

Pattern: Server-side page fragment composition

Context

You have applied the Microservice architecture pattern ([../microservices.html](#)). Services are developed by business capability ([../decomposition/decompose-by-business-capability.html](#))/subdomain ([../decomposition/decompose-by-subdomain.html](#))-oriented teams that are also responsible for the user experience. Some UI screens/pages display data from multiple service. Consider, for example, an Amazon-style product detail page, which displays numerous data items including:

- Basic information about the book such as title, author, price, etc.
- Your purchase history for the book
- Availability
- Buying options
- Other items that are frequently bought with this book
- Other items bought by customers who bought this book
- Customer reviews
- Sellers ranking
- ...

Each data item corresponds to a separate service and how it is displayed is, therefore, the responsibility of a different team.

Problem

How to implement a UI screen or page that displays data from multiple services?

Forces

Solution

Each team develops a web application that generates the HTML fragment that implements the region of the page for their service. A UI team is responsible for developing the page templates that build pages by performing server-side aggregation (e.g. server-side include style mechanism) of the service-specific HTML fragments.

Related patterns

- The Client-side UI composition ([client-side-ui-composition.html](#)) pattern is an alternative approach

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