

Project documentation for mobile app *Cents: put sense into your finances*

Code First Girls

+Masters Programme: Mobile App Development

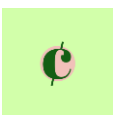
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Overview of the process

The goal of our project was to address the overwhelming complexity of the usual budgeting apps and to create something straightforward with a clear spending visualisation for the user. We hope this would help people, especially those just starting out with budgeting, to take ownership of their finances and stick to their intended budget. Starting we faced the challenge of creating a project that is functional and self-contained without overcomplicating either the UI or the grammatical aspect. We already have many ideas on how we would love to improve and expand this app – with an appropriate increase in time and skill.

Another issue we faced was the difference in schedules and time zones making it difficult for all of us to meet regularly and discuss the project. We overcame this by sharing notes from the meeting enabling those of us who missed the to continue being in the loop both with our own tasks and the overall progress of the group.

Goals and Design choices

Our goals for this app were to further our understanding of React and Redux, as well as the design decisions involved in making a mobile app. We wanted to create something that showcased our dedication to simplicity and ease of use while still achieving high functionality and interesting design.

User persona

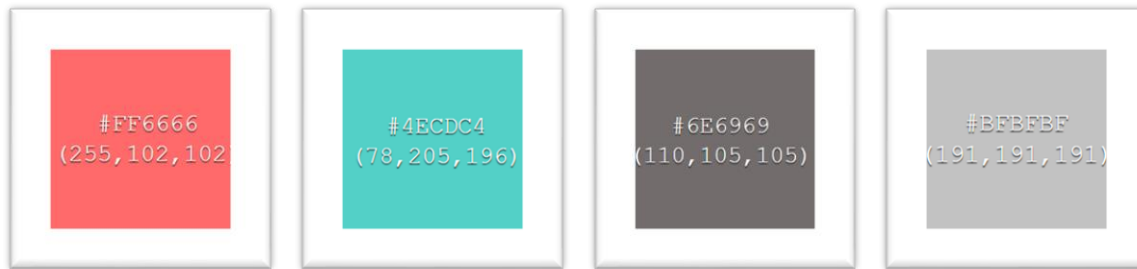
When designing our app, we imagined a young woman who is already comfortable with technology but is new to budgeting. She might have been motivated to start budgeting by the current cost of living crisis, or a desire to take charge of her finances in pursuit of independence and savings. She wants to live within her means and, if possible, to save for future investments (such as property). She is frustrated that she often doesn't have the motivation to stick to her budgeting goals in face of tempting offers or good deals. She often impulse buys. She wants to have an all-in-one accessible tool which will keep her accountable by having to write the numbers down and will showcase her spending habits by seeing the money she is putting into each of her spending categories. She has quite a few apps on her phone so is looking for something lightweight, without much fuss.



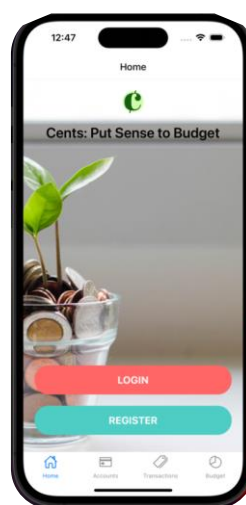
Design choices

To help our user to achieve these goals we offer a simple non-cluttered interface that allows for putting expenses into categories. We incentivise staying within the predicted budget by portraying motivational messages on the login screen. We would love to implement an option to share your budget goals with friends to promote accountability.

Colour palette and imagery



We chose a soft, muted colour palette with a prominent grey element to inspire calmness. User experience research shows grey inspires feelings of peace and indicates restraint. These are features we wished to convey to the user. The primary pink-grey colour we chose for our app is reminiscent of the Pantone colour of the year, with more softness and a stronger grey influence. Through this, we ensure our app has a distinct look with recognisable colours while maintaining a modern feel that aligns it with other apps and websites of the year 2023. We guard against the potentially moody or depressing appearance of the app by using generally regarded positive colours such as pink and blue to balance the grey.

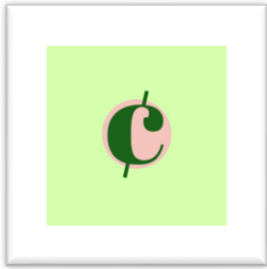


The login background picture of a plant growing from a pot of coins also signals monetary growth as well as inspires feelings of positivity and calmness. It has been repeatedly proven in psychological



research that sights of greenery and plants reduce stress levels and promote positive feelings even when the pictures are seen briefly on computer screens. The plant also serves to bring the colour green into the app tying it to our logo. Through the coherent use of colours and simple design choices, we created a coherent and unified look of the app that tells a story of peace and grounds the user.

Logo



During the design process, we aimed to encapsulate the central aims and goals of our app, as well as its aesthetic. A balance between including all that a product stands for and adding too many elements of interest was crucial for us in the design of a logo. As such, we opted for monetary elements and a representation of the name. A combination of the letter C with features of currency symbols such as the dollar or euro is a simple and elegant solution conveying this is a budgeting app without over-complication. It features a combination of muted green colours with the pink-grey from the app colour palette thus tying the app and the logo together while adding some warmth into the otherwise cold spectrum prominent in the app.



Functionality



We started with quite a complex wireframe of the features we would like to include in the app. After team discussion and considering our constraints, we opted for a simpler version of the app that still retains our core concepts and ideas. When choosing which features to implement and how we kept the complexity and time constraints in mind as well as making sure each feature or design choice was aligned with our goals and vision for the app.

Initially, we wished to dynamically model the data to show a spending prediction for the user. However, due to the complexity of mocking and modelling required for such a feature, we settled for a simpler approach. Instead of the prediction, we chose to show the degree to which the budget has been spent. This still offers an estimate of how they are doing within the budget to the user, maintaining the initial idea, but is within the scope of our time and abilities.

On the login screen, we weighted the need for security and data protection with the additional time and hassle of a mandatory login. We looked at the security implementation of other apps that involve sensitive information and decided to favour security over ease of use.

When creating the bank account list, we emulated the sleek look of banking apps. This creates a feeling of familiarity and taps into the muscle memory of the user making the app more intuitive. We not only achieve a more comfortable learning curve but also ensure that our app is instinctively grouped into the money matters schema in the medial prefrontal cortex of the brain (LT memory). This then precipitates the habit formation and continuous usage of the app. In order to avoid an overly dry feel, as well as to further promote mindfulness, calmness and focus of our users, we added an inspirational quote at the bottom of this screen. Users will see a new quote every time they



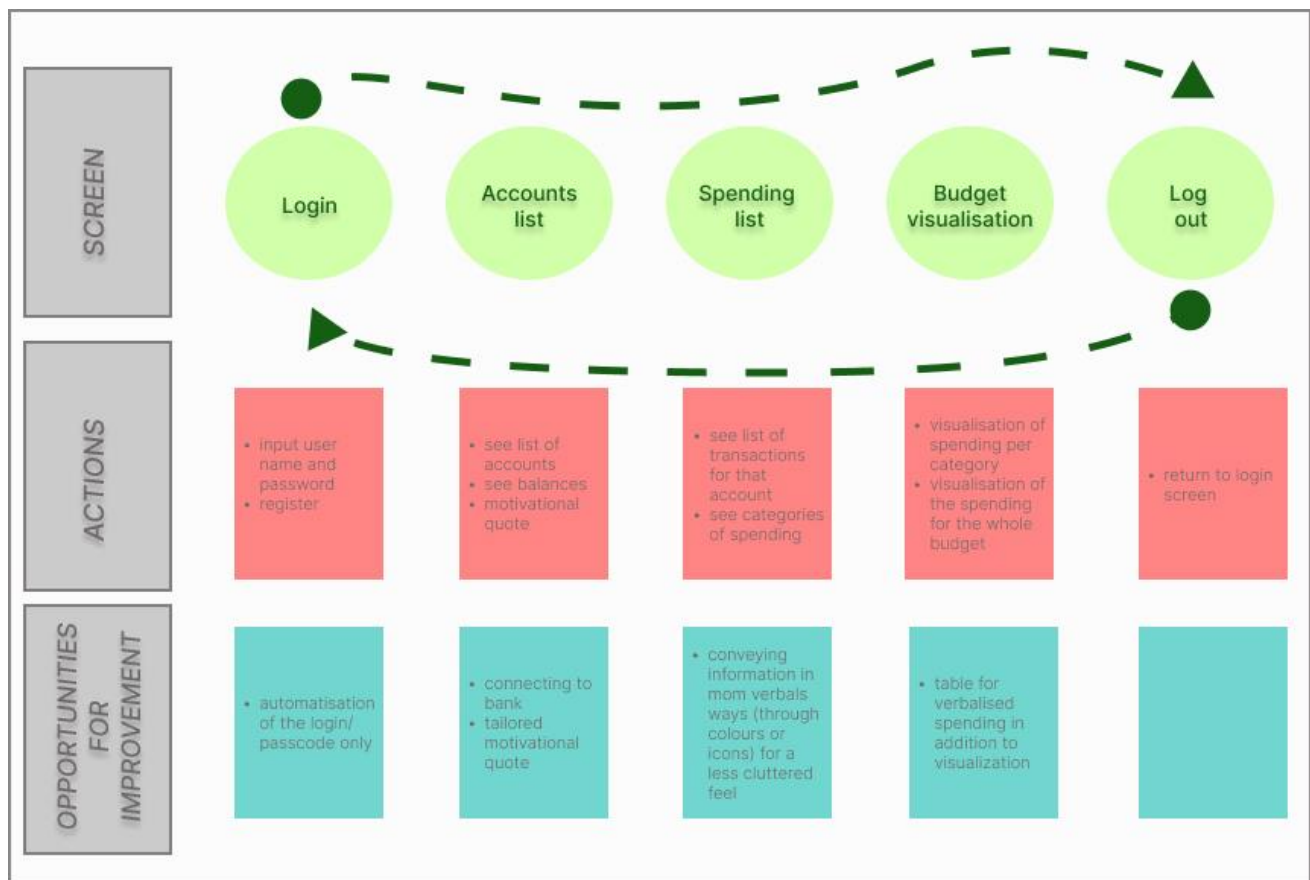
log into the app as this is the first screen they see after the login screen also adds a pint of novelty and interest to every login. This positive feeling further promotes the use of the app in the user's reward system.

When clicking on the account, the user is shown a list of all the transactions they have made to and from this account. During the planning phase for this feature, it became abundantly clear we would not be able to implement it in the original form. Due to complexity and legal limitations, there was no way to connect an app account to a real bank account. Instead, we hard-coded the transactions into the table. This means that the app is not fully functional for production, but it showcases what we wished to make and paves the way for achieving it in the future. The issue impacted the pie chart on the budget screen as well, as the transactions are not real, so the pie chart is calculated based on the previously mentioned hard-coded dummy transactions.

When designing the budget screen, we chose a pie chart variation (reef) as it is a familiar and powerful way of visualising data. The total budget amount is in the centre of the reef for ease of access and to visually anchor the gaze. Around it, the reef visualises the amount of money spent in each of the categories as well as the amount of money saved that month. The colours of the reef are the already familiar grey-forward shades of the app. When discussing options for this screen, we were deliberating between a table, a pie chart and both; finally deciding on the reef pie chart. It combines rich information with visually interesting elements while maintaining the simplicity of a single feature. A table would have provided more detail, but it could look unappealing to the customer, might make the budgeting seem daunting and lacks the intuitive understanding so easily provided by a good visual element. When picturing our user persona, we evaluated the importance and benefit of each aspect to the user. It became clear we ought to prioritise knowing at a glance the rough amount of money spent over a meticulous and thorough but complicated breakdown. Once again, we let the core values of lightweight, easy-to-understand and simple design guide us in choosing the right features for the screen. We eliminated the table completely as including both the table and the reef on the screen would look cluttered and overly busy thus losing information while potentially overwhelming the user.



User Journey



Facilitating intuitive use and ease of familiarisation, our app has a simple and classic user journey. The journey starts with the login screen (registration on first use) for data protection and security as the app will one day be connected to the user's bank account and will have confidential data such as account numbers and balances. Upon logging in, the user is presented with the list of their accounts in a table view, here they can see the money they have as well as accounts such as savings in order to motivate the user to increase their savings account or offer positive reinforcement for seeing a good savings balance. There is also an inspirational quote on this page to further promote the inspirational feel of the app and focus our users on their goals. When they click on one of the accounts, a full list of transactions is shown, and the list is generated automatically with information from the bank for maximum convenience to the user. Each transaction is categorised into one of the categories provided by the app, there is also an option for the user to make their own categories tailoring the app to their lifestyle. When going to the budget screen, there is a pie chart visualising the budget and the spending, as well as a table for a more detailed depiction. Unlike the transactions in the previous screen which are sorted chronologically, they are sorted by category.

