Faculdade de Design,
Tecnologia e Comunicação
Universidade Europeia

Project name: pacaward

Proposal made by:

Name	Contact
André Elias	andre@fidel.uk

Project Members:

Name	Number	Contact
Francisco Cordeiro	50037301	franciscordeiro99@gmail.com

Table of Contents

Context

Consumers often have the problem of receiving discount offers for things they do not really need. Moreover, retailers also have problems when it comes to targeting the right customers for their discounts.

Card-linked offers (CLO) is a Online-to-Offline (O2O) system, meaning the online marketing leads to an offline (physical) experience, helping mitigate the problems for both entities. Firstly by getting consumers behavior data (with their consent), analysing it, enabling the retailers to make specific marketing campaigns. Secondly by having personalized offers to each consumer, applying the discounts automatically on each purchase just by using the credit or debit card, discarding the need for coupons, promo codes or membership cards.

This way consumers avoid offers for merchants they do not really need, leaving only offers to what they are looking for and turning digital banking into a marketing channel for retailers, benefiting both parts.

Pacaward is a CLO Android application that integrates Fidel API. The app integrates Fidel SDK so the user can link debit/credit cards to the app. When one of these linked cards is used to complete a purchase that has a discount available on the app, this discount is redeemed automatically and the app sends a transaction notification to the user, which is also made visible in the app.

Using Fidel tools is a great benefit to this project since they already passed difficult barriers caused by the need of accessing customer payment data, consequently there is no need to deal with sensitive data.

CLO is a booming market as a result of the shift to cashless (growth of 20% per year), thus there are many apps related to this, the most relevant being:

- Acorns[3] (https://www.acorns.com/) - in every purchase with a liked-card, rounds up to next dollar, giving the user a choice to save or invest their change.
- Dosh[5] (https://www.dosh.cash/) - partner of more than 1000 stores and restaurants, has a referral system where users can earn money when a friend links a card.
- Drop[6] (https://www.earnwithdrop.com/) - works with points instead of direct cashback.

Although there are many CLO applications like the ones presented before, all applications differ in their partners, meaning there will be distinct retailers, therefore different offers. Apps also differ in the way they offer their discounts, some work with direct cashback, others use a points system forcing the users to spend it on other offers.

Scenarios

Main scenario

After logging in, the user sees a list of offers available, links a new card, sees a list of his linked cards and the transactions he has made.

1. User logs in;
2. When entering the app, the user has a list of all offers available;
3. By clicking on Cards the user is redirected to cards screen;
4. User sees a lists of linked cards (if no cards are linked a message will be displayed);
5. By clicking in the plus sign to add a new card and is redirected to Fidel SDK;
6. Fills the information required and submits;
7. Is redirected to the Cards screen where the new card is already visible;
8. User clicks Transactions;
9. It is displayed a list of the transactions made by the user filtered by date.

Secondary scenarios

1st.

User makes a transaction with a linked card and receives a push notification.

2nd.

User is on the home screen, clicks on an offer and it is expanded, showing detailed information and a location preview.

Personas

- User - every user must have an account and has access to all functionalities.

Work Plan

Work Plan

1st Delivery		2nd Delivery		3rd Delivery			
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Investigation	Write Project Report	Requirements Engineering	Domain Model	Implementation of Offers Screen	Link Fidel API	List Offers	Implementation of Cards Screen
Define Scenarios	WorkPlan Draft	Mockups	Project Charter				
			WBS				

Work Plan

4th Delivery				5th Delivery					
Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18
Link Fidel SDK	List cards	Implementation of Transactions Screen	List Transactions	Implement Sign up	Implement Login	Implement logout	Push notifications on new transaction	Redirect to map when clicking location preview	Poster A1
									Presentation Video

Requirements

Functional Requirements

ID	Name	Description	Priority
FR01	User log in	User logs in with its credentials	HIGH
FR02	User sign up	User can make a new account	HIGH
FR03	List of offers divided by category	On offers screen there are a list of offers divided by category (Nearby, Food,	HIGH
FR04	User log out	When clicking on profile image, there is displayed a log out option	HIGH
FR05	Offer description	When clicking an offer there is displayed an offer description with a location preview	HIGH
FR06	Redirect to google maps	When clicking on offer location preview user is redirected to google maps on shop location	MEDIUM
FR07	Link card from Offer description	If the account has no cards linked it is displayed a warning in the offer description, when clicked the user is redirected to Fidel SDK	MEDIUM
FR08	List Transactions	On Transactions screen its displayed the transactions filtered by date	HIGH
FR09	List Cards	On Cards screen its displayed all cards linked, if no cards are linked there is displayed a message	HIGH
FR10	Link card	When clicking the plus sign on cards screen, user is redirected to Fidel SDK	HIGH

| FR11	Splash Screen	When opening and when logging in, the app shows a splash screen	LOW
FR12	Navigation bar	There is a nav bar with 3 buttons to the correspondent screens (Transactions, Offers, Cards)	HIGH
FR13	Push notification	After making a transaction the user receives a push notification	MEDIUM
FR14	Initial screen	When opening the app there is an initial screen with two buttons (Log in and Sign up)	LOW

Non-Functional Requirements

| ID	Name	Description	Priority
NFR01	User password encryption	User passwords must be encrypted	HIGH
NFR02	Program language Java	Program must be written in Java	HIGH
NFR03	SQL Injections	Program must be protected against SQL injections	HIGH
NFR04	Usability	User should use the app without any guidelines or external help	MEDIUM
NFR05	Use Fidel API	Use Fidel API test environment and playground	HIGH
NFR06	Integrate Fidel SDK	Integrate Fidel native SDK	HIGH
NFR07	Use Amazon Web Services	User AWS to support real-time webhooks	MEDIUM
NFR09	Performance	App should not take more than 3 seconds to load	MEDIUM
NFR08	Use GitHub	Github to control versions	HIGH

Domain Model
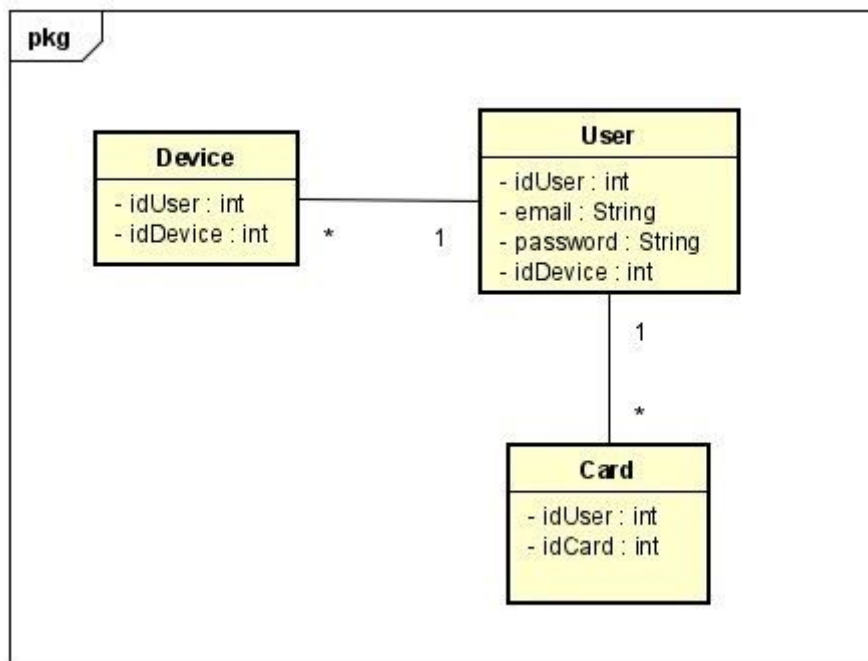
Mockups

[Interactive Mockups](#)
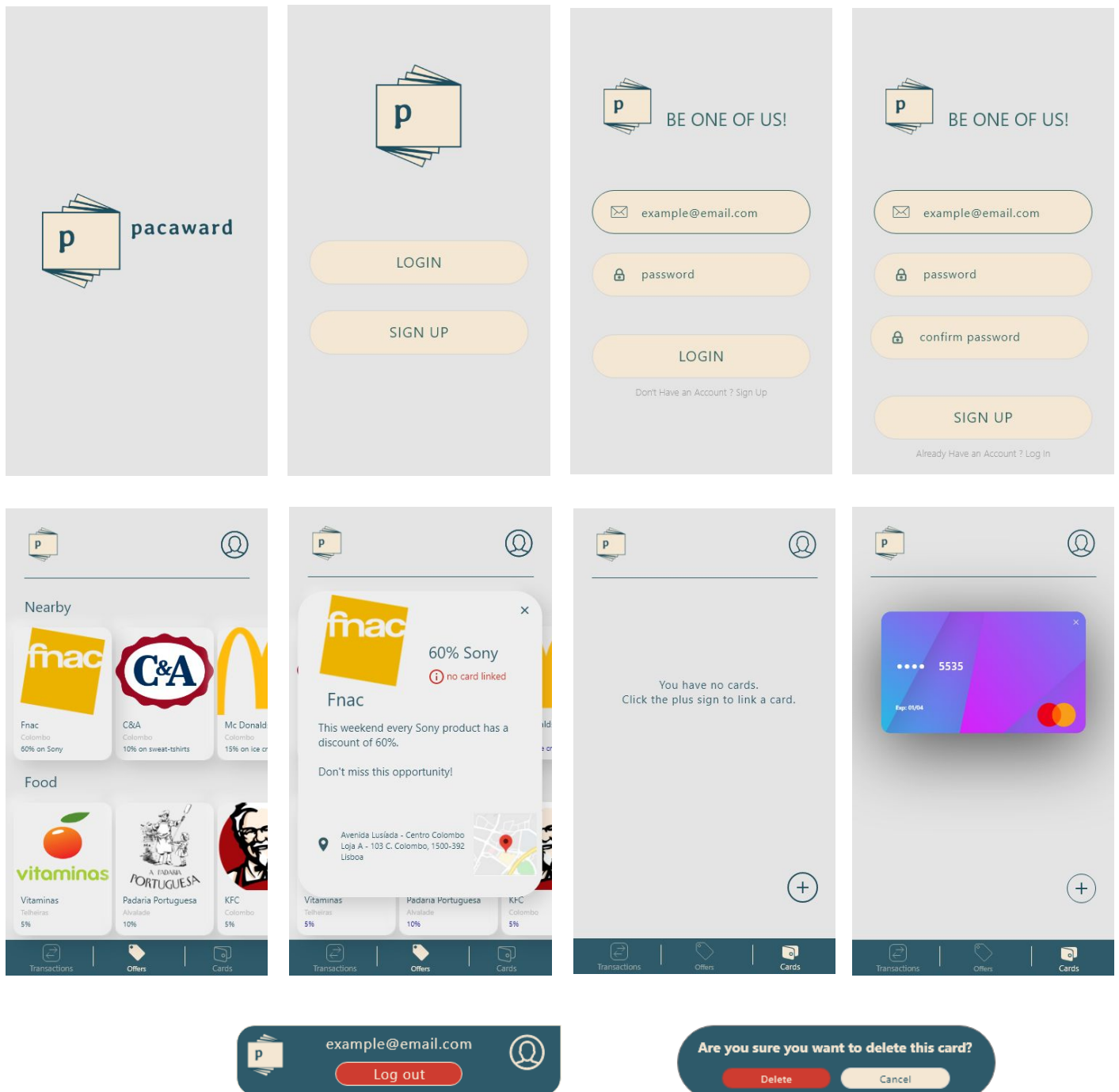
Mockups flow
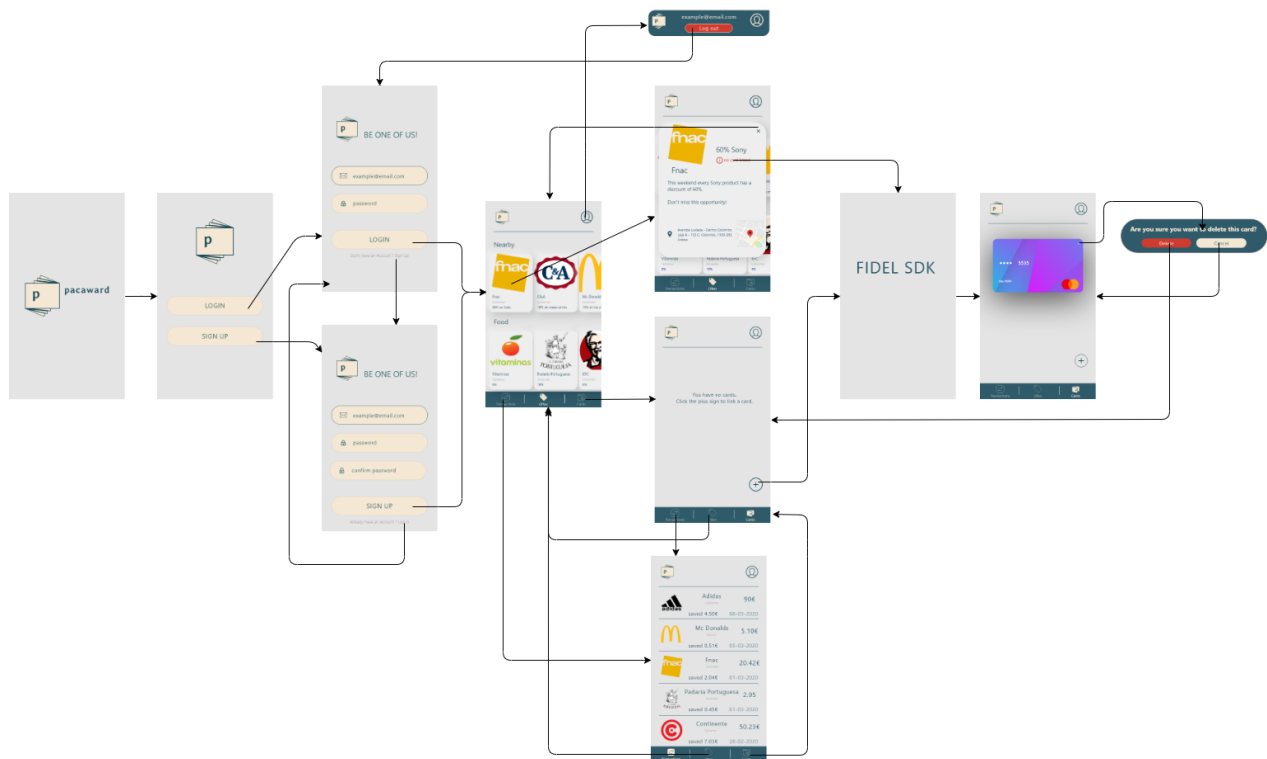
References

[1]Fidel – We're democratising access to payment data. (2020). Retrieved 28 February 2020, from https://fidel.uk/about

[2]Fidel in Focus – What is card-linking?. (2020). Retrieved 28 February 2020, from https://fidel.uk/blog/what-is-card-linking/

[3] Acorns - Invest, Earn, Grow, Spend, Later. (2020). Retrieved 5 March 2020, from https://www.acorns.com/

[4]What Is Acorns & How Does It Work?. (2020). Retrieved 5 March 2020, from https://www.acorns.com/support/how-does-acorns-work/

[5]Cash back, automatically. (2020). Retrieved 5 March 2020, from https://www.dosh.cash/

[6]Get rewarded. Supercharge your debit and credit cards. (2020). Retrieved 6 March 2020, from https://www.earnwithdrop.com/

[7]Desjardins, J. (2020). The Future of Customer Rewards: Card Linked Offers. Retrieved 7 March 2020, from https://www.visualcapitalist.com/future-rewards-card-linked-offers/