
DeKoi: Koi Index App

Stage 6: Evaluation results and presentation of the
final project



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Addressing Problems

Note: Before showing the solution to each problem we just want to say that our colleagues declared that: “também corre em iOS, supostamente, mas não conseguimos testar”. While the application does also run on IOS, we focused testing for Android and the Google Maps API may not work correctly on IOS as-is.

For each problem we will show the part of the table that our colleagues wrote in order to evaluate our system, and under each part we wrote the **solution**, or **comment** on that same problem.

| Nº | Problem | Heuristic | Description | Severity | Solution |
|----|---|--------------------|---|----------|----------------------------------|
| 1 | Pop up do “Delete” de um koi com apenas uma opção (Yes) | Visible Navigation | Quando selecionamos a opção para apagar um koi, em vez de aparecerem duas opções, apenas aparece 1. | Leve | Adicionar a opção “No” no pop up |

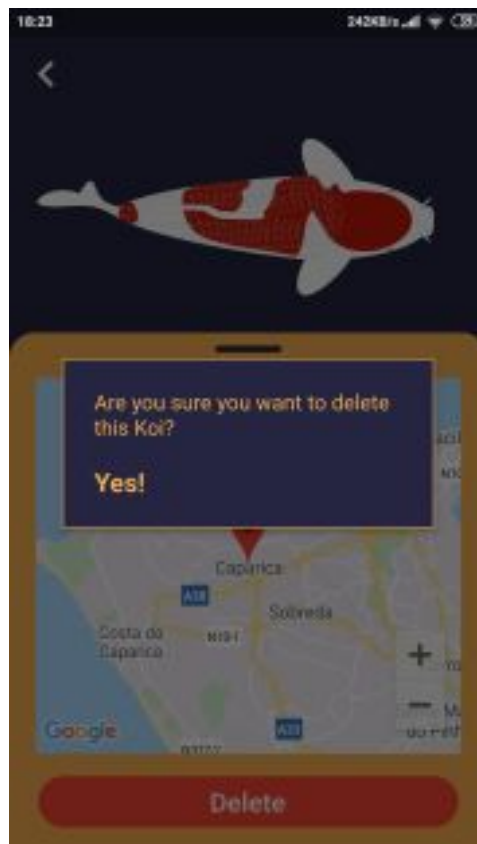


Fig 1. Delete Koi problem

Comment - Every Android and IOS phone has a default built-in “return” button or gesture. This is standard and every user is expected to be able to use it. We made it so that this return action is what discharges the popup, as well as clicking anywhere on the screen that is not part of the popup (also made darker with higher opacity to convey this). This makes it impossible for users to accidentally press “Cancel” while trying to press “Yes!”.

If this was done on a webpage we would have added a “Cancel” option, but this was done with good design for mobile applications in mind, as explained in the first paragraph.

| Nº | Problem | Heuristic | Description | Severity | Solution |
|----|-----------------------------------|-------------------|--|----------|--------------------------------|
| 2 | Navegação no catálogo muito lenta | Latency reduction | Navegar entre os diferentes kois causa lentidão na aplicação | Grave | Tornar a aplicação mais rápida |

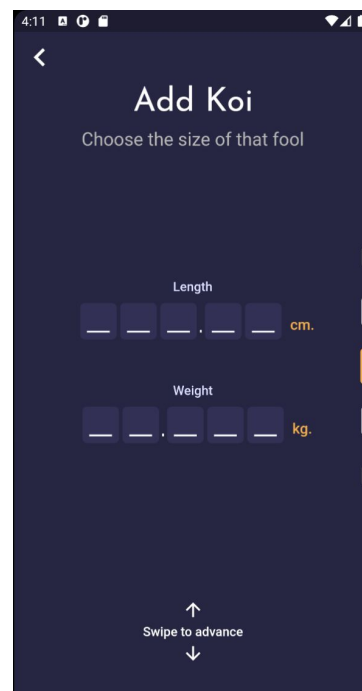
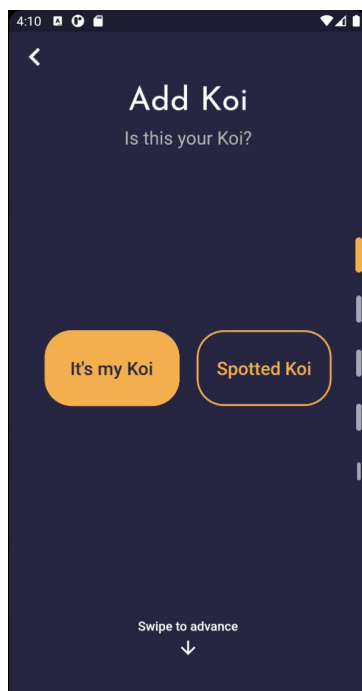
Comment - We are aware of this issue on lower-powered phones. We used a complex system of animated vector images to achieve our objective of being able to dynamically large amounts of different types of Koi. If we were to release this application we would have exported a discrete image of each combination and loaded it as an asset, however due to the already huge complexity of the application, and of that not being the subject of this course, we chose not to do that.

| Nº | Problem | Heuristic | Description | Severity | Solution |
|----|-------------------------------|--------------------|--|------------|--|
| 3 | Swipe up na criação de um koi | Visible Navigation | Na primeira parte da navigation, não está especificado para onde o utilizador deve fazer swipe | Muito leve | Fazer o que está a ser feito nas seguintes páginas do processo |



Fig 2. Koi creation first step without the swipe arrow Fig 3. Koi creation second step with the swipe arrow

Solution - This was indeed a mistake on our part. A downward arrow was initially added on all steps as well, but a mistake in one of the last commits before the project submission accidentally deleted this. (available in the github repo, at request - link not provided to our colleagues due to sensible Google Maps API access keys).



| Nº | Problem | Heuristic | Description | Severity | Solution |
|----|----------------------------|-----------|---|----------|---|
| 4 | Selecionar a medida e peso | Defaults | Em caso de engano, o utilizador é obrigado a reescrever todos os algarismos da medida | Leve | Arranjar uma alternativa de input das medidas |



Fig 4. Koi creation add size and weight of Koi fish

Comment - It is (and was) possible to delete the imputed values by pressing the return key, see Comment Fig. 1-3 at the bottom of the file, in case of a mistake.

We believe that our colleagues meant that, after inputting a value and scrolling down, if one scrolls back up the value is no longer there. This is due to the value being stored and not fetched again to populate the pin-entry form. We knew of this but didn't fix it due to the small effect it had and focused on building the rest of the application.

| Nº | Problem | Heuristic | Description | Severity | Solution |
|----|--|-------------|---|----------|--|
| 5 | Preenchimento de informações no processo de adicionar um koi | Readability | O teclado tapa algumas caixas de input (nome e dia de nascimento) | Leve | Compactar melhor o display das informações a preencher |

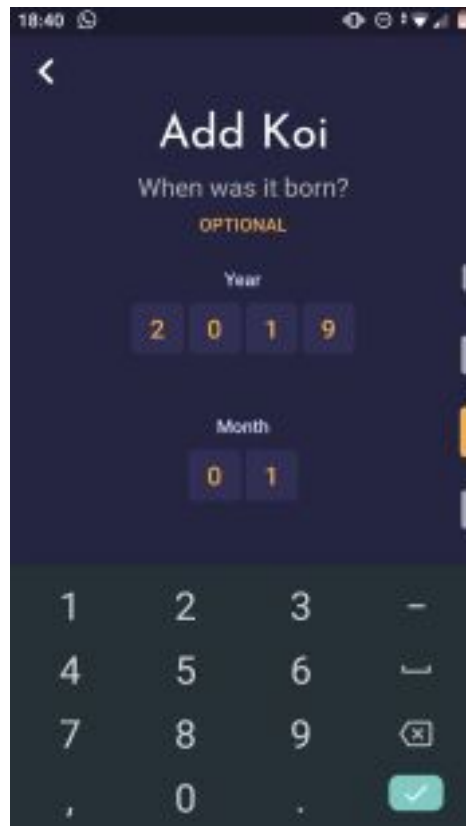


Fig 5. Koi creation, add age of your Koi fish

Comment - We designed the app with more modern screens with higher aspect ratios. We tested with POCO F2, and a phone with a small aspect ratio, the PIXEL 1. We did not attempt to make the app work well on phones with smaller screens as it would unnecessarily increase the scope of the project.

We apologize to our colleagues for not indicating this, as well as that a modern version of Android is preferred. (Android 10, although it works for older versions too).

| Nº | Problem | Heuristic | Description | Severity | Solution |
|----|--|-------------|--|----------|---|
| 6 | Na criação de um koi, é possível saltar os preenchimentos obrigatórios | Consistency | Na criação de um koi, é possível saltar os preenchimentos obrigatórios | Leve | Não deixar o user prosseguir sem preencher o campo obrigatório respectivo |

Solution - Remove all optional tags.

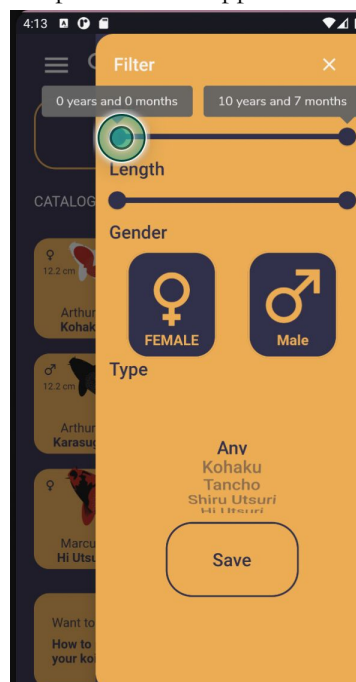
We changed the specs regarding name creation and Koi type selection so that if the steps are skipped a default type (Kohaku) and a default name (Unnamed) are chosen automatically. We unfortunately forgot to remove the “Optional” tags.

| Nº | Problem | Heuristic | Description | Severity | Solution |
|----|--|------------------------|--|----------|---|
| 7 | Selecionar idade nos filtros do catálogo | Aesthetics, Simplicity | Os sliders para a seleção do intervalo de idades dificulta a utilização dos filtros (os valores têm casas decimais quando se trata de idade) | Leve | Limitar os sliders a valores inteiros ou utilizar apenas text boxes |



Fig 6. Koi catalog filter

Solution - The solution we implemented is a custom tooltip that displays the year and month, per example “1 year 3 months” like in other places of our application.



| Nº | Problem | Heuristic | Description | Severity | Solution |
|----|---|-----------------------|---|----------|---|
| 8 | Carregar no botão para trás no android volta para o login | Explorable Interfaces | O botão de voltar atrás nos androids volta para a página do login | Médio | Carregar para trás deve voltar para a tarefa anterior |

Solution - We unfortunately could not find why this problem was caused, and our changes to the in-app routing didn't fix the problem. We eventually decided to move on from this problem. The solution would require further research into Flutter routing. This happens sometimes, and not on all screens (only "root" screens such as "Catalog").

| Nº | Problem | Heuristic | Description | Severity | Solution |
|----|-----------------------------------|-------------------|---|----------|--------------------------------|
| 9 | Navegação entre menus muito lenta | Latency reduction | Navegar entre menus é bastante lento e cada vez que aparece a animação do koi a aplicação fica extremamente lenta | Grave | Tornar a aplicação mais rápida |

Comment - This is caused by what causes problem 2. On a more modern phone where this was tested this does not happen. Solution would be the same as pointed on N°2, but it is too out-of-scope for this subject to justify the time investment.

Addressing Extra Observations

1. “Os cenários especificam todas as tarefas que o utilizador deve fazer, sendo que não era o suposto dado o objetivo deste trabalho. (Não devia estar o que utilizador deve fazer passo a passo, mas sim apenas o que este pretende obter);”

Comment - We kept that from the last project stage as a reference point. In practice, the application is much larger (added map, map points with Koi, manual categories, manual entries, more complex Koi type selection, more complex Koi detail, etc.) and also different in some areas.

2. “Não conseguimos terminar o cenário 1 porque, ao darmos delete de um koi, a aplicação fecha automaticamente;”

Comment - Probably due to having an older Android version than the preferred one (10). This problem never came up during implementation and testing. Once again we apologise to our colleagues for not conveying this information.

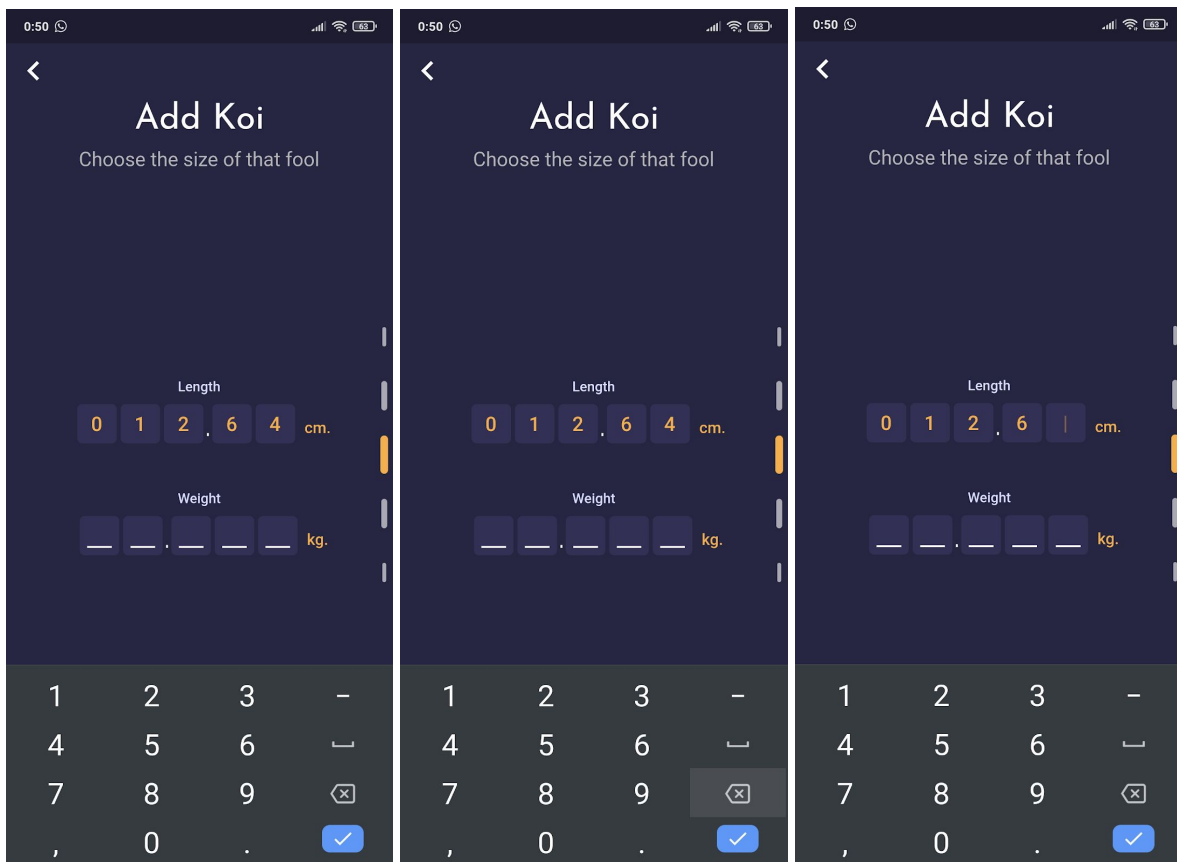
3. “O cenário 3 não dá o resultado pretendido.”

Comment - We could not reproduce this issue.

Finally, we want to say thank you for this last observation made by our colleagues:

“No geral, achamos que esta aplicação está muito bem desenvolvida, sendo bastante apelativa em termos visuais e intuitiva na sua utilização geral.”

Comment Figures



Comment Fig. 1-3: Deleting input