



Digital Asset Aggregator and Advisor

Introduction

Due to the rapid growth of Decentralized Finance (DeFi) in 2020, a large number of DeFi applications are emerged in the world of global finance to serve peer-to-peer financial services to the customers especially the investors. In this project, we identify the needs and address the problems of the DeFi investor by implementing digital asset aggregator and advisor called PlanU to aggregate the portfolios across the platforms in Binance Smart Chain (BSC) as well as simulating the overview dashboard for all the portfolios. In term of investment, PlanU acts as an advisor suggesting the most cost-effective platform for lending and borrowing. Apart from the advisory, automated yield optimizer is another feature on PlanU which automatically manage investor's depositing assets as much as possible to maximize their earnings without 24/7 monitoring.

System Design

Since there are various categories of DeFi application on Binance Smart Chain (BSC), we designed to implement the digital asset aggregator and advisor focusing on the lending platform, i.e., Venus, ForTube, and C.R.E.A.M. The application contains 4 key features to facilitate an investor on BSC investment.

i. Overview dashboard

This feature is to simulate an overview dashboard from the portfolio which consist of the digital asset in their own wallet including supplied and borrowed assets on lending platform on Binance Smart Chain, Venus. The overview dashboard will separate into 2 sections: Your Asset Overview and Your Debts Overview.

Your Asset Overview section displays net worth amount and total assets with estimated daily interest earned amount as well as total supplied amount on Venus. On the right side of this section, overview dashboard was simulated to represent the ratio of the asset in the wallet and supplied amount in lending platform.

Your Debts Overview section displays only the total debts in USD which is total borrowed amount on Venus platform. On the right side of this section, overview dashboard was simulated to represent the ratio of debts across platform.

ii. Portfolios aggregator

This feature is to display all the assets in a wallet own by a user and the debts on the lending platform, Venus. On the top of the portfolio will be summary section which contains net worth amount, total asset amount, and total debt amount.

$$\text{Net worth} = \text{total assets} - \text{total debts}$$

$$\text{Total asset} = \text{Sum of (current token price} \times \text{token balance)} - \text{supplier amount}$$

$$\text{Total debt} = \text{Sum of (borrowed amount)}$$

For lending and borrowing on Venus platform, the price and APY values were retrieved directly from Venus to calculate estimated daily interest earned and accrued.

$$\text{Estimated daily interest earned} = \frac{(\text{supplied balance} \times \text{token price} \times \text{APY})}{365}$$

$$\text{Estimated daily interest accrued} = \frac{(\text{borrowed balance} \times \text{token price} \times \text{APY})}{365}$$

iii. Investment recommendation

This feature is to recommend a user the best platform for lending and borrowing selected by the interest rate; the platform with the highest interest rate will be suggested for supplying for lending and the platform with lowest interest rate will be suggested for borrowing.

iv. Automated yield optimizer

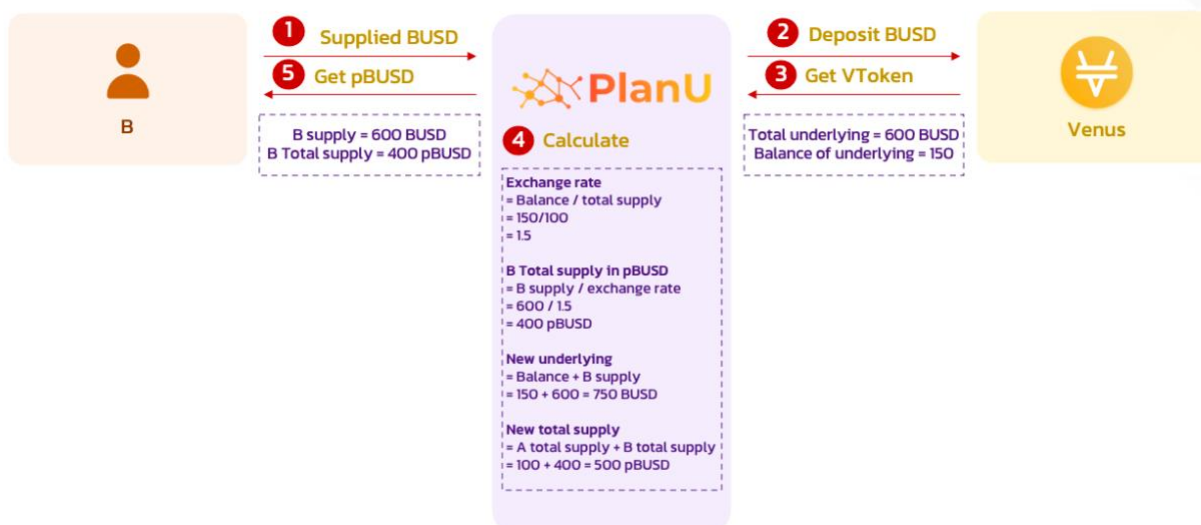
This feature is to automatically optimize depositing assets from the investor to maximize their yield earnings from lending. With this feature, the investor is not required to have all-time monitoring as well as any expertise in the investment, they could receive high returns by investing on our platform.

Once an investor deposits the digital assets to PlanU pool, they will receive the alternative coins from our pool. Note that deposit fee will be charged at 0.1% once depositing. Upon withdrawing, the investor can fully or partially withdraw from our protocol while withdrawal fee will be applied at 0.25%. The total receiving amount is the summary of withdrawal amount and earnings.

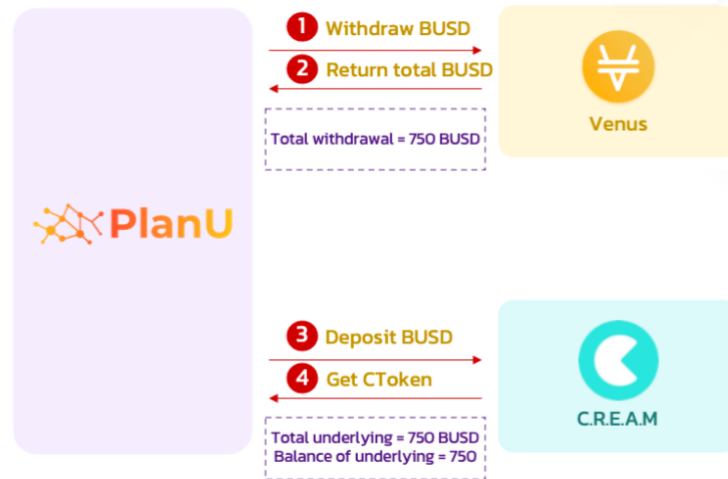
1. A supply 100 BUSD and then receives 100 pBUSD in exchange. After that planU will deposit 100 BUSD to Venus.



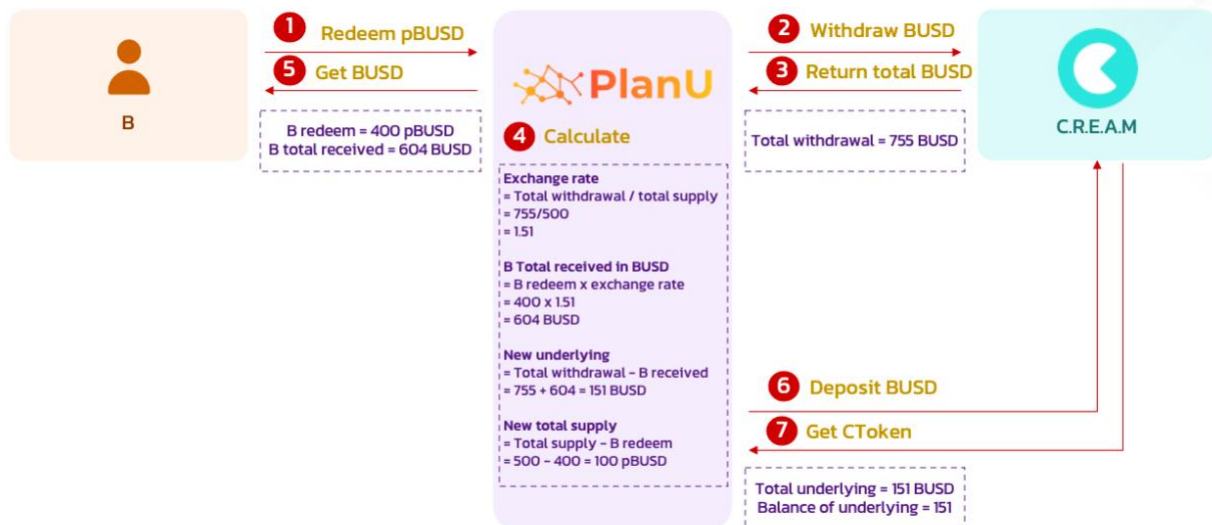
2. B supplies 600 BUSD and then receives 400 pBUSD in exchange.



- After B received 400 pBUSD, PlanU will check if the APY of C.R.E.A.M. is greater than Venus more than threshold (3%). If yes, PlanU will withdraw total underlying balance from Venus and then deposit to C.R.E.A.M.



- After few days later, B redeems 400 pBUSD and then receives 604 BUSD in exchange. If APY C.R.E.A.M. is still greater than Venus, deposit the remaining to C.R.E.A.M.



Conclusion and Future Scope

In this project, we addressed the current problems which are encountered by most of the investors on Binance Smart Chain (BSC) in the recent years. However, there are a lot features which can support or facilitate the user more on the investment, i.e., liquidity pool recommendation, transaction history, yield farming optimizer, liquidity optimizer, and staking optimizer, which we plan to implement in Q2 and Q3 of 2021 as mentioned in our roadmap. Besides, we also plan to scale up PlanU by integrating more new lending platform in the future. With these features, the investor will be more interested in DeFi investment, which help enlarging the number of investors on Binance Smart Chain (BSC) as well as uplifting the world of investment to the next level.

Reference

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