXRzs29yLY22XwGd8Q5oA

- Link to operation

- We chose the range to be between P=5.1 and P=10

- Only x tokens should be sent to the contract

ID 2) Set position in a range bellow the current price range

- Operation hash: opQzcLaUvM2HfLHc51yCX49jCJtH5fsJRFD4TL9QVLGG69yHzog

- Link to operation

- We chose the range to be between P=4.9 and P=1

- Only y tokens should be sent to the contract

ID 3) Set position in the current price range

- Operation hash: oogk2cjXFQb2iVhH8L8FDdev55VxD47zgSsh6W4huTBV6EkJVRE

- Link to operation

- We chose the range to be between P=5.1 and P=4.9 (it could be any range that includes the current price)

- Both x and y tokens should be sent to the contract

ID 6) X to Y swap

- Operation hash: ooEebpZWbvy5bvJTw1VArSp22FBK9CYDucUMWqaTx3azuvnbMC2

- Link to operation

- We gave 0.001 X tokens to the pool, and expect to get close to $Px0.001 = 5x0.001 = 0.005$ y tokens

- We chose this amounts and not 1 x token, in order to not change the price too much and stay in the current price range (while showing that the exchange rate is correct). This allows to easeally do the opposite swap (as we will see next)

ID 6) Y to X swap

- Operation hash: ooDcgaM9K8qWb8ZqyXitfhL1gMGSYt5ac9324iFwbXwQzVu7bgD

- Link to operation

- We gave 0.005 Y tokens to the pool, and expect to get close to 0.005/P=0.005/5=0.001 x tokens
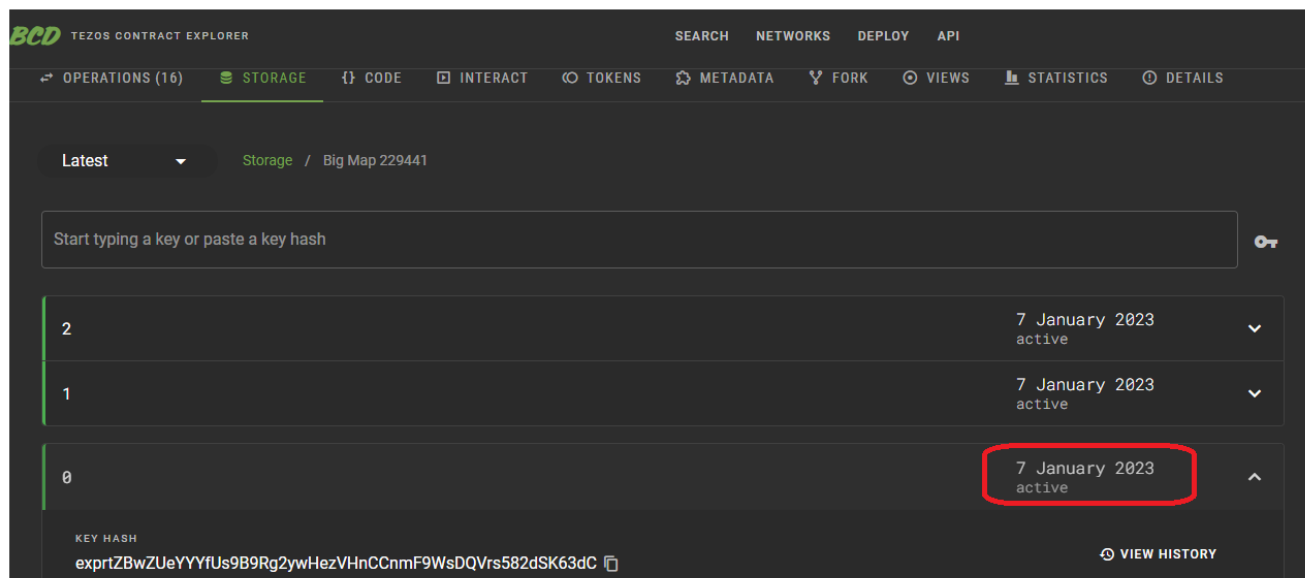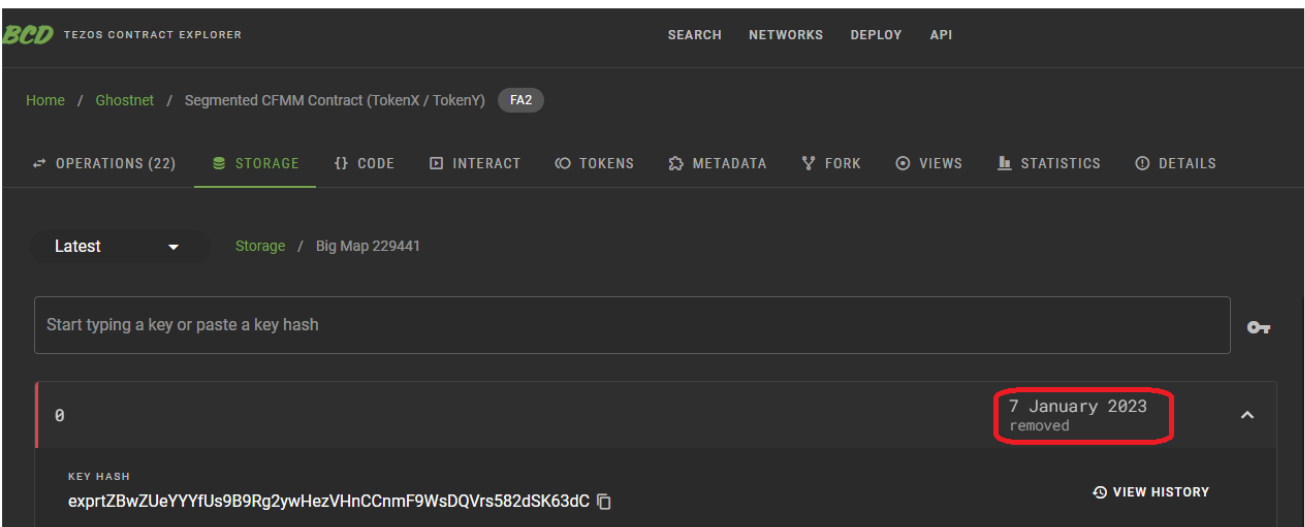
ID 9) Remove position

- Operation hash: ooQEtCBZM5K7uJN25tJV2x4nFoqCusG4CwLnmT4SRqq7xknvvam
- Link to operation
- We removed the initial position (the one where the current price is)
- Received our tokens back plus some fees from the swaps that occured

Before TX

After TX

Being the tx:

TX

ID 12) Attempt to swap

- Since we removed our initial position (the only one which included the current price), there is no more liquidity at the current price, so we can't preform a swap anymore

Error 104: Threshold on amount of bought tokens violated: `dx` received < `min_dx` or `dy` received < `min_dy`.
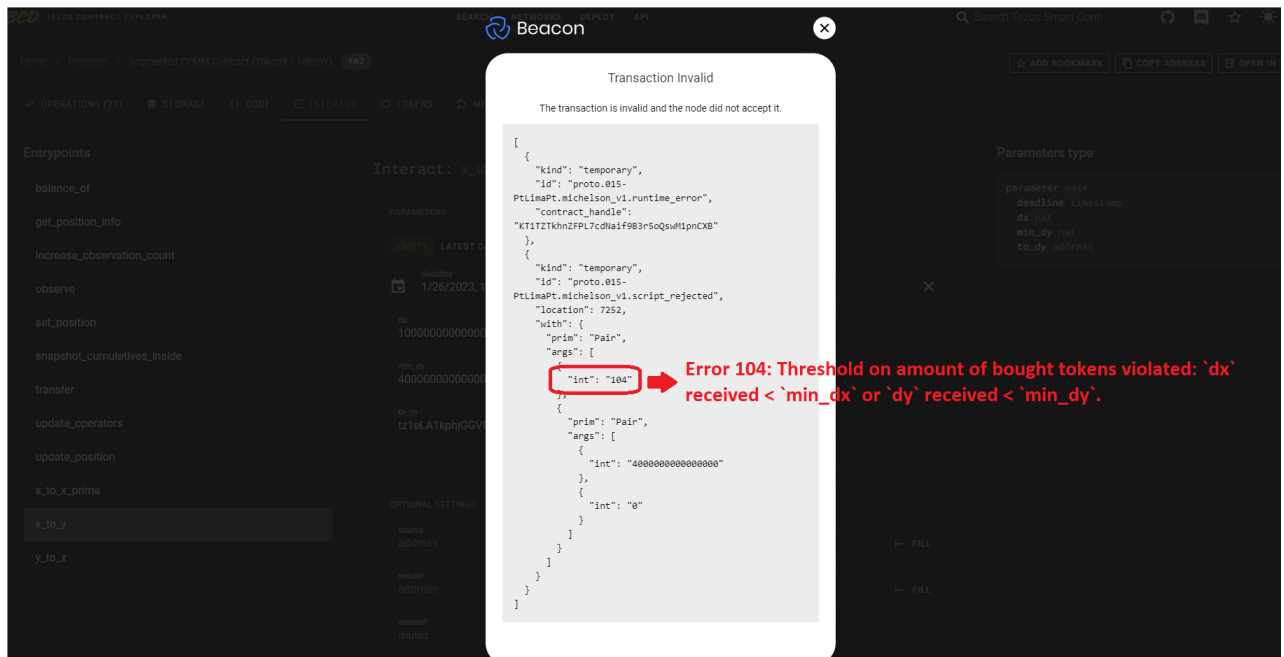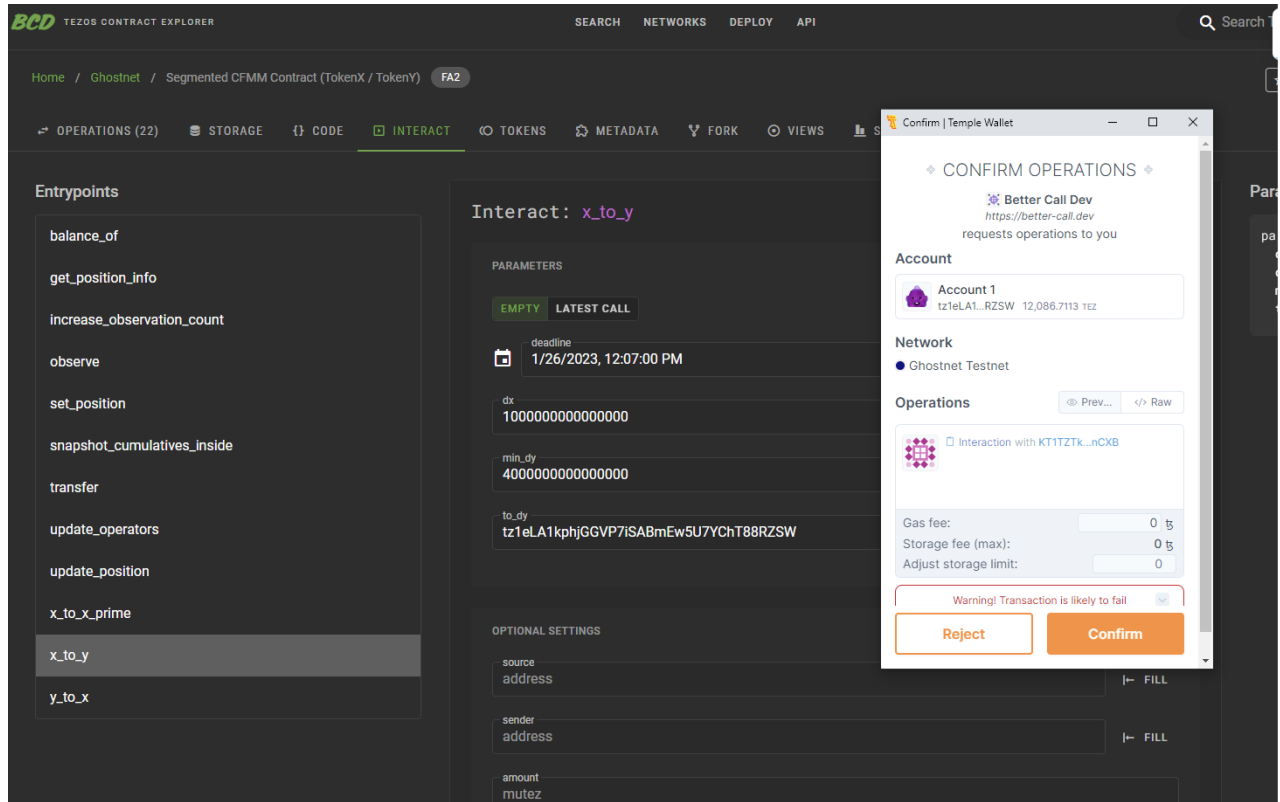
Question: Does yield farming already works? If i swap in a range will the provider receive a share?

Yes, and yes. We can see that the token amounts we get from closing our position is higher than what we inputed.

Fees collected:

Ytoken: 4.999493-4.999488=0.000005
Xtoken: 0.980135-0.980134=0.000001