

SadaParcel

Important

We want to be respectful of your time, so please try not to spend more than a day (about 8 hours) on the entire exercise.

We're interested in learning how you write production-ready code. Completing every part of the exercise is less important to us than what you choose to complete in the time available and how you choose to complete it. If you find yourself making trade-offs, please explain why in your README or code comments.

Instructions

SadaParcel is a grab-and-go ordering app. Users select their items and place an order, which they can then pay for and collect at a physical store.

Treat these stories like real stories written by Product and the CFRs like real CFRs agreed by Engineering. Be mindful about what is out of scope.

To better understand how we work at SadaPay, please review our [engineering vision](#) closely before you complete this exercise.

Please implement **one of**:

- Android App for SadaParcel customers
 - Kotlin only please
- iOS App for SadaParcel customers
 - Swift only please
- Web Management Portal for SadaParcel staff
 - Preferably React
 - Feel free to use a framework
- Back-End for the mobile apps and Web Management Portal to use
 - Preferably Java or Kotlin
 - Feel free to use a framework, e.g. SpringBoot using our starters for Java or Kotlin

Assume the options you don't choose have already been implemented according to API specifications.

Resources

- [SpringBoot Java Starter](#)
- [SpringBoot Kotlin Starter](#)

Cross Functional Requirements

- Graceful Degradation
- Observability

Out of Scope

- Authentication
- Authorization
- Real Persistence (in-memory is good enough)

API Specifications

Full API specifications can be found in the api-specs directory.

Stories

Browse Items

As a customer

I want to see what items are available and how many are in stock

so that I don't visit the store for no reason during a pandemic

Implement For

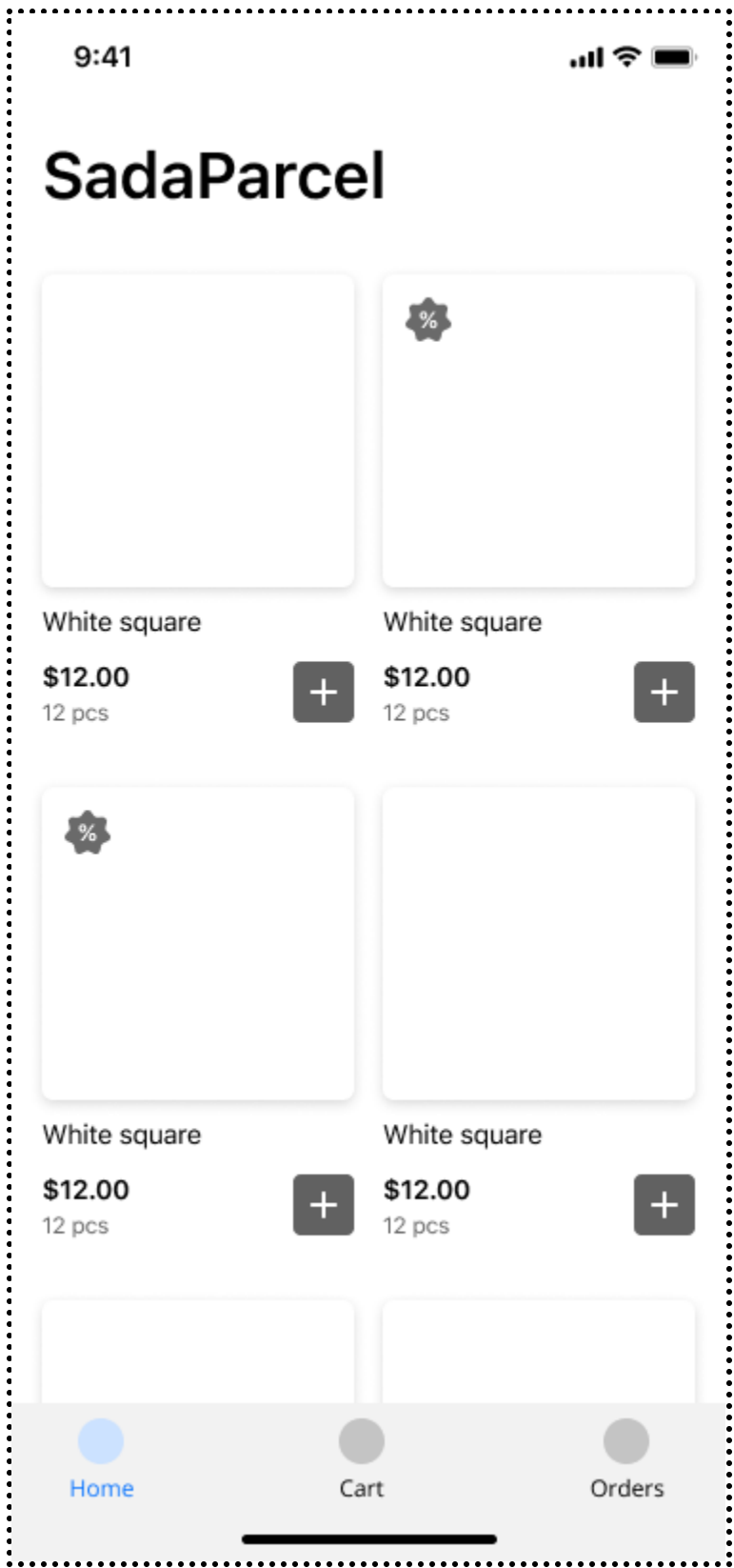
- Android App
- iOS App
- Back-End

Acceptance Criteria

When a customer opens the app

then they should see a list of all items in the inventory, their stock levels and their individual prices

Wireframes



Order Items

As a customer

I want to order items in advance and pay for them in-store

so that I don't have to wander around the store during a pandemic

Implement For

- Android App
- iOS App
- Back-End

Acceptance Criteria

Given a customer is on the home screen

when they add a listed item

then it is added to the cart

Note: For mobile platforms, we suggest skipping the next 2 acceptance criteria if you are short on time

Given a customer has items in their cart

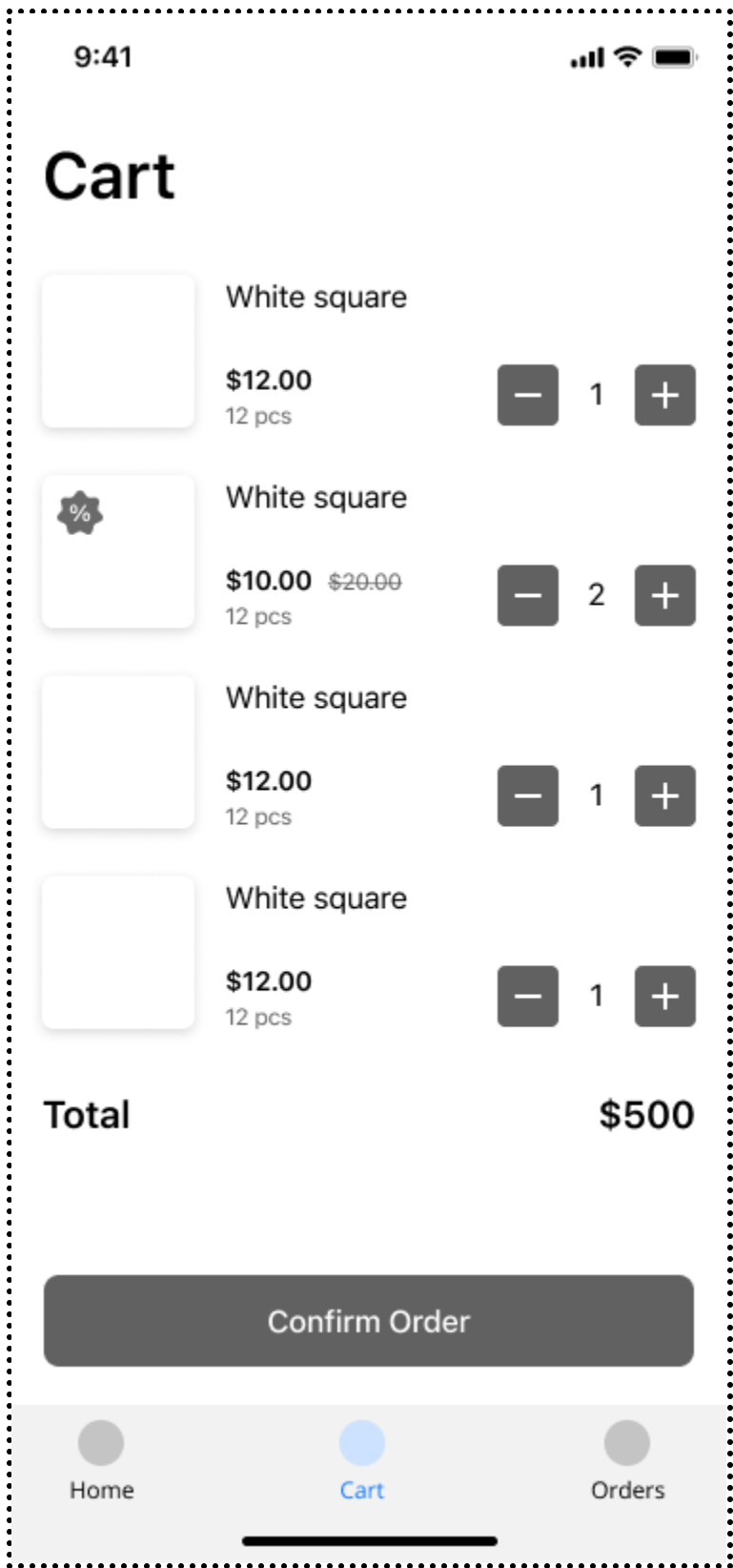
when they confirm their order

then they are taken to the order confirmation screen

Given a customer is on the order confirmation screen

when they navigate back

then they are returned to the card screen



Offers

As a user

I want to receive discounts on certain combinations of items
so that I can save money

Implement For

- Android App
- iOS App
- Back-End

Acceptance Criteria

Given there are available offers

when I use the app

then it should be able to see the details of available offers for each item

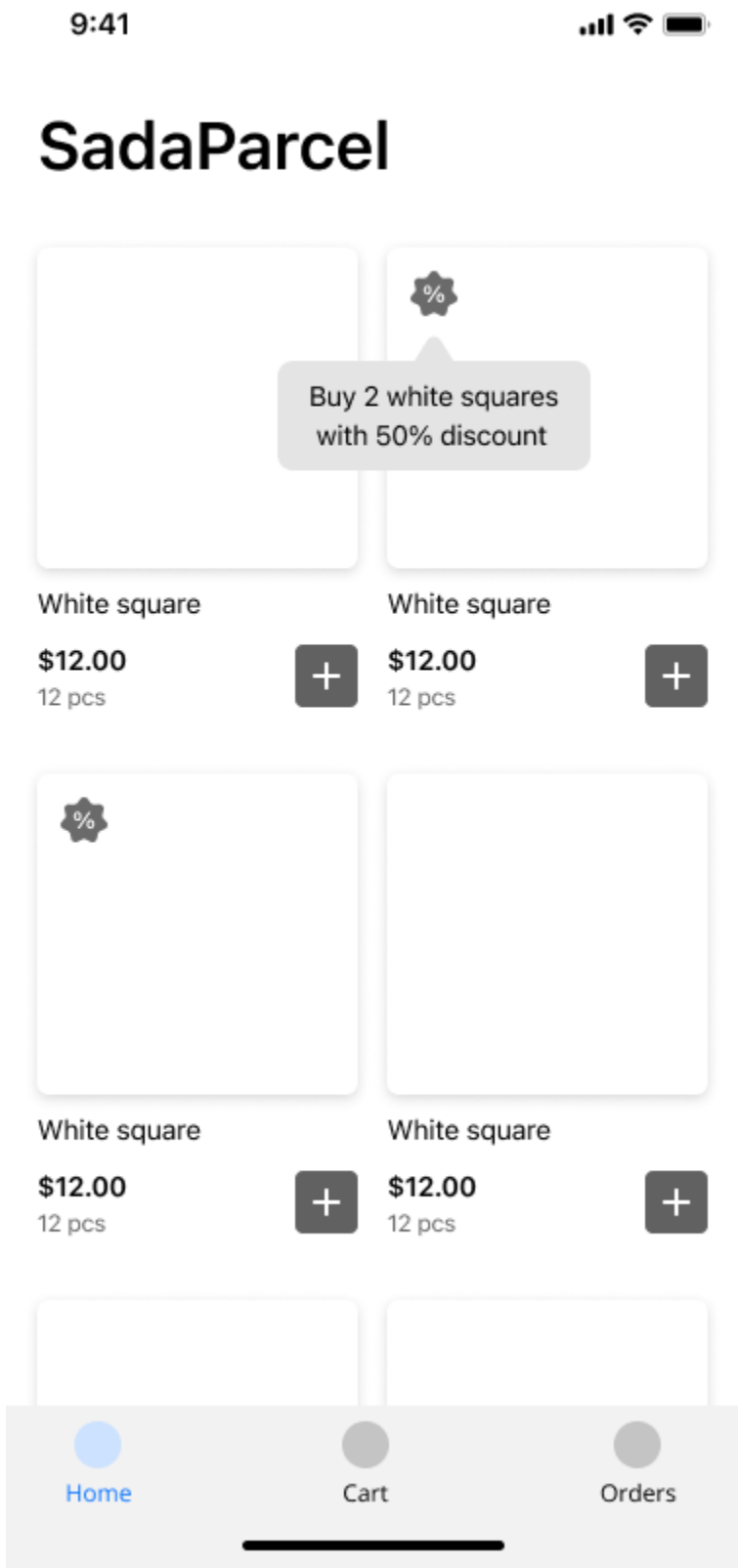
Given there is an offer for item a with a quantity-in-cart threshold x and a price reduction y

when when the x-th item a is added to the cart

then it is discounted by y

and I should see the discount in my cart

and I should see the discount on the order confirmation screen



Adjust Stock Levels in Inventory

As a staff member

I want to order only items that are in stock

so that I won't travel to the store during a pandemic only to discover that my order cannot be filled

Implement For

- Web Management Portal
- Back-End

Acceptance Criteria

Given there are items in inventory

when item quantities are updated and saved

then new item quantities should be shown here and in mobile apps

Wireframes

Edit item

| Title | Price | Quantity |
|---------------|----------|----------|
| White squares | \$ 20.00 | 12 |

CancelSaveDelete

[illegible]

Add and Remove Offers

As a staff member

I want to add and remove offers

so that I can run promotions that increase sales

Implement For

- Web Management Portal
- Back-End

Acceptance Criteria

Given an offer is defined

when I remove it

then it should no longer be offered to customers

Given an offer is not already defined

when I add it

then it should be offered to customers

Wireframes

Unavailable