

3.5 Research strategy

First of all, before the commencement of the project assignment, research was done regarding the current situation of the Lepaya's iOS app. The principles of DOT Research framework were followed during this phase.

The Development Oriented Triangulation is a model which helps you perform a thorough and structured applied research following five research strategies:

Stand on the shoulders of giants

Using the **Library** strategy, you focus to search what was already implemented in the app and what should be improved.

Understand your users

Field research is done to know and understand your end users, their needs, expectations and limitations in order to make the trainings more impactful and more engaging.

Seek variation and improvement!

The **Workshop** research is done to explore opportunities. Refactoring the already existing code, co-creation activities are all ways to gain insights in what is possible and how things could better work.

Measuring is knowing

The **Lab** research is when you test what you have done until now and learn and observe if things work out the way you intended them.

Know & show your contribution

In the **Showroom** strategy you show your product, ideas & findings and seek feedback from experts.

report should at most contain pseudocode,
source code does not bring any value to the
report

```
1 //
2 // AppDelegate.swift
3 //
4 // Created by Soilita Victoria on 21/10/2019.
5 // Copyright 2019 Lepaya <http://www.lepaya.com>. All rights reserved.
6 //
7
8 import Foundation
9
10 protocol ContentDelegate where Self: LepayaController {
11
12     func action(_ doAction: (AnyObject) -> Void)
13
14 }
15
16 extension LepayaController: ContentDelegate {
17     func action(_ doAction: (AnyObject) -> Void) {
18         doAction(self)
19     }
20 }
21
```

Figure 9: ContentDelegate class

Similar to the ContentDelegate, another delegate was created, called

ReloadCommentsDelegate, which reloaded the whole view when going back to the previous one, this meaning that if a user added a comment in the CommentListView and went back to the Bite overview, the number of comments are updated and the last added comments are shown. The ContentDelegate class is shown in

Figure 9 and ReloadCommentsDelegate class is shown in Figure 10.

```
1 //
2 // ReloadCommentsDelegate.swift
3 //
4 // Created by Soilita Victoria on 20/11/2019.
5 // Copyright 2019 Lepaya <http://www.lepaya.com>. All rights reserved.
6 //
7
8 import Foundation
9
10 protocol ReloadCommentsDelegate: AnyObject {
11     func reloadOnBack(withComments comments: [CommentDTO]?)
12 }
13
```

Figure 10: ReloadCommentsDelegate class

```
223 extension JourneyDetailsBVC: ReloadCommentsDelegate {
224     func reloadOnBack(withComments comments: [CommentDTO]?) {
225
226         if let comments = comments {
227
228             self.journeyContent.currentJourney.commentsCount = comments.count
229             self.journeyContent.lastComments = Array(comments.prefix(CommentUtilisV3.commentsToLoad))
230             self.journeyView?.commentsList?.comments = self.journeyContent.lastComments
231             self.journeyView?.commentsRow?.labelRight.text =
232                 localized("journey_details_comments_count", count:
233                     self.journeyContent.currentJourney.commentsCount)
234
235         } else {
236             self.loadContent()
237         }
238     }
239 }
```

Figure 11: ReloadCommentsDelegate implementation example

4.3. Feature for Journey Details

- **Implementation type:** Feature
- **Title:** Classroom Session
- **Description:** The mobile user wants to see the classroom session details in journeys that he/she is participating in.
- **Research questions & findings:** Based on the given description it was quite clear why this feature needs to be implemented but more detailed information was required in order to start implementing it. Because of that, I have broken down some questions that helped me perform the needed research and find the best existing solution that helped me to reach the end result.

1. Which are the details of the classroom session?

A meeting with the team helped to find out that the design done is going to offer all the needed details the classroom session should have in order to start the implementation phase.

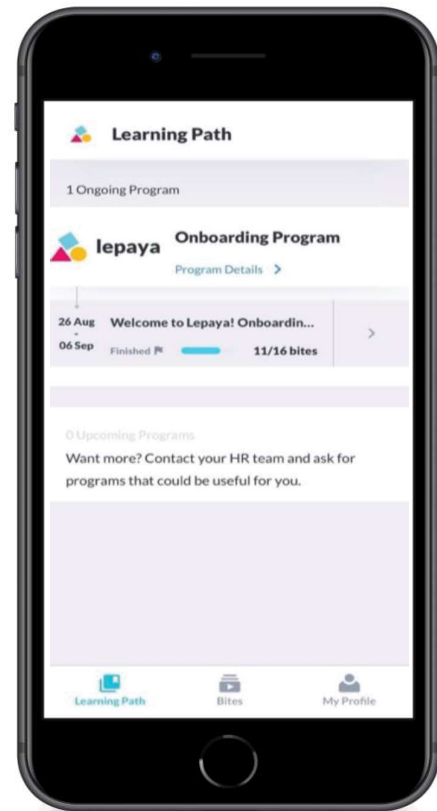


Figure 15: Before the implementation of the feature

2. How the design of this feature should look like?

To answer this question, I used the Library research that lead me to Zeplin, where the designs along with detailed information like size, colors, placement was given by our designer. After answering this question, I had a clear overview of how the feature should look like and what should include.

specific detail could have been better moved to the appendix

4.6. Bug fixes and final results

Nr.	Bug Title	Problem	Techniques used	Solution
1.	Fix “onBack” function from biteDetails	When going back from bite overview to the bite list, the entire table is reloaded, and the user jumps back to the first bite instead of where he left.	Reviewed the GoBackDelegate implementation discussed above. Refinement of the design pattern	The implementation of “lastVisibleCell” was added to the source code where I checked the indexPath of the last pressed cell from the bite list and based on this assigned variable, I was able to return the user back to selected bite in the list of bites.
2.	Error message shown on swipe back from Bite Details	When the user swipes back from bite overview to bite list, an error message appears which states that something is wrong.	Reviewed the function that was responsible for the swipe back event.	A small adjustment was added to the if statement that caused the action to be done successfully, but even though show an error message.
3.	Comments count doesn’t update	When the users adds a comment in the comment view and goes back to bite overview, the comment number isn’t updated automatically. (should be reloaded manually by the user)	Reviewed the ReloadCommentDelegate implementation discussed above.	Updated the ReloadCommentDelegate implementation by adding a counting comments variable for that specific journey.
4.	Optional Bites Shortcut in favorites & completed	Optional bite shortcut button shouldn’t be present in favorite & completed bite section, it should only be present in the list of all the bites.	Went to source code where Optional Bite button was implemented and adjusted the code.	Added an if statement that checked whatever the user is currently located in the first (all bites), second (completed bites) or third tab (favorite bites) of the navigation bar.

Chapter 6: Conclusion & Recommendations

In a nutshell, this internship was an excellent experience in which I rediscovered myself and learned to overcome my fears, embrace my weaknesses and learn by making mistakes.

As someone with few experience in the iOS environment, the ongoing processes I came through, was the best learning experience, full of interesting findings, some of which I would like to communicate below.

One of my first assigned issues as an iOS Developer intern, was the deactivation of the Dark Mode which taught me how to use outside sources in order to be able to accomplish the expected end results. Furthermore, a big source of inspiration for other assigned issues, like the Collapse/Expand animation, firebase events, was the source code itself that provided me relevant code examples and a better overview of the application's structure. All this led into being able to successfully complete one of the biggest and challenging assigned improvements for the app, the refinement of the design pattern used in the application.

The second biggest challenge I have experienced, was the classroom session feature implementation. During its development, I've learned that support is needed in order to be able to accomplish it and that asking for help, doesn't mean you failed, but that you are able to be realistic and you have the eagerness to learn from others in order to grow as a professional

Due to each encountered challenge, I gained more and more knowledge and experience that helped me successfully accomplish other issues during my internship period.

I believe that my contribution during this project, lead the entire team one step closer to the assignments goal, that consisting of trying to offer the best to our end users and help them unlock their potential to its fullest.