Coin System Discussion

Multi Value Token System

10 RUPEE COIN   40 RUPEE COIN

Problem, How do you represent values like 36, 32, etc?
(Because combinations of 40 and 10 rupee coins
cannot create numbers like 32,72, etc)

In fact, because both 10 and 40 are even
numbers we cannot create a single odd number value from them.

Potential Solutions

X1.05 = 42

1) Decimal-point Tokens

   Just represent number of tokens in Decimals.
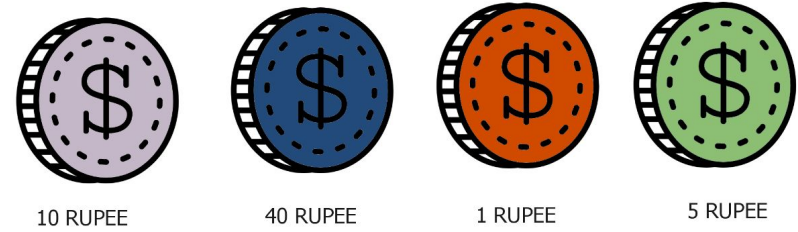
X1.1 = 11

   Problems,
   a) How do you represent non-terminating numbers in the UI and how do you store it in the backend?

   b) (My personal opinion) Makes the app feel crypto/game-like. (Crypto and gaming apps are the only mobile apps where values are represented to the user as decimals)

Potential Solutions

10 RUPEE   40 RUPEE   1 RUPEE   5 RUPEE

2) Introduce even more number of tokens

So basically, instead of just two tokens, have a 1 rupee token and a 2 rupee token and 5 rupee token and so on plus the 40 and 10/20 rupee token.

Could work, but how would this be implemented?

So if user has to pay 35 rupees and the user only has a 40 rupee token, will the user/backend system convert 40 rupee token into three 10 rupee tokens and one five rupee token. (Giving back a 5 rupee token to the user)

Potential Solution

1 RUPEE

3) One token to rule everything

1 coin token with a single value of 1 rupee exists.

For the 10,000 step milestone if one 40 rupee token was the previous milestone, now the user will instead be given 40 One Rupee tokens.

Problem,
Even if implemented properly in the code, could easily increase database costs simply due to having to track every coin.

(This problem might also exists in solution 2)