

Mobile Recruitment Case Study 1

M01 - Clothes Store

This case study is intended to allow you to demonstrate your skills and experience in building mobile applications.

It is based on a fictional scenario, but it does include a number of elements that reflect the types of mobile apps you will build at Deloitte Digital.

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The brief

Your client is an online clothes retailer. You have been asked by the client to build a mobile app that allows the customer to:

- browse a catalogue of clothing,
- add items to a wishlist for later use, and
- add items to a shopping cart

For the purposes of this example, you do not need to include a payment flow for items in the shopping cart.

The prioritised list of user stories is as follows:

1. As a Customer I can view the products and their category, price and availability information.
2. As a Customer I can add a product to my shopping cart.
3. As a Customer I can remove a product from my shopping cart.
4. As a Customer I can view the total price for the products in my shopping cart.
5. As a Customer I am unable to add Out of Stock products to the shopping cart.
6. As a Customer I can add a product to my wishlist.
7. As a Customer I can remove a product from my wishlist.
8. As a Customer I can move a product from my wishlist to the shopping cart.

Technical information

The client has an existing API that provides access to functionality you will need to build your mobile app.

It supports the following operations:

- GET a list of products
- GET the details of a product
- Accept a POST of an item into the shopping cart
- Accept a DELETE of an item from the shopping cart

NOTE: As you can see, there is no operation to retrieve the shopping cart. Please perform all cart operations on device only. We would still like to see the networking code that performs the POST and DELETE.

You can access the API and see its documentation here: <http://docs.ddshop.apiary.io/>

Product catalogue

The retailer sells six different categories of clothes:

- women's footwear,
- men's footwear,
- women's casualwear,
- men's casualwear,
- women's formalwear, and
- men's formalwear.

The products available are:

Product Name	Category	Price (£)	Quantity in stock
Almond Toe Court Shoes, Patent Black	Women's Footwear	99.00	5
Suede Shoes, Blue	Women's Footwear	42.00	4
Leather Driver Saddle Loafers, Tan	Men's Footwear	34.00	12
Flip Flops, Red	Men's Footwear	19.00	6
Flip Flops, Blue	Men's Footwear	19.00	0
Gold Button Cardigan, Black	Women's Casualwear	167.00	6
Cotton Shorts, Medium Red	Women's Casualwear	30.00	5

Fine Stripe Short Sleeve Shirt, Grey	Men's Casualwear	49.99	9
Fine Stripe Short Sleeve Shirt, Green	Men's Casualwear	49.99 reduced to 39.99	3
Sharkskin Waistcoat, Charcoal	Men's Formalwear	75.00	2
Lightweight Patch Pocket Blazer, Deer	Men's Formalwear	175.00	1
Bird Print Dress, Black	Women's Formalwear	270.00	10
Mid Twist Cut-Out Dress, Pink	Women's Formalwear	540.00	5

Submission

For iOS applications your submitted app must build and run on Xcode 10 or later and be targeted for iOS 12 or later, and written in Swift.

For Android please ensure the app runs on Android Studio 3.x and API level 19 and above. You can use Java or Kotlin.

Please include a README file that describes the code layout at a high level to help us understand where to look. Feel free to also describe your approach and your thinking.

Applications can be submitted via a compressed zip which should include everything needed to build the project, alternatively please provide access to a git repository where the code is hosted. If the application is large the latter is preferable.

Evaluation

We will use this test to assess how well you structure a solution and develop the application. There is no right or wrong answer. Functional correctness is important, but we will assess your solution holistically.

A prioritised list of user stories is provided. You do not need to build all stories. You should build a sufficient number of stories to demonstrate your understanding of key mobile development concepts.

We do not expect you spend more than a day or a few evenings on this task.

You will be assessed on the quality of your code, functional correctness and your approach to quality assurance and testing.

Frequently Asked Questions

Q) Are there acceptance criteria / wireframes for the user stories?

A) No, please use your own judgement.

Q) What assets should I use? Are any provided? (e.g app icon, branding)

A) Branding / Colour schemes are entirely up to you, although bear in mind that the creative element is not the primary focus of the evaluation so use the time wisely. An icon is not necessary.

Q) Are there product images?

A) Product images are not a requirement of the minimum viable product.

Q) May I use third party libraries?

A) No. Though we recognize they can accelerate development, we require you to demonstrate knowledge of standard APIs