DTUPay User's Guide

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ABSTRACT

The User's Guide contains a description of the major use cases.

Keywords:

REGISTER A DTU PAY ACCOUNT

Author: Gunn

Whenever a user (either customer or merchant) wishes to create an account, they can do it through the DTU Pay application. The request is going to be forwarded to and executed by the Account Service. In case of successful registration the service is going to return with "Account Provided".
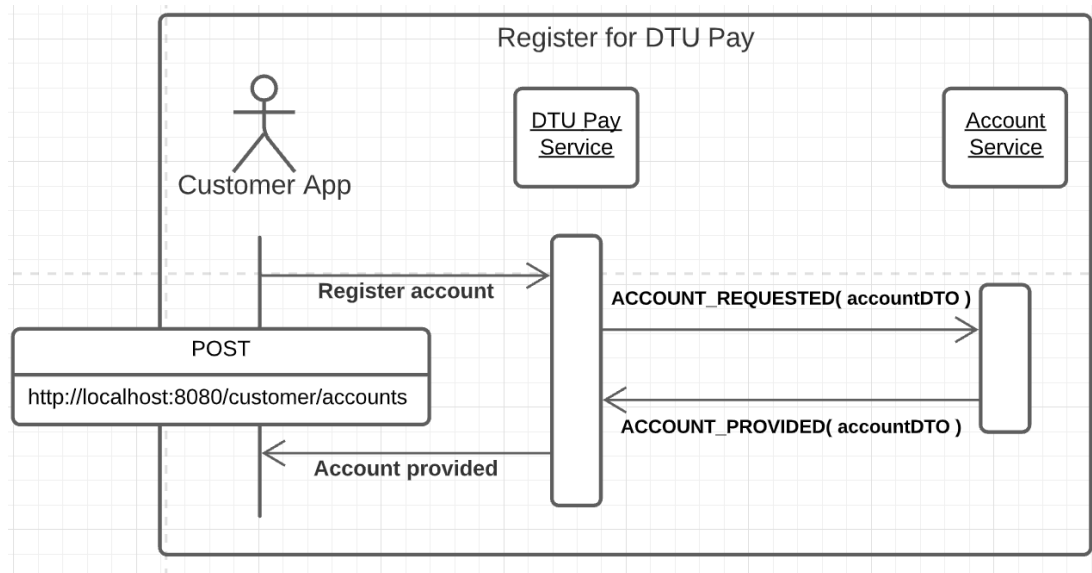

Figure 1. Diagram of a successful account registration

DELETE A DTU PAY ACCOUNT

Author: Bingkun

An account can be deleted anytime. It can be done by requesting the deletion through the DTU Pay application, the request will then be forwarded to the Account Service. In case of successful deletion, the service will return with "Account Deleted".
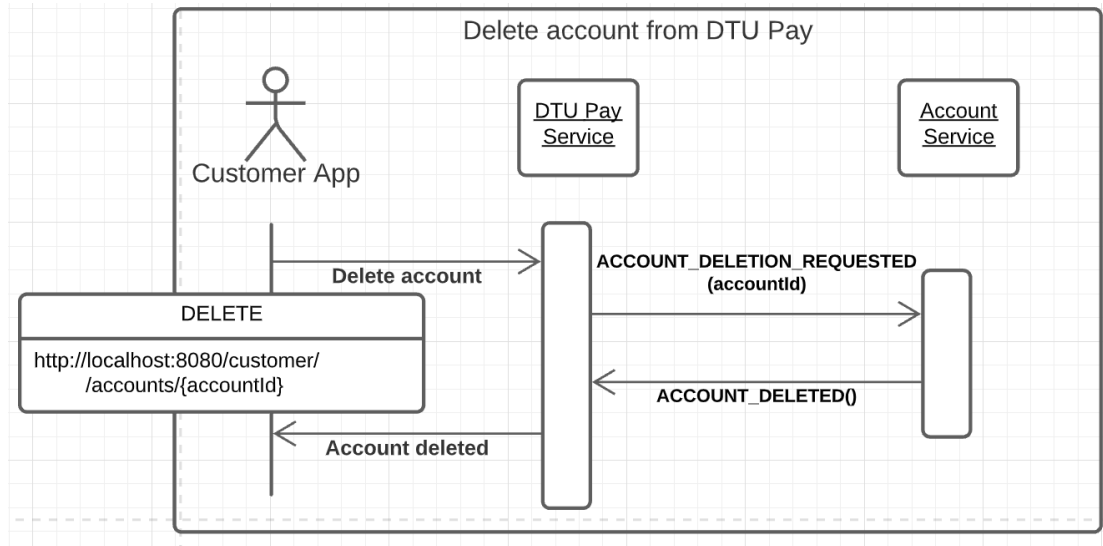

Figure 2. Diagram of successful account deletion

REQUEST FOR NEW TOKENS

Author: Tamas

A customer has to use a token for each payment. Whenever he runs out of them, he can request new tokens through the DTU Pay app. The request will be forwarded to the Token Service which will check if the user has a valid account and if he possesses less than 2 tokens. If all the conditions are fulfilled, it will create the required amount of tokens. Eventually the service will return with "Token Provided" and an object containing all the tokens.
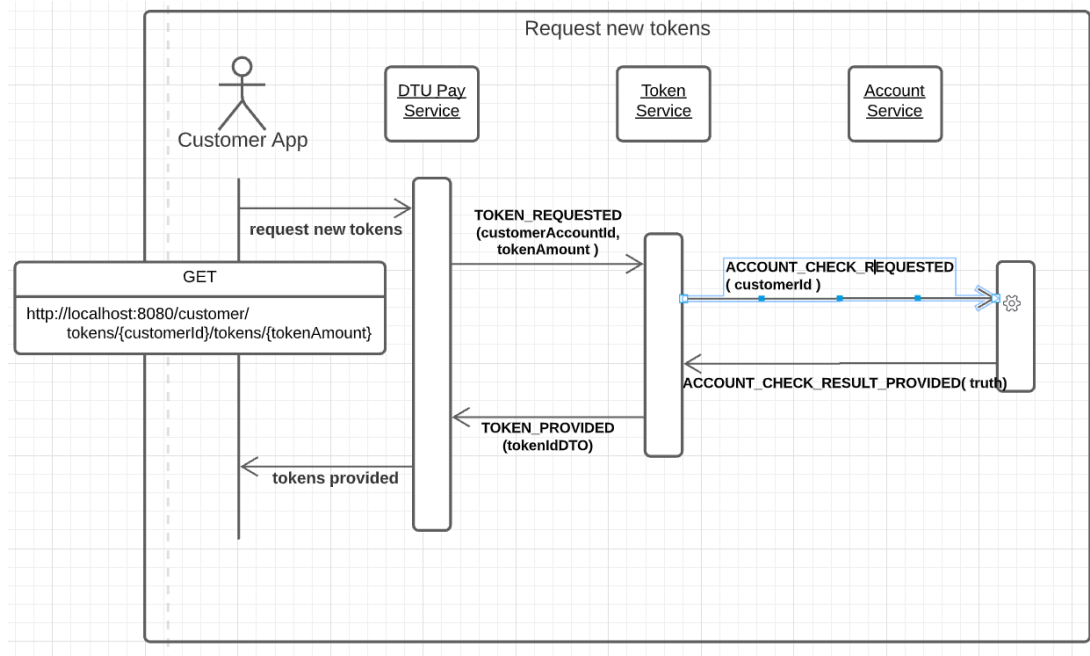

Figure 3. Diagram of Request for new Tokens

CONDUCT A PAYMENT

Author: Bence

   Conducting a payment consists of many steps. First the customer provides his token to the merchant which then will be forwarded to the Payment service. The service will check a few conditions before actually initiating the payment: first of all if the given token is valid, then if both the customer and merchant have valid accounts. If all conditions are fulfilled then the payment request will be forwarded to the Bank service. The request contains the identity of the customer and the merchant and the amount to be transferred. If the amount doesn't exceed the balance of the customer then the transaction will be executed and the service will return with "Payment Completed". All successful payments will be stored in the Report service for later use.
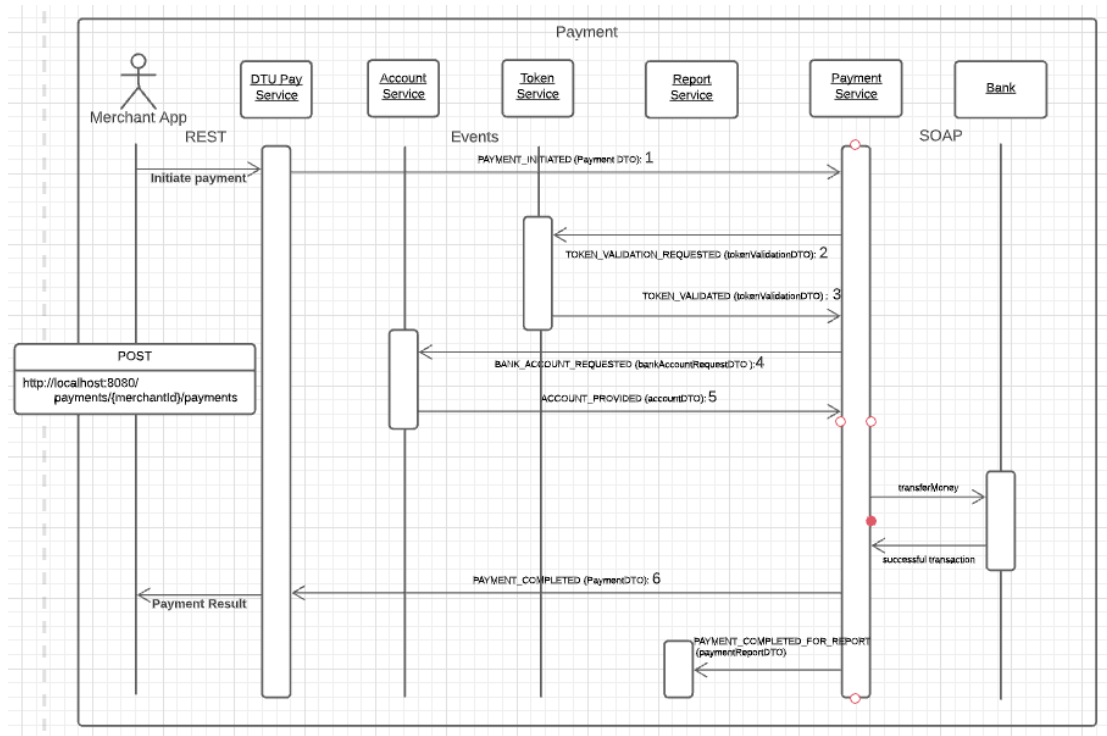

Figure 4. Diagram of conducting a Payment

REQUEST FOR REPORT

Author: Florian

Whenever a customer or merchant would like to learn their purchase history they can request a list of all their previous transactions. They can do it via the DTU Pay app which will forward the request to the Report service. The service will return the list of all previous payments. However a merchant can never know who the customer was, only the tokenID he used. Moreover every customer can only request for their own payments.
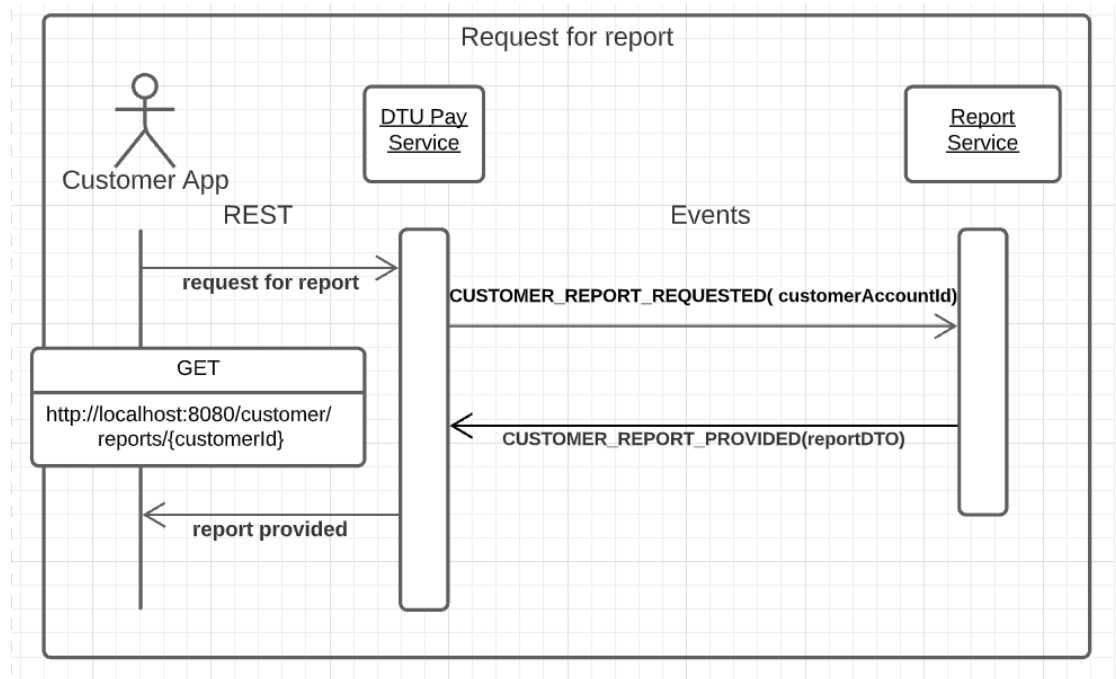

Figure 5. Diagram of requesting a report