

Subscriptions TDS

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Overview

This document describes technology design to support the MVP Subscription code with Hybris.

Functional Requirements

Requirement
A guest and logged in user can select from a predefined list of subscription durations but must be logged in to subscribe.
Only one product/kit can be subscribed to at a time. User will be able to select the quantity per subscription item.
A user must be logged-in to complete a subscription order. If the user is not logged in, they will be redirected to the log in screen and on successfully log in redirected to the Subscription Order Confirmation screen.
<ul style="list-style-type: none">• Hybris will support variable frequencies for subscriptions for each product.• There will only be 1 discount/price per multiple frequencies per product.• Frequency duration will be defined in weeks, but a free text display name will be available for the merchandiser to use.• The system will only apply the number of weeks, it will not necessarily be the same day each frequency• <i>E.G., Apply 5% off on the following frequencies</i><ul style="list-style-type: none">• <i>Monthly (4 weeks)</i><ul style="list-style-type: none">• <i>starts on Aug 20th 2018, the next deliver would be 4 weeks later September, 17th 2018</i>• <i>Weekly (1 week)</i>
Based on the selected subscription duration, hybris will display the price of the order.
A GP Business User can configure the subscription frequency options by product.
A GP business user can configure a % or \$ amount off of this single order and/or future orders for a subscription.
Hybris will maintain subscription pricing and promotions.
Hybris will create the order and send to S/4 for fulfillment n days before the subscription is due
Hybris will send subscription notification email n days prior to sending order to S/4 / NetSuite
Order placed email will be sent when cronjob sends order to S/4, NetSuite <ul style="list-style-type: none">• This can be the same email as a normal order, with some slightly different content based on it being a subscription order
Order shipped email will be sent when fulfilled <ul style="list-style-type: none">• This can be the same email as a normal order, with some slightly different content based on it being a subscription order
A user will receive an email alert if an item in their replenishment order has been substituted or discontinued.

Registered users can receive SMS alerts for subscription notifications if SMS service is available in R2

A user will not be unsubscribed from a subscription order if a replacement product in their order has been substituted.

A logged-in user can only cancel a single order within a subscription

Hybris will ensure that PCI/PII compliance is maintained due to how long we store customer information/tokening, etc. related to subscriptions.

A guest or logged-in user can filter and browse subscription products within search by indexing the isSubscribable attribute

Technical Requirements

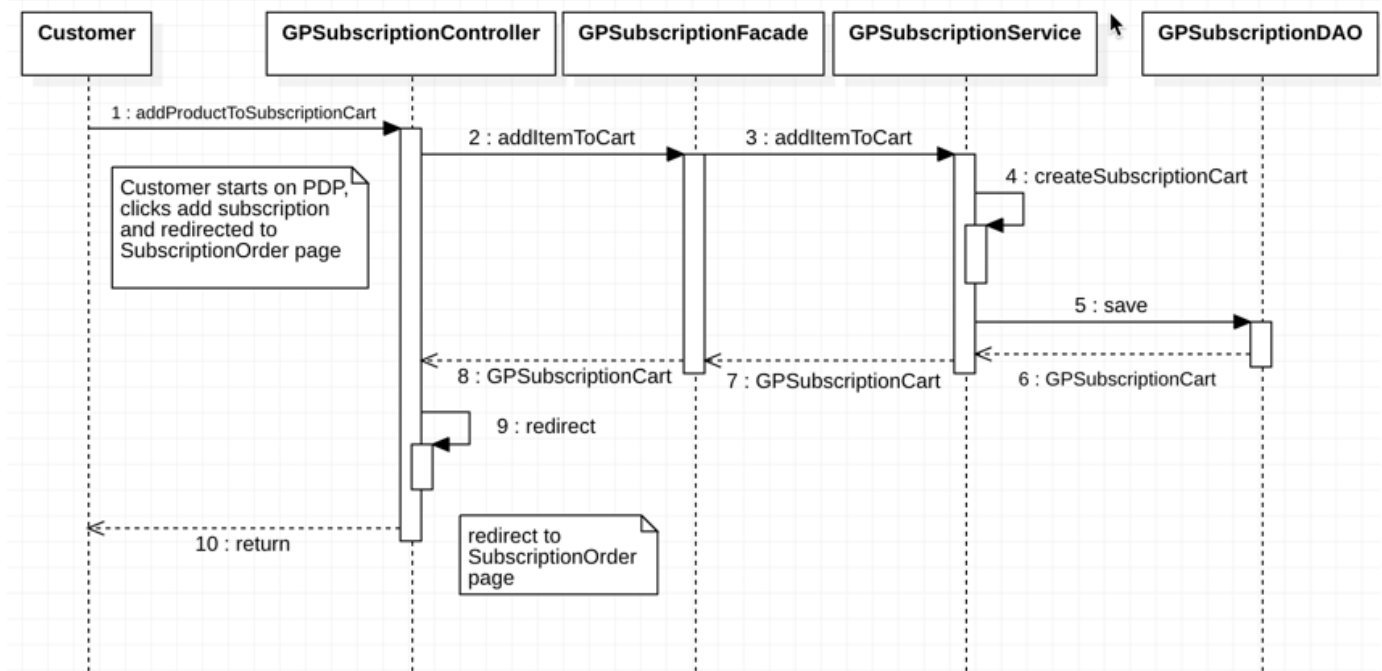
Subscription Pricing

To accommodate pricing discounts when a customer subscribes to a product, the system will extend the OOTB priceRow objects. These discounts then will be applied to the price being retrieved from the GPEurope1PriceFactory.

The details to have been added to the [Pricing and Multi-Brand](#) design doc.

Sequence Diagrams

Add Subscription



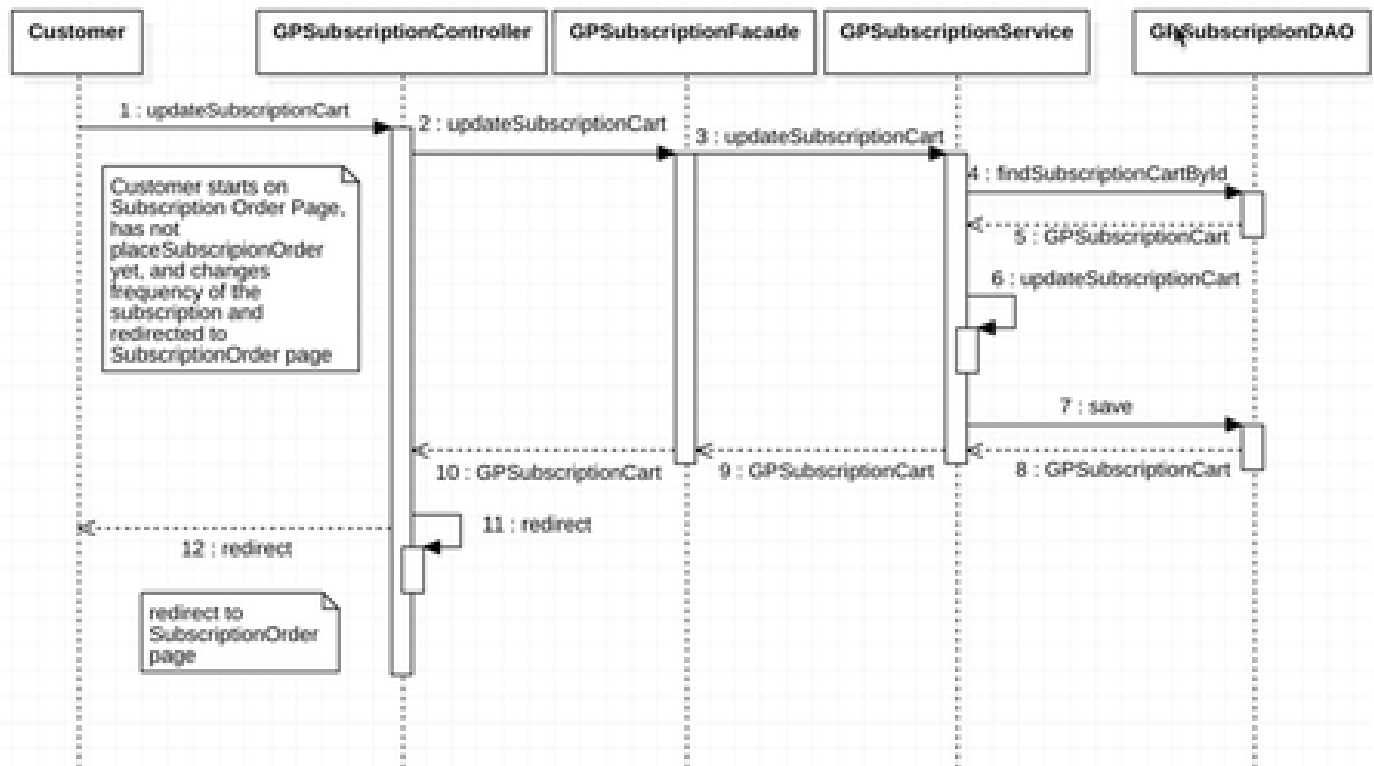
1. Customer visits a PDP page of a subscribable product
 - a. The page shows a dropdown with all the subscription options
 - b. Customer selects 1 option and clicks the subscribe button
2. GPCSubscriptionController validates inputs including
 - a. Product code
 - b. Frequency of Subscription
 - c. Quantity
 - d. GPCSubscriptionService creates a GPCSubscriptionCart to hold the GPCCommerceProduct

GPCSubscriptionCart and GPCCommerceProduct are subclasses of their Hybris counterparts and therefore should be able to run through the normal cart processes like cart calculation.

1. GPCSubscriptionDAO persists the GPCSubscriptionCart
2. returns GPCSubscriptionCart

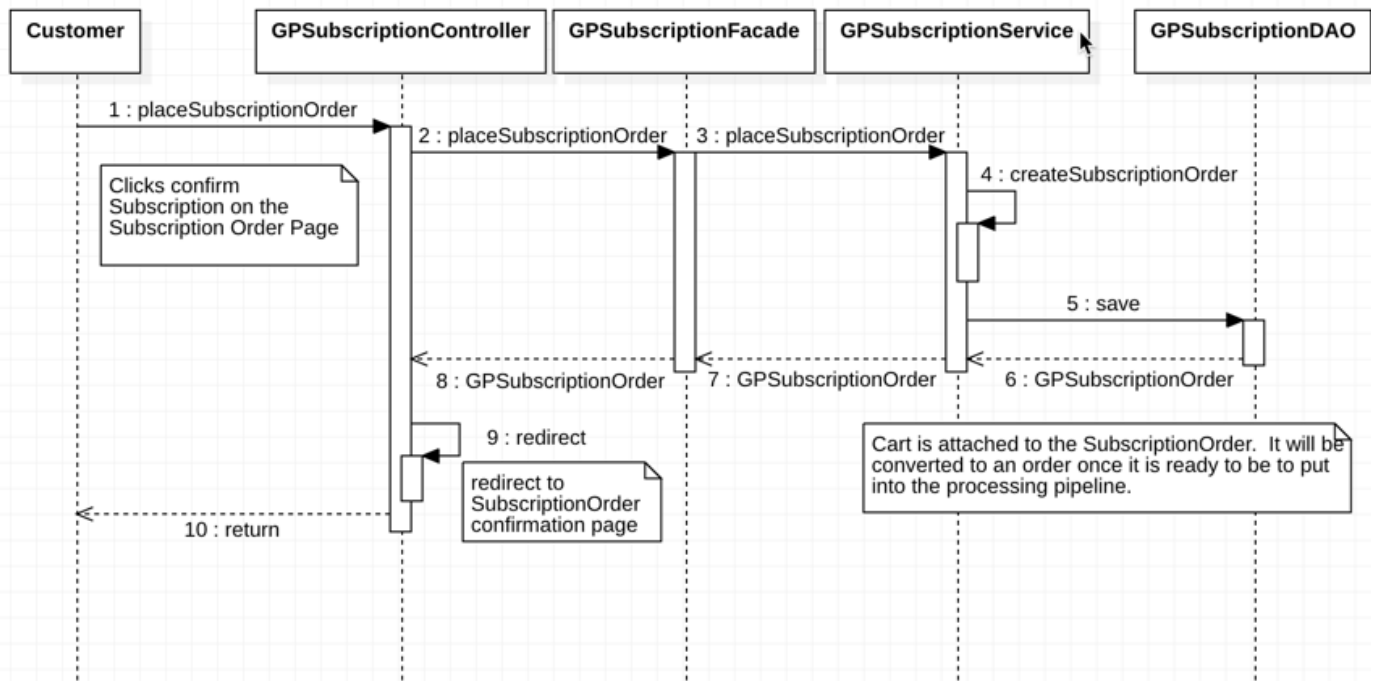
3. returns GPSubscriptionCart
4. GPSubscriptionFacade
5. GPSubscriptionController redirects to the Subscription Order Page

Update Subscription



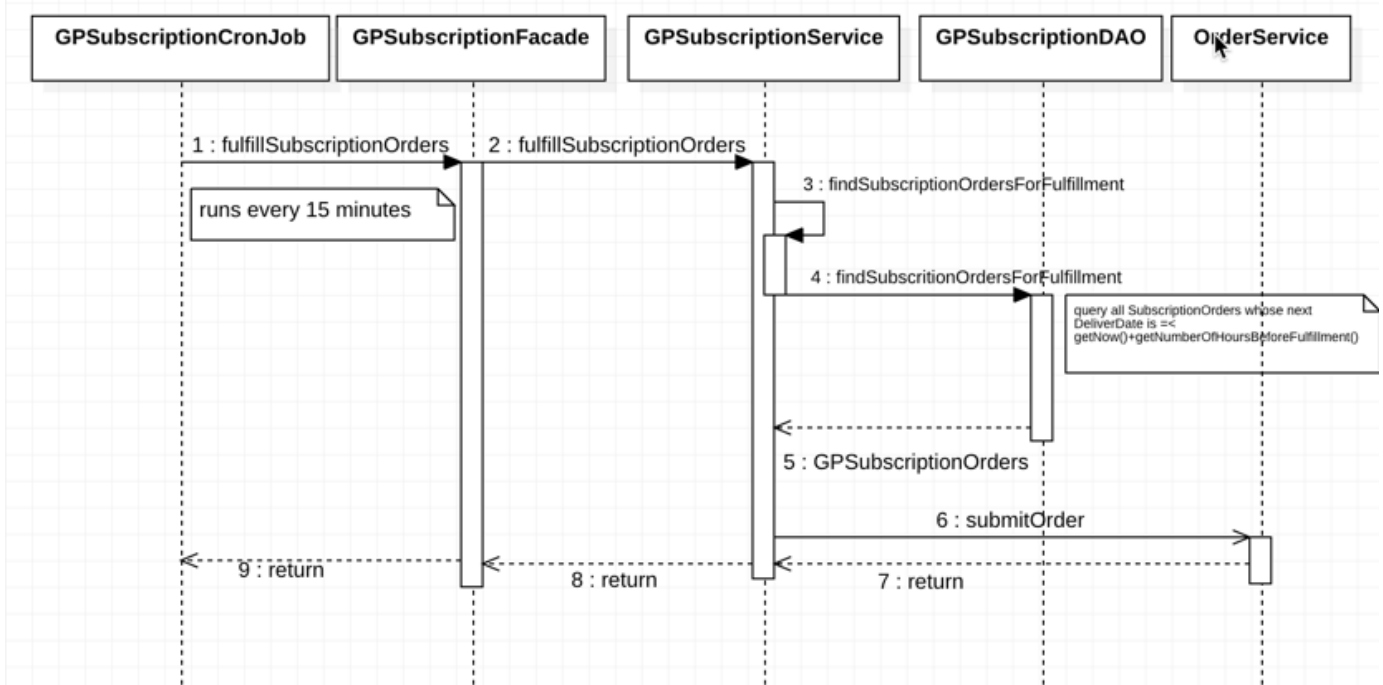
1. Customer is on the Subscription Order page, but has NOT placed the Order yet
 - a. The page shows a dropdown with all the subscription options, but current frequency option is selected
 - b. Customer changes the frequency option
2. GPSubscriptionController validates inputs including
 - a. Product code
 - b. GPSubscriptionCart.code
 - c. New Frequency of Subscription
 - d. New Quantity
3. GPSubscriptionFacade
4. GPSubscriptionService calls GPSubscriptionDAO to find the subscription cart
5. GPSubscriptionCart is returned
6. GPSubscriptionService
 - a. iterates through the cart to find the Product code (Note: for the MVP version there is only one item per subscription cart)
 - b. updates the Frequency, quantity
7. GPSubscriptionService the GPSubscriptionCart
8. returns GPSubscriptionCart
9. returns GPSubscriptionCart
10. returns GPSubscriptionCart
11. GPSubscriptionController redirects to the Subscription Order Page

Placing a Subscription Order



1. Customer is on the Subscription Checkout Page and clicks Confirm Subscription
2. GPSubscriptionController validates inputs including
 - a. GPSubscriptionCart.code
3. GPSubscriptionFacade
4. GPSubscriptionService creates a GPSubscriptionOrder
 - a. Sets the cart attribute to GPSubscriptionCart
 - b. Sets the nextDeliveryDate to getNow() **Note: When creating a subscription for the first time, an order also needs to be created to be fulfilled. Every subsequent order will use the frequency interval to calculate the nextDeliveryDate.**
 - c. GPSubscriptionCart and GPCommerceProduct are subclasses of their Hybris counterparts and therefore should be able to run through the normal cart processes like cart calculation.
5. GPSubscriptionOrder is persisted
6. returns GPSubscriptionOrder
7. GPSubscriptionController redirects to the Subscription Order Confirmation Page
8. Subscription Order Confirmation Page is displayed

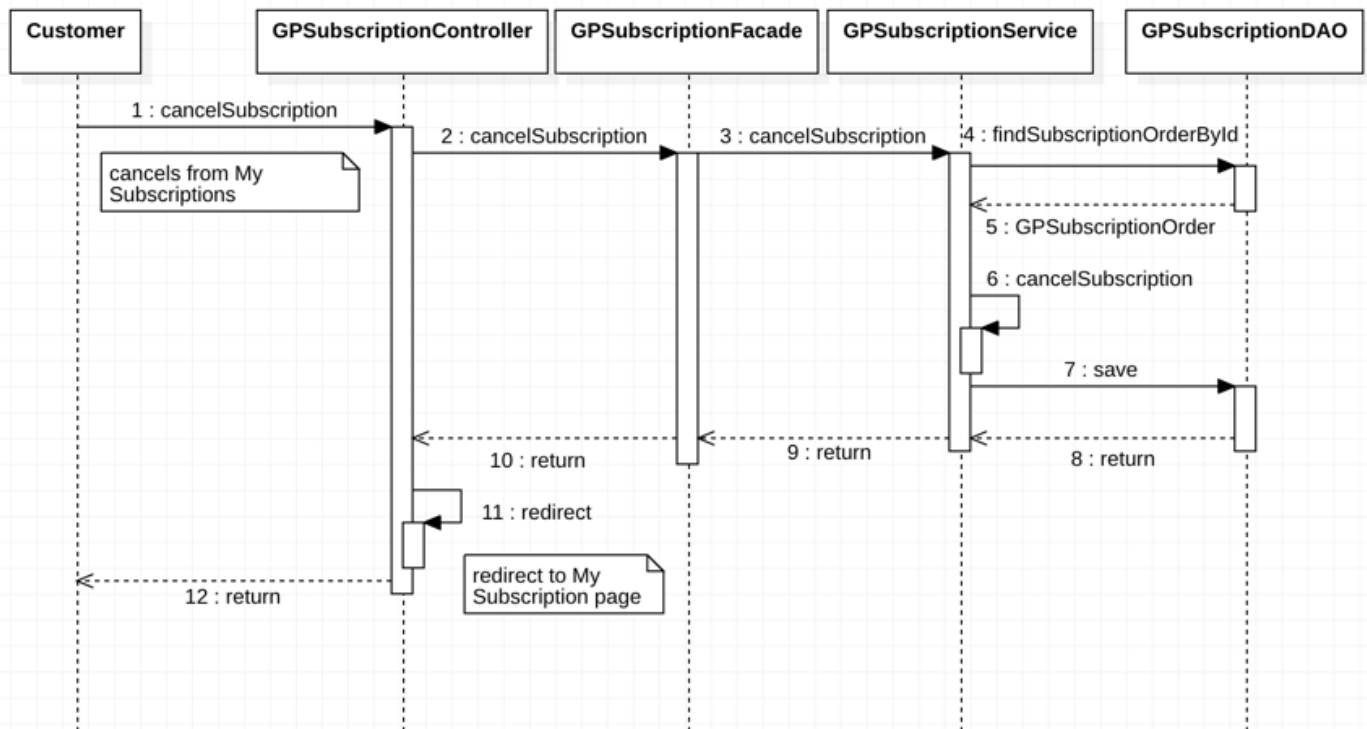
Fulfill Subscription Order



1. GPSubscriptionCronJob runs every N minutes
2. GPSubscriptionFacade
3. GPSubscriptionService calls GPSubscription DAO to get subscription orders ready to be fulfilled
4. GPDAO queries the database for
 - a. query all SubscriptionOrders whose next DeliverDate is <= getNow()+getNumberOfHoursBeforeFulfillment()
 - i. getNumberOfHoursBeforeFulfillment is the number of hours Hybris should send this subscription order to fulfillment
 1. E.G.,
 - a. Subscription is weekly
 - b. numberOfHoursBeforeFulfillment is N hours
 - c. System should send the subscription order N day(s) before the nextDeliveryDate
5. GPSubscriptionService receives a Collection of GPSubscriptionOrders for fulfillment and iterates over each GPSubscriptionOrder
 - a. Converts the GPSubscriptionCart into a valid Order object
 - i. Set flag isSubscription for later reporting
 - b. **Try/Catch should be inside the loop, so a order that fails won't prevent any other order from being processed**
6. Sends order Order Service to be submitted to the Order workflow
7. Update the next order date based on the frequency selected by the User. **nextDeliveryDate=frequency+getNumberOfHoursBeforeFulfillment()**
8. Returns
9. Returns

Step 6 is the similar as if the customer when through normal checkout and clicked Place Order. All emails and notifications should follow as per a regular order. The exception is that there might be small content changes based on the fact this Order was generated from a subscription

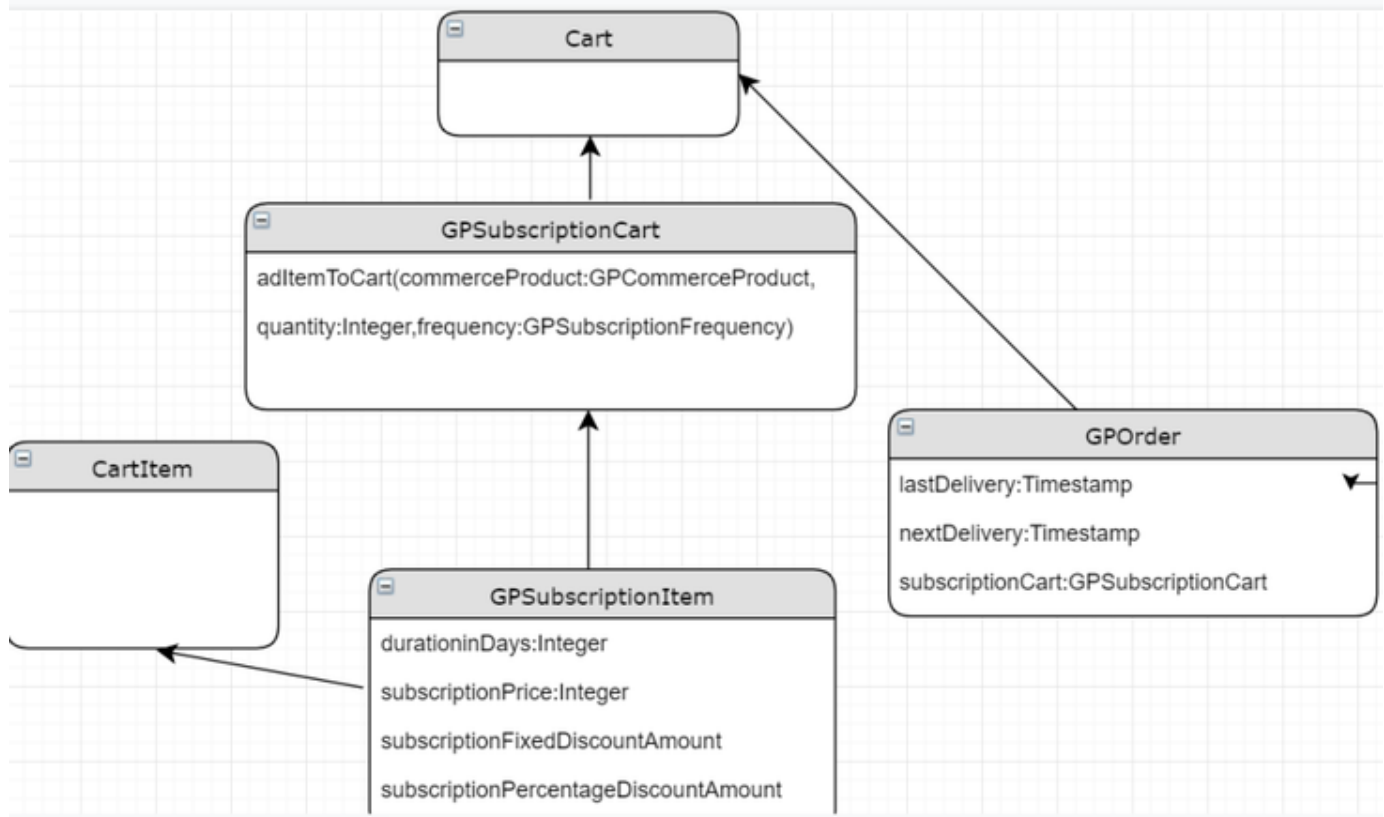
Cancel Subscription



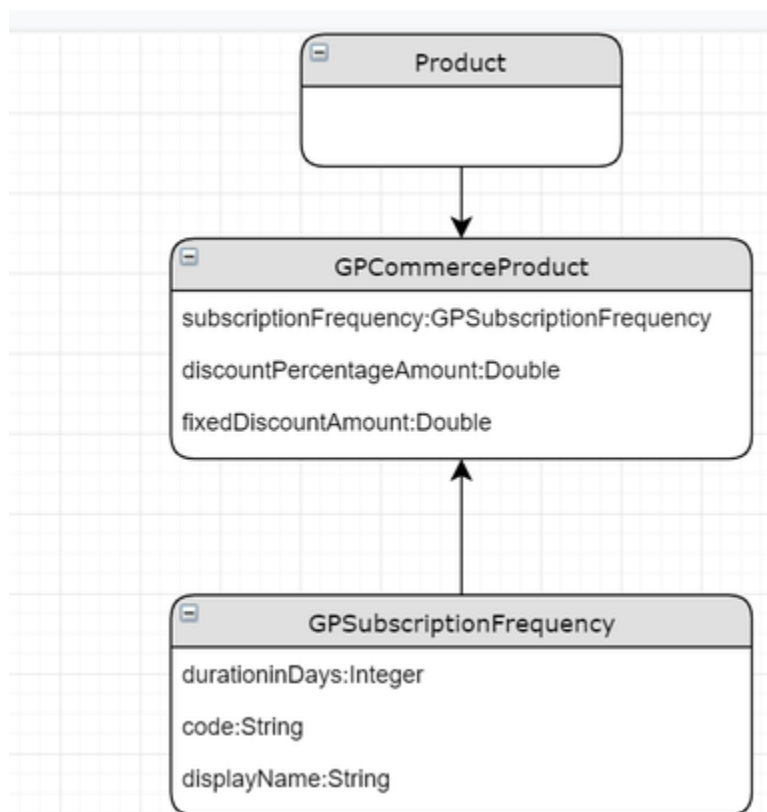
1. Customer visits the My Subscriptions in My Account
 - a. The page shows all the subscription orders
 - b. Customer selects clicks the cancel button button
2. GPSubscriptionController validates inputs including
 - a. SubscriptionOrder code
3. GPSubscriptionFacade
4. GPSubscriptionService calls GPSubscriptionDAO to find the subscription cart
5. GPSubscriptionDAO returns GPSubscriptionOrder
6. GPSubscriptionService cancels GPSubscriptionOrder by
 - a. Setting state to CANCELLED
 - b. Setting the nextDeliveryDate to null
7. GPSubscriptionOrder is persisted
8. returns
9. returns
10. returns
11. GPSubscriptionController redirects to My Subscription Page
12. My Subscription Page now showing the GPSubscriptionOrder as cancelled.

Class Diagrams

GPSubscription Services



Subscription Cart/Order Classes



GPCommerceProduct

