



Tour de icapps

Plan of Approach

Internship ITFactory

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INTRODUCTION

During my internship, I was tasked with creating a full-stack Flutter for Web application called "Tour de icapps." I was given the designs to develop this application on my own with the assistance of other Flutter developers at icapps, with the eventual goal of programming and deploying the application.

This plan of approach is a document that aims to give you, the reader, a clear view of the internship and the company for which I developed it. In this document, I will provide an overview of what icapps is as a company, the purpose of this application, and how it will be developed.

The goals of the application, as well as the internship, will be described in detail in this document to ensure a complete understanding of the project.

Additionally, I will provide an overview of the planned schedule. This schedule was created in advance and offers a broad overview of all the planned activities. Finally, I would like to clarify that I developed this application with the assistance of my mentors, except for the designs, which were provided by the design team at icapps.

1 ICAPPS

icapps is a prominent digital agency based in Antwerp, Belgium, and it holds a notable position within the Kronos Group, a leading technology and innovation hub. As part of the Kronos Group, icapps benefits from a strong network of expertise and resources, enabling them to deliver cutting-edge solutions to their clients.

With a team of highly skilled professionals, icapps has successfully completed numerous projects, ranging from small-scale applications to large enterprise solutions. Their portfolio boasts a diverse range of clients from various industries, including finance, healthcare, retail, and more. This extensive experience allows icapps to understand the unique requirements and challenges specific to each sector, ensuring tailored and impactful digital solutions. Some of icapps' customers include widely known companies, such as Monizze, KBC, Telenet, Orange, Port of Antwerp, Luminus, ...

icapps has offices in both Antwerp and Mechelen, but my internship will take place at the office in Antwerp. I will be starting within Squad 42, a dedicated team of developers who specialize in one particular framework: Flutter.

2 REASON AND BACKGROUND

Within icapps, sports is a true lifestyle. Many employees engage in daily cycling, friendly football competitions, darts, or spinning. This passion for sports led Hannes Van den Berghe, the current team lead of Squad 42 and an avid cyclist, to create a friendly cycling competition within icapps. This annual competition, known as "Tour de icapps," coincides with the Tour de France.

Hannes has always acted as the judge of this competition and, as a result, had to meticulously record all activities performed by the participants using an Excel sheet and the Strava application. However, this process was time-consuming and burdensome for Hannes.

3 GOAL

The goal of this project is to develop a Minimum Viable Product (MVP) that Hannes can use to track all activities performed by players and automate scoreboards for the entire tournament.

Initially, all employees are asked to participate and can either accept or decline the invitation. Following that, teams are randomly created with the participating employees and assigned names. These teams are then stored and utilized within the application.

Participants will be able to complete activities during the tournament, which will be recorded on Strava. Strava is an internet service and application used for tracking physical exercise, offering various social network features. Participants will be able to view and upload all their tournament activities to the application.

Once an activity is uploaded, it will be linked to a stage. A stage is defined by two dates and has specific challenges associated with it. These challenges may vary in purpose, such as determining which team rode the most kilometers during a stage, which team achieved the most elevation meters, and so on.

To ensure the accuracy of uploaded activities, challenges and stages typically have requirements attached to them. For instance, in a stage focused on a time trial, participants must have exercised a distance greater than 25 kilometers. Alternatively, in a longer stage spanning multiple days, a requirement could be that the total distance covered by a team must exceed 250 kilometers. Activities that do not meet the requirements at the challenge or stage level are not eligible for point calculation.

Finally, once all challenges are completed and the tournament concludes, a ranking displaying the scores of all teams should be visible both on the stage and tournament levels.

4 BUSINESS CASE

The final version of the application will not have a specific target audience but will serve as a tool for all employees at icapps to use. They will be able to upload activities or view the current rankings of the tournament through the application.

The main goal of this project is to enhance the quality of the Tour de icapps by eliminating manual labor and the need to search through each participant's Strava page. The application itself will handle all calculations and provide rankings.

Ultimately, my aim with this project is to provide all icapps employees with a convenient and automated solution for organizing in-company cycling tournaments.

It's also important to note that this project serves not only as an exploration to discover the possibilities and limitations of Flutter for web, but also as a valuable learning experience. The primary goal of the internship is to enhance the knowledge base of both myself and others through active learning.

5 SCHEDULE

My internship at icapps will consist of two major phases: the initiation phase, which will span the first three weeks, and the realization phase, which will cover the remaining 10 weeks.

During the initiation phase, my main focus will be on building up my knowledge base. I will aim to absorb as much as possible about Flutter for web and gain a clear understanding of what lies ahead during the realization phase. This phase will include learning about icapps as a company and working on a starter project called the [Flutter Beer App](#).

The Flutter Beer App serves as a starting point for new hires and interns to familiarize themselves with the Flutter framework. It also teaches the use of various tools, scripts, and templates offered by icapps. I have been given three weeks to explore this sandbox project, with specific small goals in mind to learn basic Flutter techniques.

Once I have a good grasp of these techniques, I will move on to setting up the Tour de icapps project. icapps provides a [starter template](#) for all their new applications, which includes a comprehensive toolkit featuring utilities such as a debug screen, project structure, and a local storage database. The Beer App is built upon the same starter project.

Upon completing the initiation phase, I will begin working on the Tour de icapps project itself during the realization phase. The realization phase will be divided into five sprints, focusing on the following areas:

1. General project setup:
 - Configuration of Strava integration
 - Firebase setup
 - Single Sign-On implementation
2. Strava interaction:
 - Retrieving activities from logged-in users
3. Stages & tournaments setup:
 - Defining the tournament structure in Firebase
 - Displaying the tournament structure in the application
4. Home screen & score calculation:
 - Creating a homepage to greet users and display a countdown until the next tournament
 - Implementing a ranking system to show scores for the entire tournament
 - Developing a ranking system to show scores per stage
5. Calendar & landing:
 - Implementing a calendar feature to display all stages, their requirements, and challenges

- Making final adjustments to ensure the project lands securely
- Completing documentation for the project

These five sprints will form the core of the realization phase and guide the development of the Tour de icapps project.

6 INFORMATION AND REPORTING

During the internship, the SCRUM method will be followed. The 10-week realization phase will be divided into five sprints, with each sprint lasting two weeks. Within each sprint, there will be a total of four standups held every Tuesday and Thursday at 10:00. During these standups, each team member will have the opportunity to share their progress and plans for the upcoming days. It also allows team members to raise any issues they may be facing, enabling the team to collaborate and find solutions together.

Throughout each sprint, a Jira board will be utilized. The Jira board consists of different swimlanes representing different states such as "to-do," "doing," and "done." Each task or issue to be addressed during the sprint will have its own ticket, which can be moved across the swimlanes as progress is made. This proved to be a valuable tool for tracking the status of the project and remaining tasks. However, since I was working on the project alone, there were no other contributors to the board. In a team project, the Jira board would be a great collaborative tool.

During the project, Koen Van Looveren, a senior Flutter developer at icapps, will be monitoring my progress. I can reach out to him if I have any questions or concerns. Additionally, the other members of Squad 42 are also available to provide support when needed. Slack, a communication software, is used by icapps for team communication and has been an invaluable resource.

To aid in documentation, I will maintain a weekly report where I will describe my accomplishments for each day. This will make it easier for me to write comprehensive documentation as the internship progresses.

During the internship, there will be two moments when all students under the supervision of Hans Bartholomeus are required to return to campus. At the first moment, each student will present about the company they are interning at and provide an overview of their plan of approach for the remaining internship period. The second moment will involve further presentations of each student's progress and achievements up to that point.