Android Mobile Application for Astronomy

By: Lama Dwikat

Outline

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Introduction

Imagine you have thousands of cameras scanning the night sky every second. They spot explosions, blinking stars, and strange signals. But astronomers can't look at all of them—there are just too many! That's why Fink exists: to help scientists find the 'interesting stuff' fast

What is Fink ?

Fink is a scientific platform that collects and filters astronomical alerts in real time. It stores the data in an online database and provides access through a REST API. For the past five years, it has supported a website that displays these alerts, helping astronomers detect rare events such as supernovae, black holes, and signals potentially related to gravitational waves.

Website Problem

Currently, Fink is only available as a web platform. However, it is not a responsive website, meaning it does not display correctly on smaller screens. This limitation restricts access—especially for students, researchers in the field, and citizen scientists who often rely on mobile devices.
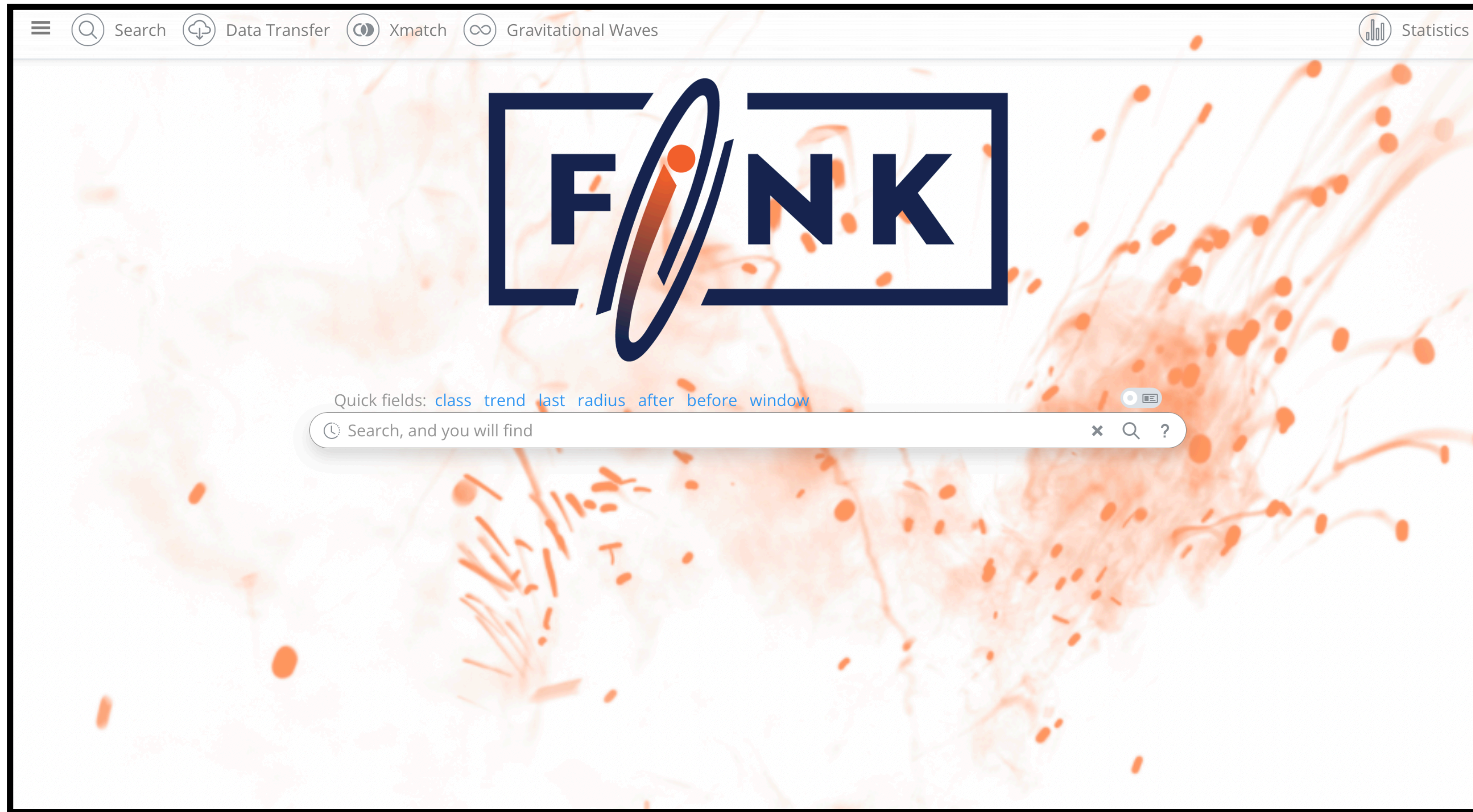
The Solution

"I'm designing an Android mobile app for the website that makes Fink data accessible to everyone —from professional astronomers to curious learners.
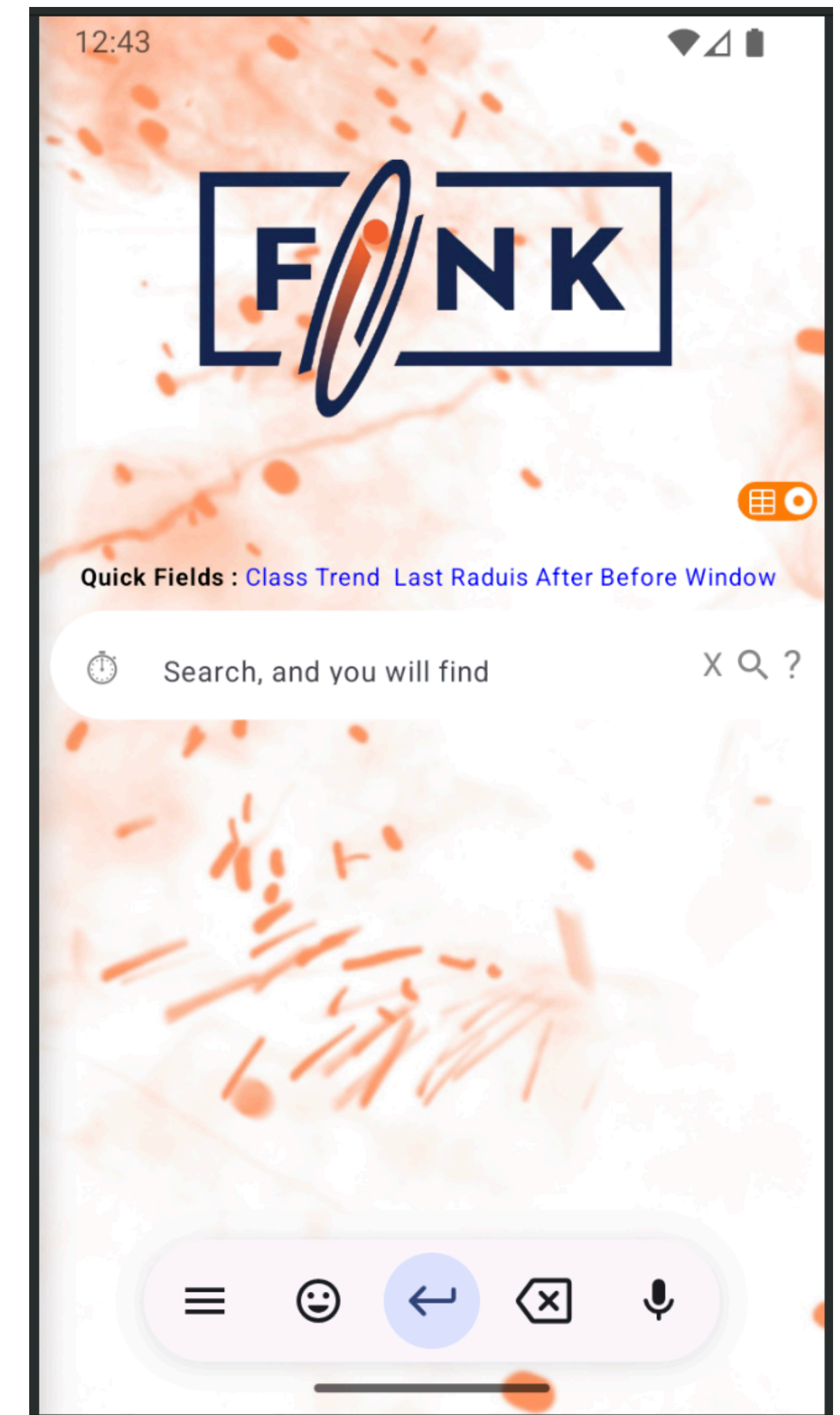
Languages and platforms

- Programming Language: Kotlin

- Development Environment: Android Studio
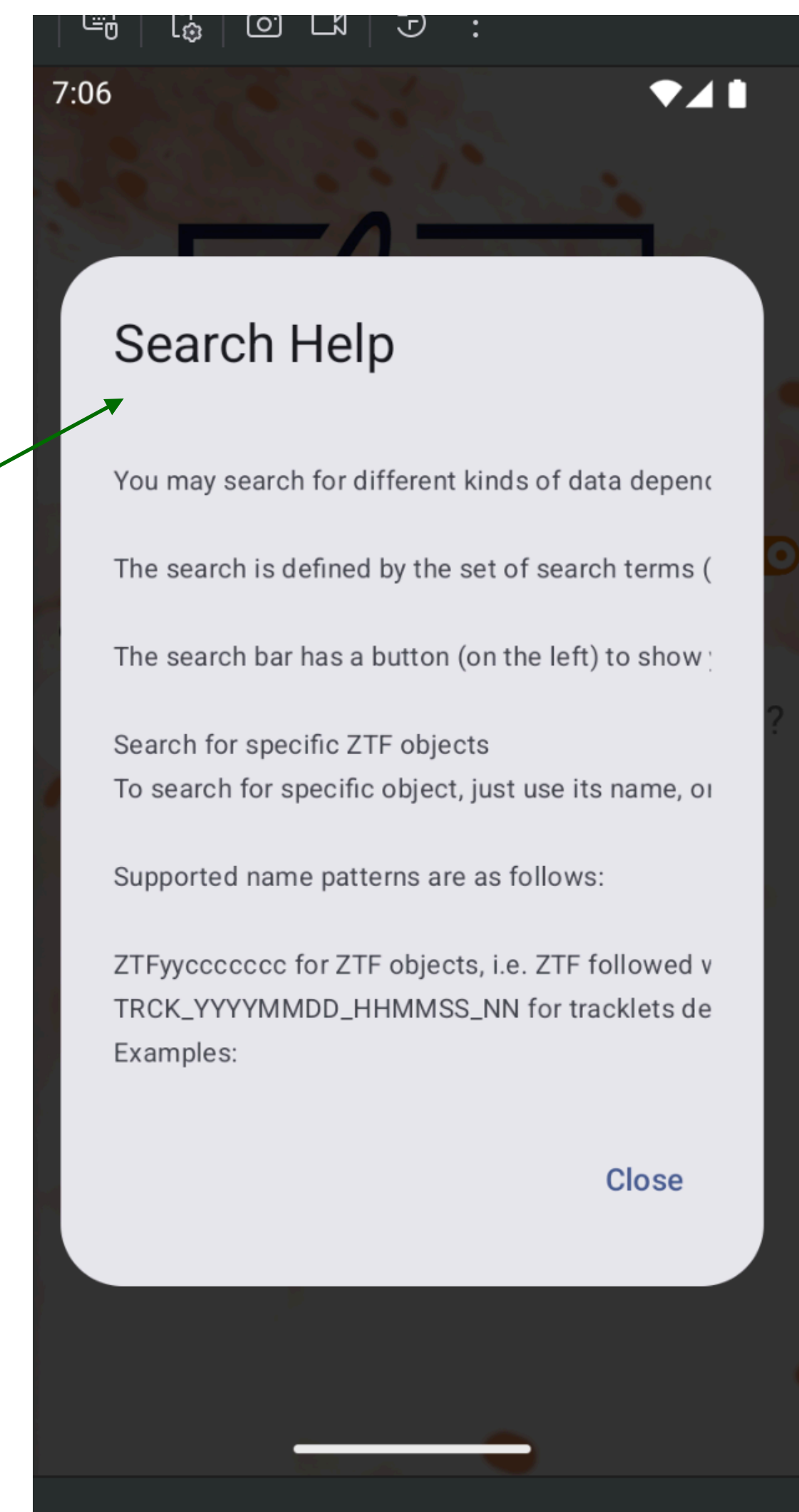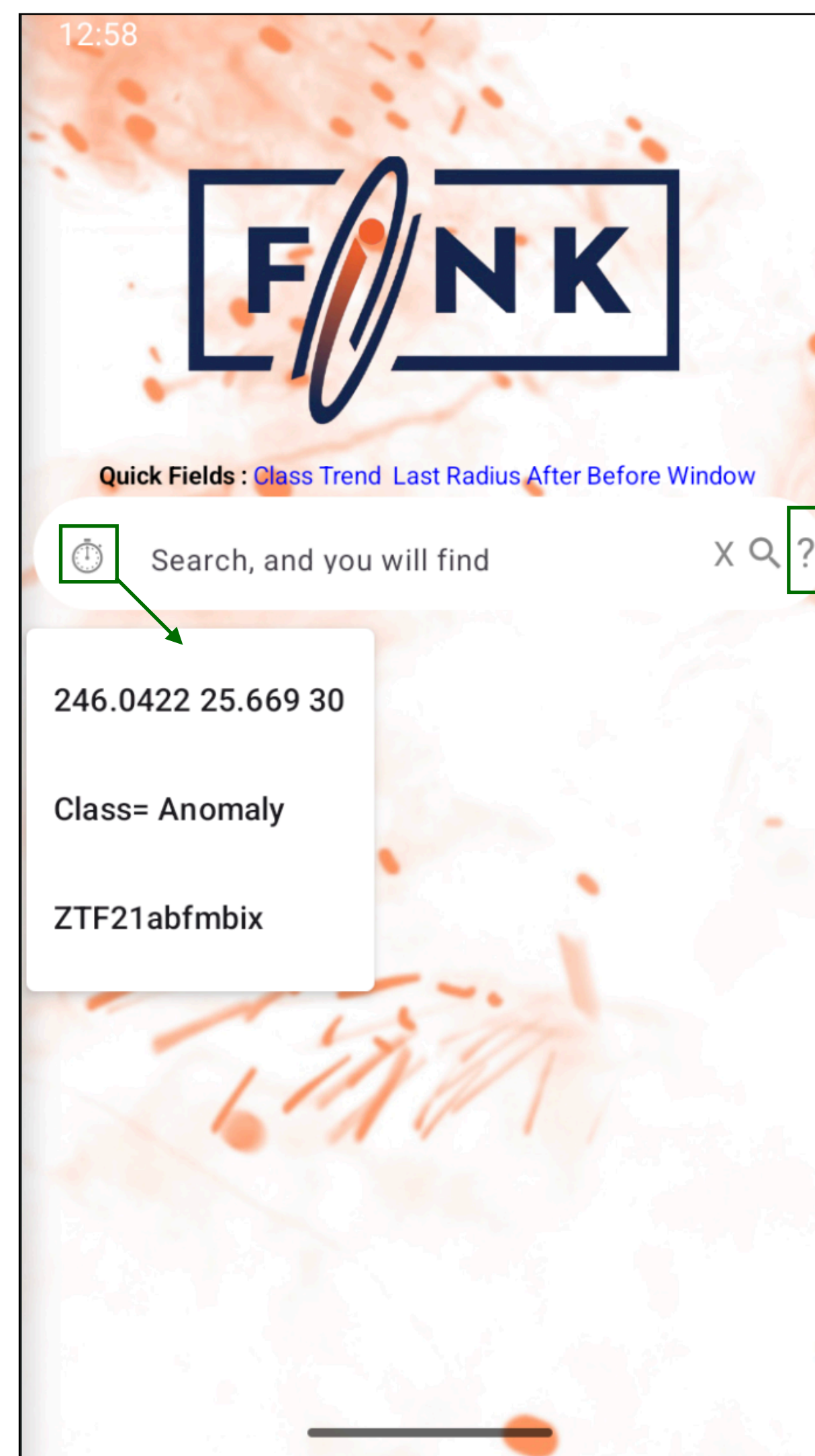
- Data Source/API: Fink REST API

Search Bar Page

Website

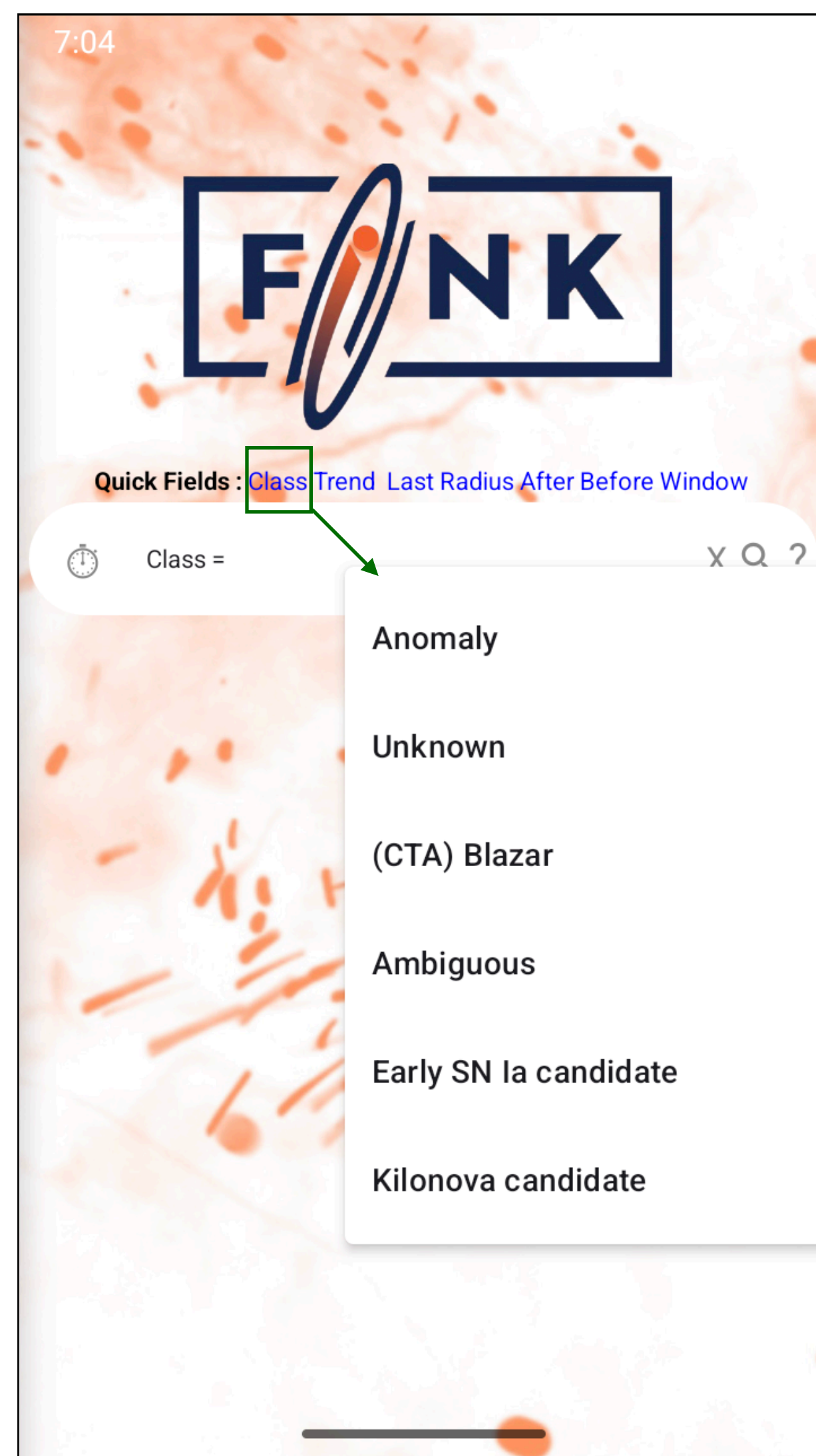## Mobile Application

Search Bar Page

Search Bar Page

Website -Fist View Result

Search Bar Page

Mobile Application - First View Result

Quick Fields : Class Trend Last Raduis After Before Window

ZTF21abfmbix   X 🔍 ?

Object ID	RA	DEC
ZTF21abfmbix	193.8217409	2.8973184
ZTF21abfmbix	193.8217447	2.8973164
ZTF21abfmbix	193.8217429	2.8973067
ZTF21abfmbix	193.8217162	2.8972958

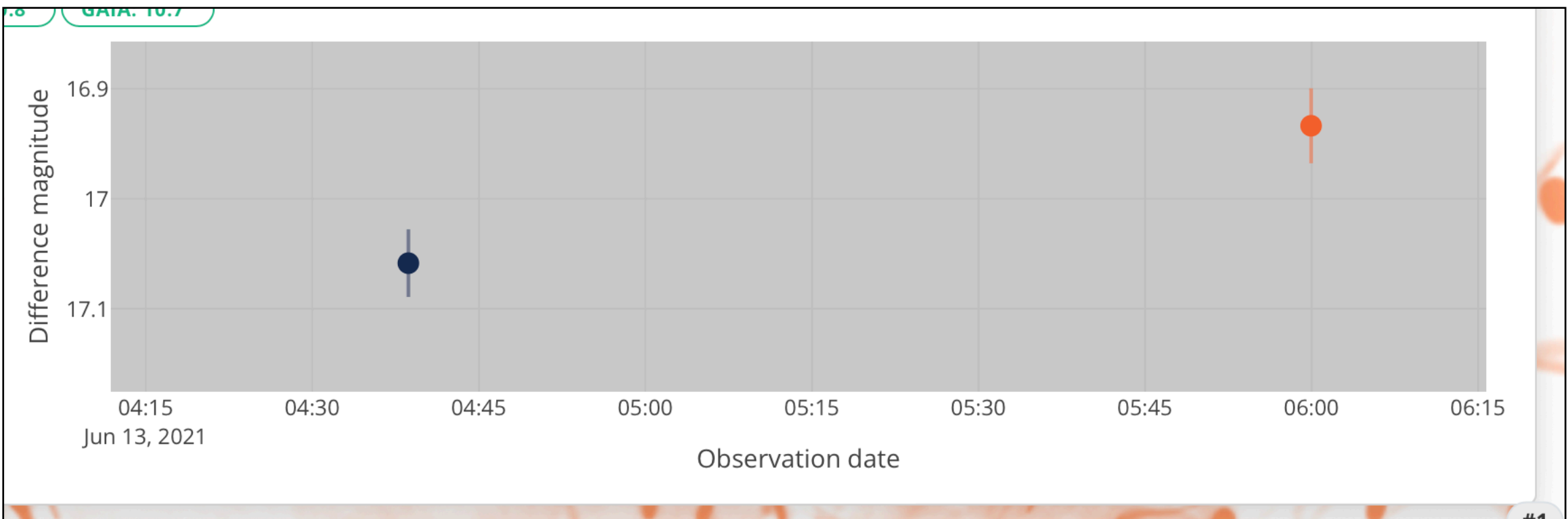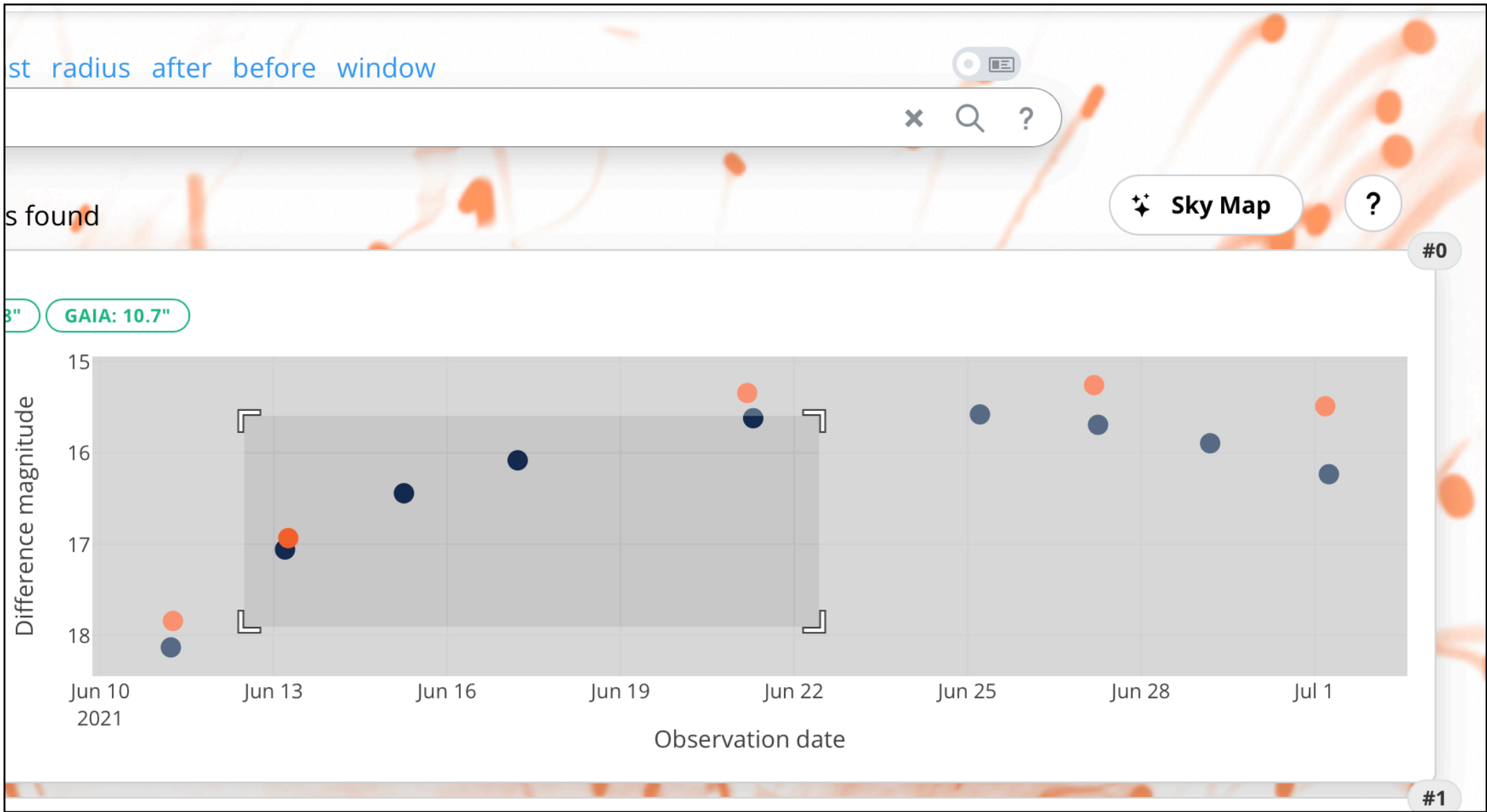**Quick Fields :** Class Trend Last Raduis After Before Window

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Last Alert	Classification	Measurements
2021-07-01 05:59:37.000	SN candidate	17
2021-07-01 04:29:46.003	Unknown	16
2021-06-29 04:41:50.001	SN candidate	15
2021-06-27 06:09:52.998	SN candidate	14
2021-06-27		

Search Bar Page

Website -Second View Result

Search Bar Page

Mobile Application - Second View Result

Conclusion

In conclusion, the current application successfully implements the main page of the application will its features , including object search and filtering. To further enhance its functionality and usability, the following steps are planned to :

- Develop the next page to show complete details for each object.

- Package the application for distribution.

- Test the app thoroughly on a real Android device.