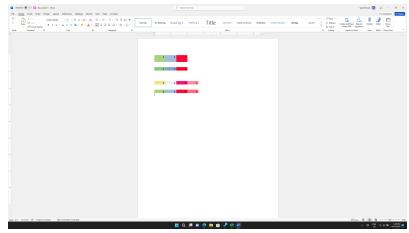
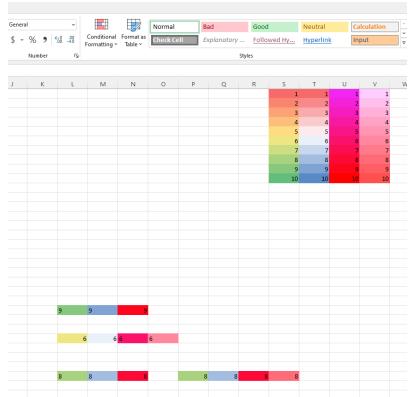


<https://docs.google.com/document/d/1wSM19Amkl7PTjIN3x1poMXnkyEDRcZ8ngYIE5O1Zfns/edit?usp=sharing>

Within this logbook, you will find:

- A list of work completed, such as:
 - *Completed the main menu function*
 - *Includes a login input and checks against a list of users*
 - *Added in some colours to the main menu function*
 - *Imported colorama library*
- Challenges and achievements from certain periods of time:
 - **Achievement:** *Issues with user input have been solved by checking if it is alphabetical.*
 - **Challenge:** *Using the colorama library of code and attaching it to all documents to be submitted to work properly*
- References and links that are vital to the development of the project
 - *Geeks For Geeks - Dictionaries* - <https://www.geeksforgeeks.org/python-dictionary/>
 - *Images have been included to demonstrate the work completed or highlight issues*

Date	Work Completed	References / Links
19/11/2022	<p>Achievements:</p> <ul style="list-style-type: none">● Worked on Gantt chart● I did not plan on doing the whole Gantt chart today, but ended up finishing it <p>Challenges:</p> <ul style="list-style-type: none">● Working on Gantt chart made me realise that I had a lot of features to implement in addition to studying for other subjects● I am unsure if I will be able to keep up with Gantt Chart schedule or will end up like one of those people who have to tone down their awesome ideas (hopefully not as bad as Wombat)	 <p>Finished gantt chart</p>

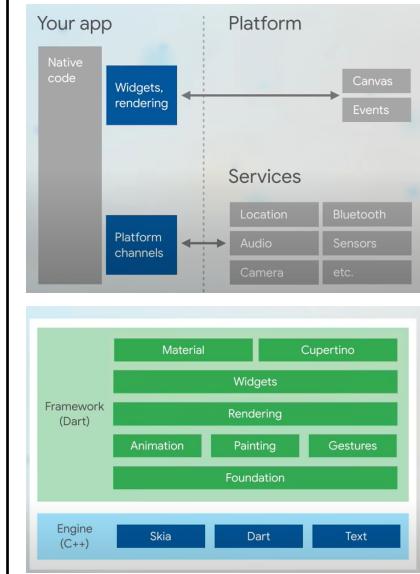
	<p>Combat)</p> <ul style="list-style-type: none"> I was using Excel conditional formatting to generate colours for my cells, when copying cells it would not preserve the colour even on the paste formatting only option. To get around this I pasted to a word document first and then copied it back to the excel sheet. 	 <p>Word colour copy work around</p>  <p>Conditional formatting colours</p>
25/11/2022	Improved Gantt chart on advice of Mr Dunne, added due dates and uploaded to google drive and generated link	
3/12/2022	<p>We have finally finished exams and I now have time to start working on the project</p> <p>Achievements:</p> <ul style="list-style-type: none"> Started learning how to use the flutter language, started with a video about how it is different to other languages Learnt about the concept of widgets in Flutter and about native rendering features Learnt a little about reactive programming styles, as apps need to be reactive Found that Dart can run both just-in-time and also in a compiled form which is quite cool Learned about the use of declarative frameworks vs the imperative ones that I am familiar 	How is Flutter different for app development - YouTube

with

- Learned a little about the hot reload feature and how to use it
- Learnt that assert() only works in development and not production
- Learned about “late” and lazy initialization
- Learned about const vs final, const being known at compile time
- Learnt about dart expressions inside strings

Challenges:

- Why is dart different from everything else...



How to change UI in a declarative framework



In the imperative style, you would typically go to ViewB's owner and retrieve the instance `b` using selectors or with `findRenderObject` or similar, and invoke mutations on it (and implicitly invalidate it). For example:

```
// Imperative style
b.withOpacity(red)
b.backgroundColor = ViewColor(...)
```

You might also need to replicate this configuration in the constructor of ViewB since the source of truth for the UI might outlive instance `b` itself.

In the declarative style, view configurations (such as Flutter's Widgets) are immutable and are only lightweight "blueprints". To change the UI, a widget triggers a rebuild on itself (most commonly by calling `setState()` on StatefulWidget in Flutter) and constructs a new Widget subtree.

```
// Declarative style
return ViewB(
  color: red,
  child: const ViewC(),
);
```

Here, rather than mutating an old instance when the UI changes, Flutter constructs new Widget instances. The framework manages many of the responsibilities of a traditional UI object (such as maintaining the state of the layout) behind the scenes with RenderObjects. RenderObjects persist between frames and Flutter's lightweight Widgets tell the framework to mutate the RenderObjects between states. The Flutter framework handles the rest.

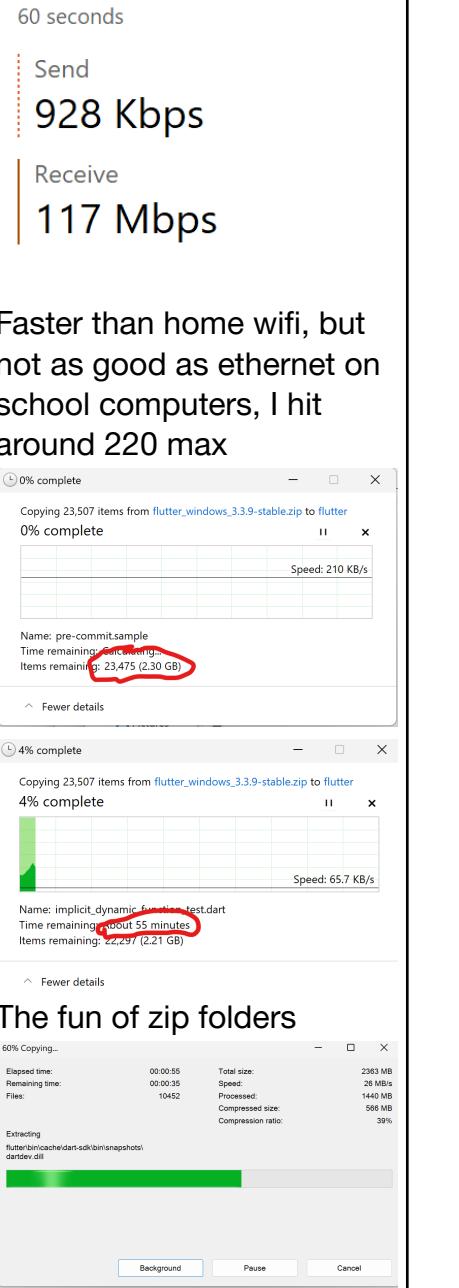
[Hot reload | Flutter](#)

[Flutter samples](#)

[Language samples | Dart](#)

		<p>Language tour Dart</p> <p>Built-in types</p> <p>The Dart language has special support for the following:</p> <ul style="list-style-type: none"> • Numbers (<code>int, double</code>) • Strings (<code>String</code>) • Booleans (<code>bool</code>) • Lists (<code>List</code>, also known as <code>arrays</code>) • Sets (<code>Set</code>) • Maps (<code>Map</code>) • Runes (<code>Runes</code>; often replaced by the <code>characters</code> API) • Symbols (<code>Symbol</code>) • The value <code>null</code> (<code>Null</code>) <p>Strings</p> <p>A Dart string (<code>String</code> object) holds a sequence of UTF-16 code units. You can use either single or double quotes to create a string:</p> <pre>var s1 = 'Single quotes work well for string literals.'; var s2 = "Double quotes work well too."; var s3 = "It's easy to escape the string delimiter.";</pre> <p>You can put the value of an expression inside a string by using <code>\$(expression)</code>. If the expression is an identifier, you can skip the <code>\$</code>. To get the string corresponding to an object, Dart calls the object's <code>toString()</code> method.</p> <pre>var a = 'string interpolation'; print('This \$a is very handy.' == // Dart has string interpolation. 'which is very handy.'); print('\${a.toString()} is very handy.' == // \${toUpperCase} is a method 'That deserves all caps.'); // STRING INTERPOLATION is very handy');</pre>
8/12/2022	<p>Our SDD lesson finished about 15 mins early and we had some spare time, in this time I looked at all the things to install and how to install the android SDK without installing android studio I also worked on the assignment in my study period and started installing things using the faster school Wifi</p> <p>Achievements:</p> <ul style="list-style-type: none"> • Tried to enable debugging on phone (and then found / remembered I had already enabled it) • Looked at more Flutter examples (I liked flutter weather and chillify, but both do not use material design) • Installed flutter to root user folder • Ran flutter doctor to find out what needs to be installed (I did not need Visual studio as I was not intending to develop for windows) • Installed Google USB driver • Got flutter doctor to be happy • Setup Flutter tools in VS Code and flutter doctor was still happy • Learned that I should use flutter release build mode when wanting to test performance <p>Challenges:</p>	<p>How to setup Android SDK without Android Studio. by Nitish Sharma ProAndroidDev</p> <p>7 Flutter Open Source Projects to Become a Better Flutter Developer by Farhan Tanvir Geek Culture Oct. 2022 Medium</p> <p>Windows install Flutter</p>

- Installing the android sdk without android studio turned out to be too much of a hassle for something that may end up causing more issues down the line
- Waiting for zip folders to extract (see image) - gave up using windows explorer to extract, switched to 7zip, which was much faster (also see image)
- Was using where command on powershell and it wasn't working because it only works in cmd (sigh)
- Got error "cmdline-tools is missing", I had to do some research, Google's docs were not very good and this [I am getting error "cmdline-tools component is missing" after installing Flutter and Android Studio... I added the Android SDK. How can I solve them? - Stack Overflow](#) gave me the answer immediately
- Android licences had to be accepted through cli
- My laptop has only one USB port and my phone takes up one when developing. I usually use a monitor with a usb keyboard which no =w has nowhere to go, so I have resorted to using my inbuilt laptop keyboard for now
- One of my usb cables didn't have data transfer so wasn't getting picked up (pls fix USB standards 😞)
- Android studio automatically downloaded API level 33 which my phone did not support so I had to download API level 31 and configure flutter to use it



7zip my saviour

```
Welcome to Flutter! - https://flutter.dev

The Flutter tool uses Google Analytics to anonymously report feature usage
statistics and basic crash reports. This data is used to help improve
Flutter tools over time.

Flutter tool analytics are not sent on the very first run. To disable
reporting, type 'flutter config --no-analytics'. To display the current
setting, type 'flutter config'. If you opt out of analytics, an opt-out
event will be sent, and then no further information will be sent by the
Flutter tool.

By downloading the Flutter SDK, you agree to the Google Terms of Service.
Note: The Google Privacy Policy describes how data is handled in this
service.

Moreover, Flutter includes the Dart SDK, which may send usage metrics and
crash reports to Google.

Read about data we send with crash reports:
https://flutter.dev/docs/reference/runtime-reporting

See Google's privacy policy:
https://policies.google.com/privacy
```

Note: As of Flutter's 1.19.0 dev release, the Flutter SDK contains the `dart` command alongside the `flutter` command so that you can more easily run Dart command-line programs. Downloading the Flutter SDK also downloads the compatible version of `Dart`, but if you've downloaded the Dart SDK separately, make sure that the Flutter version of `dart` is first in your path, as the two versions might not be compatible. The following command tells you whether the `flutter` and `dart` commands originate from the same `bin` directory and are therefore compatible.

```
C:\Users\lucy-Flutter\src  
C:\Users\lucy-Flutter\src\bin\flutter  
C:\path-to-flutter\src\bin\flutter.bat  
C:\path-to-dart-sdk\bin\dart.exe :: this should go after C:\path-to-flutter-s  
C:\path-to-flutter\src\bin\dart  
C:\path-to-flutter\src\bin\dart.bat
```

What I saw

However, if you are using PowerShell, in it `where` is an alias of `Where-Object` command, so you need to use `where.exe` instead.

To learn more about the `dart` command, run `dart --help` from the command line, or see the [dart tool](#) page.

If only I had scrolled down

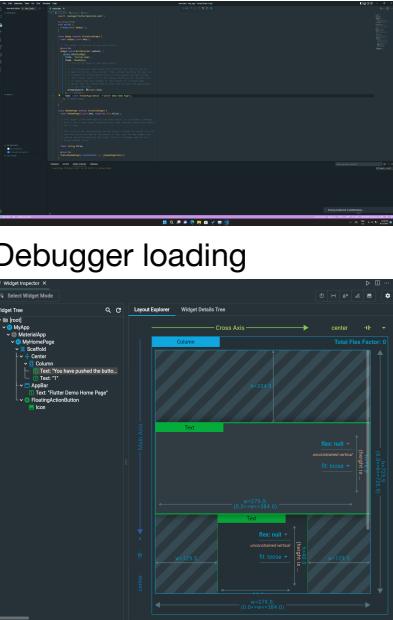
```
C:\Users\user> flutter doctor
Running "flutter pub get" in flutter-tools...                                19.8s
Doctor summary (to see all details, run flutter doctor -v):
  [✓] Flutter (Channel stable, 3.1.1, on Microsoft Windows [Version 10.0.22000.1819], locale en-US)
    • Android toolchain - develop for Android devices
      • Android Studio from: https://flutter.dev/docs/get-started/install/windows#install-android-studio (visit https://flutter.dev/docs/get-started/install/windows#install-android-studio for detailed instructions).
      • Java version OpenJDK Runtime Environment (build 11.0.10+0-b60-7582205)
      • All Android licenses accepted.
    • Connected device (1 available)

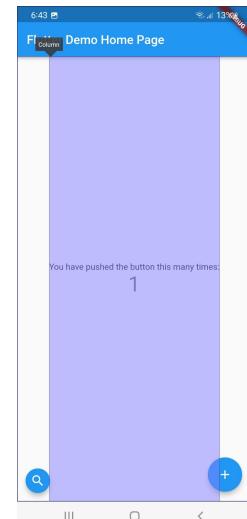
[!] Chrome (webview devtools)                                     Could not find Chrome.
    • To use the Chrome devtools for a connected device, please use
      'flutter config --android-sdk <path>' to update its location.

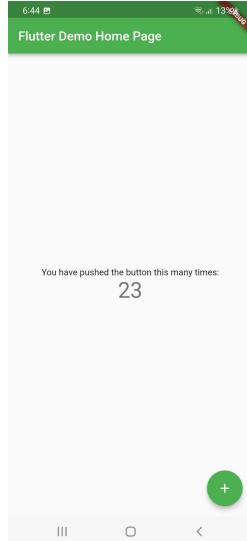
[!] Visual Studio (Android developer tools) is necessary for windows development.
    • Download at https://visualstudio.microsoft.com/downloads/
      • Android Studio is required for development with C++ backed, including all of its default components
        • Android Studio (Install)
        • Connected device (3 available)
```

Flutter doctor first run

| Its finally happy

9/12/2022	<p>Mr Song took the liberty of not turning up to his IPT lesson so we were deported to an engineering class. We also met Mr Dunne near the end of the period.</p> <p>Achievements:</p> <ul style="list-style-type: none"> • Got the test app working on my phone • Learnt about debugger features including swoing animations • Ran dev tools in browser • Started learning about flutter widgets • Decided that making some form of mockups would be useful • The dart samples allowed me to familiarise myself with dart language a bit, but I'm still screwed on widgets • Stateful widgets are those that respond to user interaction or later data, stateless widgets are known at drawtime and are not changed or dynamic in nature (bar appearing ad disappearing). But say we want to update text which is a stateless widget, we shuodl wrap it in a statful widget • Learnt that <code>_at</code> start of function or variable make it private • Learnt about widget layouts and scaffolding <p>Challenges:</p> <ul style="list-style-type: none"> • The debugger took a very long time to run the first time, but on subsequent runs was faster • Struggling to learn language • Resorted to looking a ReVanced code in a desperate attempt to learn the language, I thought it would be easier... • To download the code for ReVanced manager and use it properly you need to put your github access key in a file (sus), I will have to do this later <p>Note for self: get google fonts, you need to override build and init state as you override theri original states</p>	 <p>Debugger loading</p> <p>Using the Flutter inspector Flutter</p> <p>Flutter Widgets - Javatpoint</p> <p>Language samples Dart</p> <p>Flutter for Android developers Flutter</p> <p>Layout widgets Flutter</p> <p>Introduction to widgets Flutter</p>
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Debugger and hot reload in action (phone screenshots)

10/12/2022

Achievements:

- Cloned revanced
- Finally got it running on debug mode so I can see how it works

Challenges:

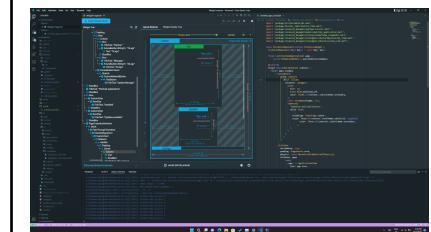
- Doc link in ReVanced manager was broken and I had to manually find the doc (as a matter of courtesy I opened a pull request to help them fix this)
- ReVanced decided to compile in sdk version 33, so it was downloading gradle for a long time while I thought it was compoling, the targetsdkversion had to be changed, then I found that the plugins did not support version 31
- Gave up on using Android 12 and decided that I will move to target android 13. While the news sites say my phone has received android 13, the update is not currently coming up, I'll try and compile on version 33 and just hope it works on my phone due to the min sdk version being lower

Other notes

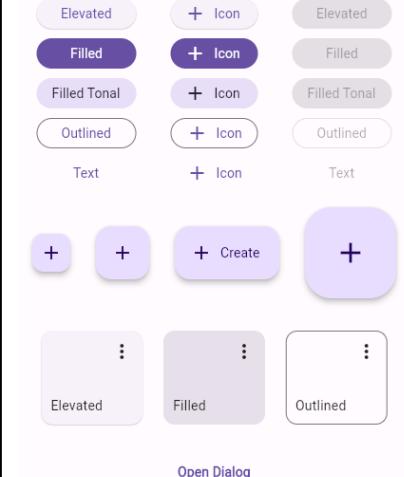
[revanced/revanced-manager: 🧬 Android application to use ReVanced \(github.com\)](https://github.com/revanced/revanced-manager)

PROBLEMS 3K+ OUTPUT DEBUG CONSOLE TERMINAL

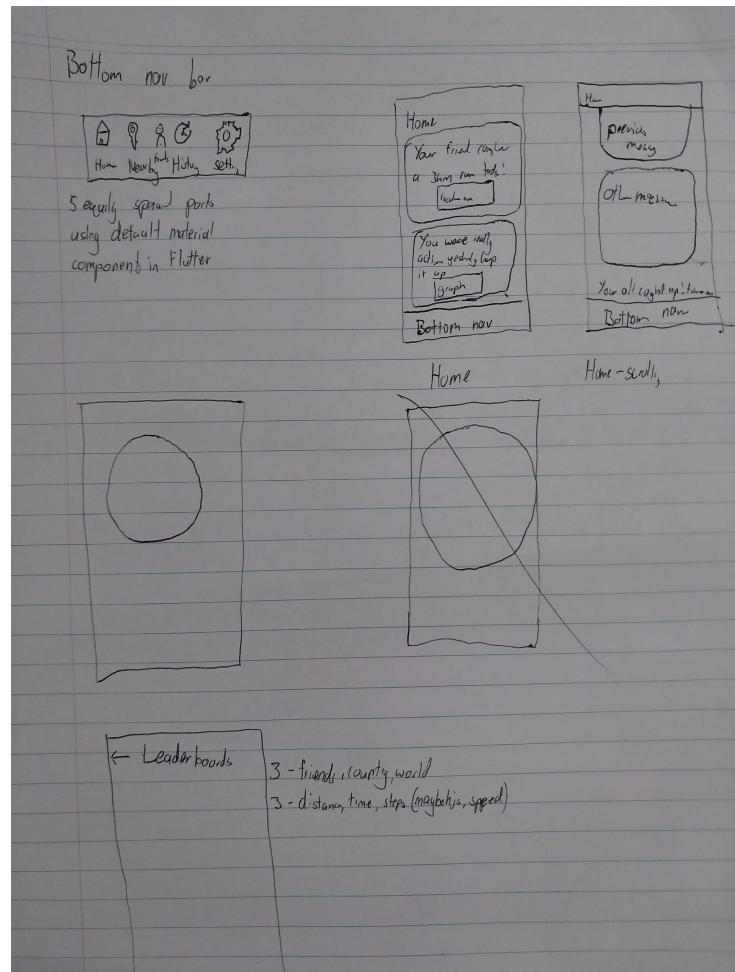
Oh no, 3k+ problems (just havent installed packages)



ReVanced is running!!!!

	<p>Title code snippet sample</p> <pre>child: Text('', style: GoogleFonts.inter(color: Theme.of(context).textTheme.headline6!.color,),),</pre> <p>It is best to make a separate file for navigation bar widget that you can just reuse with all other screens</p>	
11/12/2022	<p>Achievements:</p> <ul style="list-style-type: none"> Looked at how to implement material design in flutter and the <code>useMaterial3</code> property <ul style="list-style-type: none"> Linked some components that I may plan to use in links area Looked at material demo Notes from flutter improvement guide - use serif, icons, theming, animation Confirmed that I should use bottom bar navigation by watching a video <p>Challenges:</p> <ul style="list-style-type: none"> Doc link in ReVanced manager was broken and I had to manually find the doc (as a matter of courtesy I opened a pull request to help them fix this) 	<p>Flutter – Material Design 3</p>  <p>Take your Flutter app from boring to beautiful Google Codelabs</p>

		Choosing the right navigation - Material Moment - YouTube NavigationBar class - material library - Dart API (flutter.dev)
12/12/2022	<p>Mr Dunne was not teaching today, so we got a period to either work on our notes or major project. Since I had not brought my phone cable today, I decided to work on my notes, but got bored after 10 minutes and then worked on my project again</p> <p>Achievements:</p> <ul style="list-style-type: none"> Started working on some design mockups on paper - made some initial designs Looked at some libraries for stat taking features <p>Challenges:</p> <ul style="list-style-type: none"> Realised that my home screen needs a big start run button and I had only made a feed - could not decide how to integrate both cleanly Making icons Forgot to add a friends tab to my navigation bar and it had to be added later Forgot that I needed a leaderboards menu and temporarily located it inside the friends section I could not decide how to display components for choosing stats and the scope of the leaderboard - I looked at 2 segmented buttons or 1 segmented button and 1 extended FAB. May have to make mockups in Figma to get a better design Some Material 3 components do not seem to be integrated with Flutter, I looked at the Github issue and it suggested that more components than I thought were added and documentation was not available yet, which is why I thought they had not been implemented 	geolocator Flutter Package (pub.dev) mobility features Flutter Package (pub.dev) maps toolkit Dart Package (pub.dev)  Bring Material 3 to Flutter · Issue #91605 · flutter/flutter (github.com) Migrating a Flutter app to Material 3 Codemagic Blog



Achievements:

- Tried resetting onedrive app data
 - From my own disappointing experiences, decided that for my own project I should just store on a local folder and then use git for keeping cloud backups on github. I can reuse the .gitignore file from the ReVanced repo
 - Eventually gave in and ran a chkdsk
 - CHKD SK worked and I was able to delete the file

```
C:\Users\mizan\OneDrive - NSM Department of Education\2023\SDC\Major Project> Remove-Item .\Unassigned\ -Recurse -Force  
Remove-Item : The tag present in the reparse buffer is invalid.  
At C:\Users\mizan\OneDrive - NSM Department of Education\2023\SDC\Major Project>:1:1  
+ Remove-Item .\Unassigned\ -Recurse -Force  
+ CategoryInfo          : WriteError: (C:\Users\mizan\... :String) [Remove-Item], IOException  
+ FullyQualifiedErrorId : SystemException,Microsoft.PowerShell.Commands.RemoveItemCommand
```

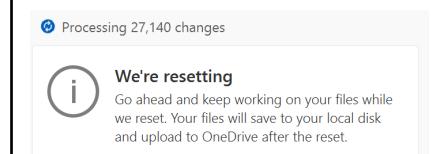
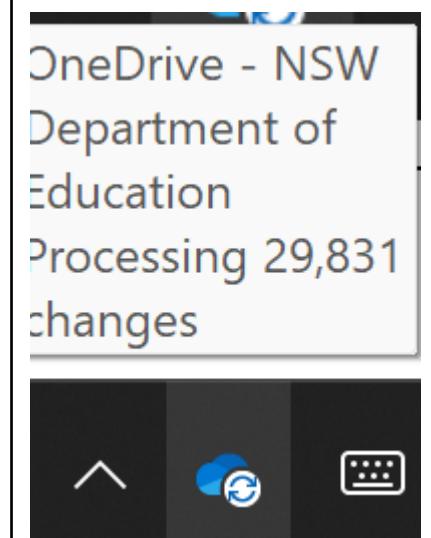
On UAC powershell

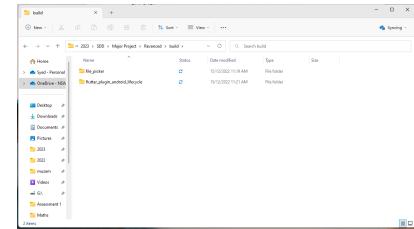
Challenges:

- ReVanced stopped working... I dont know what to do
- The ReVanced folder wont delete, so I can't reinstall it - After a while I realised it was probably the fact I had stored it on a onedrive synced folder (my bad)
- Found that some of the folders were corrupted... 😞 😞 😞
- Dont want to run CHKDSK, too long, need to restart, too lazy, not bothered etc.
- Was able to do pretty much nothing in the double period as nothing worked
- A onedrive reset could not fix the problem



[\[FIXED\] OneDrive "The tag present in the reparse point buffer is invalid" Error \(pcrisk.com\)](#)



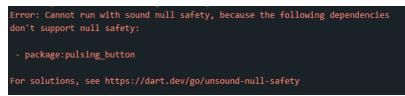
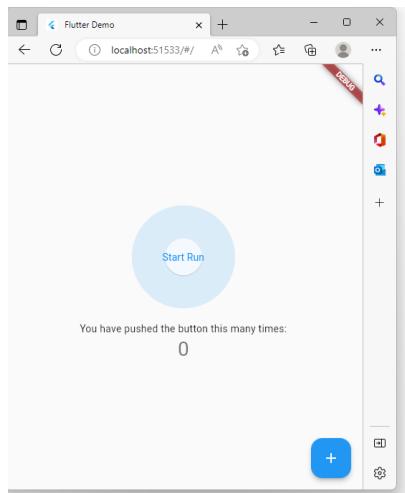


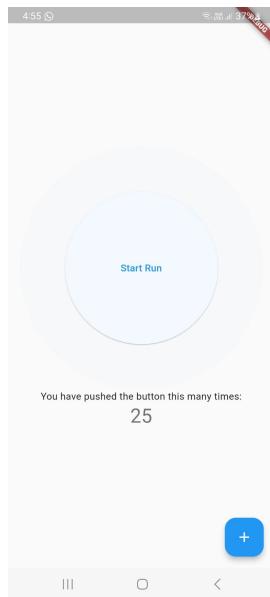
The only two folders left -
the ones not working

16/12/2022	<p>Last lesson of the year, played Football Manager on cloud streaming and did some work</p> <p>Achievements:</p> <ul style="list-style-type: none"> Recovered and then deleted gradle.properties from Onedrive, got back api keys Redownloaded and setup/compiled revanced Looked through some other apps code Found that the test app was easier to understand than other more popular apps, <p>Challenges:</p> <ul style="list-style-type: none"> My api keys to download revanced libraries got deleted so I had to recover my gradle.properties from onedrive 	<p>Top 10 open source flutter apps. A list of top 10 awesome open source... by Ashish Singh Aviabird Medium</p>
24/12/2022	<p>Came back from holiday and realised I was very behind</p> <p>Achievements:</p> <ul style="list-style-type: none"> Found out tasks that needed to be done <p>Challenges:</p> <ul style="list-style-type: none"> Checked Gantt chart and saw that I needed to start server setup and making assets but I had not even finalised the design of the app yet Got overwhelmed and did not continue 	

25/12/2022	<p>Tried to actually get some SDD work done today</p> <p>Achievements:</p> <ul style="list-style-type: none"> Made some near final design mockups, see image <p>Challenges:</p> <ul style="list-style-type: none"> Forgot to make a stats and in-run mockup 	
27/12/2022	<p>Achievements:</p> <ul style="list-style-type: none"> Ran the test app on MS edge for absolutely no reason, judging by the way all my settings reset in the Flutter browser window, I'm assuming it runs in some sort of isolated environment - performance was fine, but this was a very small app, compiling was slightly faster Learnt about how to prevent overflow errors Decided that I will probably have to use view models in addition to making the views as that seems to be the easiest way to make an app with extensive computing capabilities Learnt how to make a circle Continued looking through revanced source code, mainly analysing how they routed screens together and their use of scaffolds and viewmodels Learnt that navigator is pretty much an array Learnt to use <code>onPressed</code>: for on press events Decided that I could use a remove until method to remove previous routes that should no longer be navigable to <p>Challenges:</p> <ul style="list-style-type: none"> Learning how view models work Deciding where to start Learning Flutter 	<p>Running the app on edge</p> <p>How to debug layout issues with the Flutter Inspector</p>

	<ul style="list-style-type: none"> Originally I was not able to understand navigator but after looking at another tutorial I was able to get it, linked the better guide 	by Katie Lee Flutter Medium Expanded class - widgets library - Dart API (flutter.dev) dart - Flutter Circle Design - Stack Overflow Navigate to a new screen and back Flutter Navigate with named routes Flutter pushAndRemoveUntil method - Navigator class - widgets library - Dart API (flutter.dev)
30/12/2022	<p>Achievements:</p> <ul style="list-style-type: none"> Learnt about the SafeArea widget and that I should use it after looking at appditto/natrium_wallet_flutter Understood that it is better to make an updating app bar rather than making a new scaffold each time Finally starting to understand the ReVanced code and how the navigation, widgets and viewmodel are working in tandem - previously I was unable to understand viewmodels and their use, which is just to separate UI and logic code, I have also understood the multiwidget structure of the app - in which one widget contains multiple smaller ones to allow it to complete more complicated tasks with cleaner code and have also understood navigation Found out that I can use a refresh indicator for refreshing a page, te video on the docs page was useful Found a library for pulsating button, will need to confirm if this counts as using assets 	SafeArea class - widgets library - Dart API (flutter.dev) Scaffold class - material library - Dart API (flutter.dev) RefreshIndicator class - material library - Dart API (flutter.dev)

	<p>Challenges:</p> <ul style="list-style-type: none"> Google was ignoring my search for “? in flutter”, since “?” is punctuation, I eventually got around this by typing out “question mark” 	pulsing button Flutter Package (pub.dev)
3/1/2022	<p>Updated to Android 13, battery life and performance are similar to 12, some of the blur effects are a bit nicer</p> <p>Achievements:</p> <ul style="list-style-type: none"> Found out how to make custom icons in flutter (see first 2 links) Gave more of my previous data to google by signing up for a pub.dev account Added my first dependency (pulsating button) Realised you have to import material in every file Decided that it was easier to just preview my app in MS edge, as I’m still learning the language and its quicker to compile for web Found a different library that does half of what I want to do Miraculously created some sort of pulsing custom widget, imported it and got it to work first try Finally understood why everyone created states for widgets but only sometimes, thanks to a stackoverflow answer, the reason is that stateful widgets require a default state to build while stateless ones do not Ran the code on my phone and adjusted sizing using hot reload <p>Challenges:</p> <ul style="list-style-type: none"> The pulsing button library does not support null safety Tried just copying the code into a newer dart version file, but the author has used multiple null values that I cant be bothered to fix Tried to make the code null safe with “?” but a number of other issues came up most relating to variables being assigned values not consistent with their type The new library (avatar_glow) does not affect button size, something I will have to implement myself Opening all my VScode files (including ReVanced reference code) - I should make some workspaces Getting the perfect animation speed The dropdownmenu material 3 documentation for flutter is a mess (doesn’t work and the implementation is still being discussed in a number of github issues) 	<p>FlutterIcon - Flutter custom icons generator</p> <p>How to Add Custom Icons to Your Flutter Application (freecodecamp.org)</p>  <p>Null safety error</p> <p>What's a state in flutter? - Stack Overflow</p> 



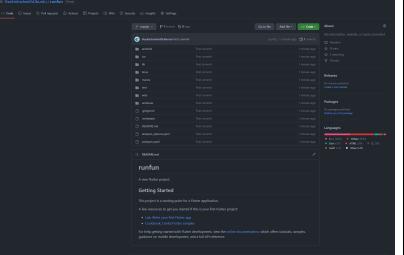
App running on phone

[DropdownMenu class - material library - Dart API \(flutter.dev\)](#)

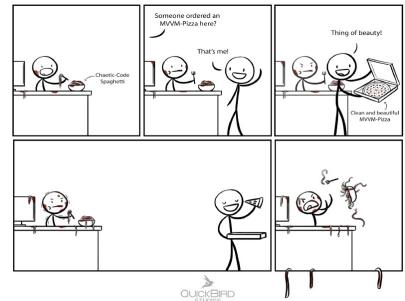
[Create `DropdownMenu` Widget to Support Material 3 · Issue #115005 · flutter/flutter \(github.com\)](#)

[\[DropdownMenu\] Disable text input · Issue #116587 · flutter/flutter \(github.com\)](#)

[Add `focusNode` and `showVirtualKeyboard` properties by QuncCcccccc](#)

		· Pull Request #117504 · flutter/flutter (github.com)
4/1/2023	<p>Worked a lot on the project yesterday, so did not do a lot today</p> <p>Achievements:</p> <ul style="list-style-type: none"> Looked up some info on animation, more specifically modifying the padding size dynamically <p>Challenges:</p> <ul style="list-style-type: none"> The button animation looks a bit off, it needs more experimentation 	DartPad (dartlang.org) AnimatedPadding class - widgets library - Dart API (flutter.dev)
6/1/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Stole revanced gitignore file (and acknowledged) Made a private github repo Initialised the local codebase onto Github using the proper way which does not involve deleting all my files and then reckoning them Fixed up display name of app from “runfun” to “RunFun” Adjusted my pulsing button widget filename at the request of the dart extension Changed the home page to a stateless widget, as the example flutter app was using a stateful one and I had unknowingly copied it Added safearea, but not tested on mobile, where it actually makes a difference Made the button so that its sized is based upon screen size <p>Challenges:</p> <ul style="list-style-type: none"> Realised I haven't been commenting, I may do this later in the class-allocated lessons Still find it somewhat confusing that a stateless widget can have stateful widgets inside it My indentation got messed up a bit when adding a safearea, but I was able to fix it Trying to find out how to position the elements relative to each other Making the padding larger hides the text from view, changing the sizes to relativ fixed up this issue When debugging in edge and using the VS code debugger, one window would always go behind so i had to use powertoys to force the edge window to stay on top 	Adding locally hosted code to GitHub - GitHub Docs  <p>Up and running</p>  <p>Asking me to change file name</p> Layouts in Flutter Flutter
8/1/2023	The dropdownmenu PR linked earlier has had some activity	Add `focusNode` and

	<p>Achievements:</p> <ul style="list-style-type: none"> Learned about initState() and dispose() in stateful widgets Actually understood how stateful widget work and the multiple ways to manage state Somewhat understood animations Got the animation mostly working Added comments before I forgot what the code does <p>Challenges:</p> <ul style="list-style-type: none"> Accidentally reset my keyboard lighting while trying to adjust the audio, luckily I had my settings saved and could just import them Realised that if I want to animate the button further, it would need to be converted to a stateful widget When converting to a stateful widget, I was not able to access passed parameters, Stackoverflow told me that I should use widget.variable The animation not doing anything 	<p>`showVirtualKeyboard` properties by QuncCccccc</p> <p>· Pull Request #117504 · flutter/flutter (github.com)</p> <p>Adding interactivity to your Flutter app Flutter</p> <p>Implicit animations Flutter</p> <p>dart - Passing data to StatefulWidget and accessing it in its state in Flutter - Stack Overflow</p>
9/1/2023	<p>Used SDD as an excuse to procrastinate English</p> <p>Achievements:</p> <ul style="list-style-type: none"> Set a voidcallback that that should pass through to button Noted baseapiservice and changenotifier which should be useful Learned about the difference between ? and late, ? assigns value of null and allows calling while null, late does not do so and will throw a runtime error if you call it as null and cannot be set to null Looked at Flutter Weather to learn more about MVVM implementations Looked at using openweathermap for weather data <p>Challenges:</p> <ul style="list-style-type: none"> Trying to make my custom pulsing button handle clicks Despite its wide usage, found that viewmodel functionality was not build into flutter, so I would need to learn more about it and what packages are best. Everyone has a different way to implement MVVM architecture 	<p>Flutter : MVVM architecture.</p> <p>Model-View-ViewModel by Maraj Hussain Medium</p> <p>ArizArmeidi/FlutterWeather: Weather app created using Flutter and Dart (github.com)</p> <p>Pricing - OpenWeatherMap</p>



Use Model-View-ViewModel to make your code cleaner in Flutter with Dart Streams ([freecodecamp.org](https://www.freecodecamp.org))

null - What is the difference between using `late` keyword before the variable type or using `?` mark after the variable type it in the Flutter? - Stack Overflow

MVVM in Flutter using Providers. MVVM is the hot topic anytime in... | by Vipin Vijayan | ITNEXT

	<p>Achievements:</p> <ul style="list-style-type: none"> Watched an informative video about inherited widgets and learned that it allows you to pass values to widgets down the tree more easily Looked at splash screen info to implement later Read a guide which showed me how to decouple UI and logic without going into using the intricate MVVM architecture Took a lot more research (around 1hr) but started to wrap my head around providers and how 	<p><u>Inherited Widgets Explained - Flutter Widgets 101 Ep. 3 - YouTube</u></p> <p><u>flutter_native_splash Flutter Package (pub.dev)</u></p>
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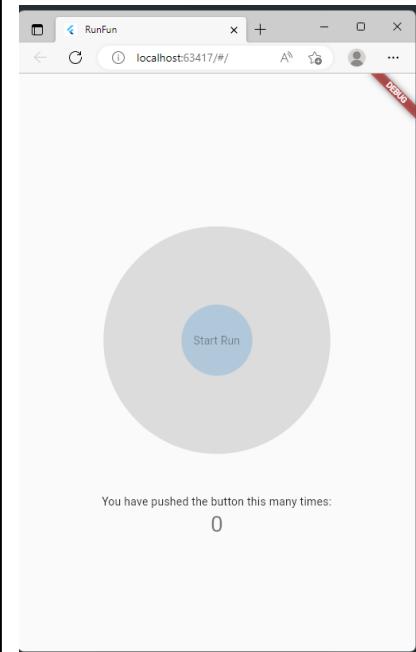
- to use them in my own application
- Got the animation working again by going back and making some edits to my stateful widget code rather than using the animated widget. I honestly don't know what's working and what's not but the end result is correct so I will accept it and not touch this code any further

Challenges:

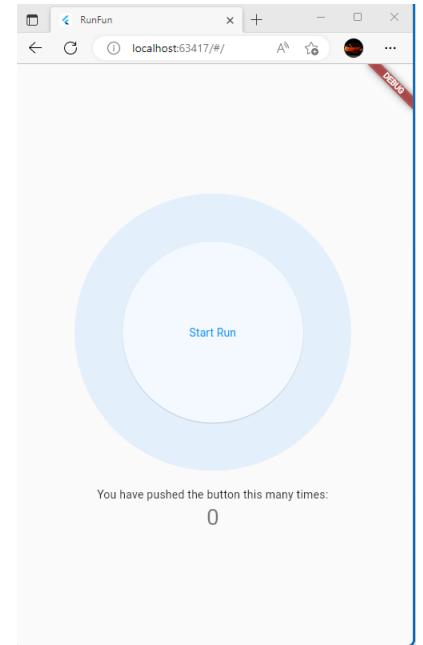
- Understanding how provider works in the guide (3rd link and 3rd achievement dot point)
- Flutter seems to have updated and now most of my colours and stuff are off, it might have been the new animation code, investigating the logbook to see if I can identify any likely culprit
- The glitch must have been some of the animations as going back to an old version yielded a result that was expected
- Some assertion started failing
- Feeling a little demotivated after spending a lot of time but not getting much code done today (at least it started working again 😊)

[Decoupling logic from UI in Flutter application | by Anton Klimenko | Medium](#)

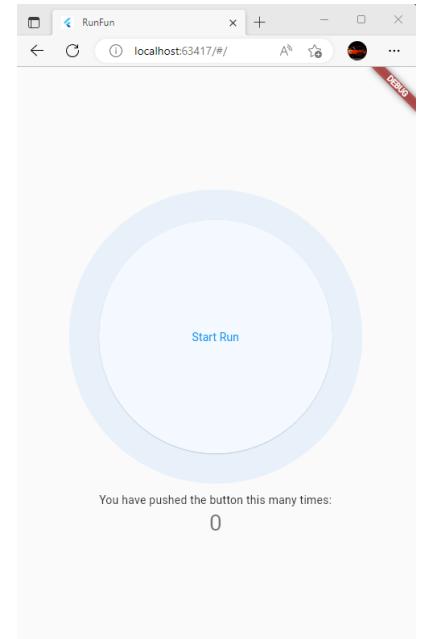
[Starting with Flutter: A simple guide for Provider | by Enrico Ori | TheOtherDev/s | Medium](#)



Regression



Button not animated but
now working - old code



Both animations working again



Random assertion that started failing

13/1/2023

Achievements:

- Rewrote my animation code as I found a much cleaner way to animate
- Changed the tween values to adapt to screen size
- Created debug launch files

Challenges:

- The avatarglow animation starts on load while I need it to start 2 seconds after
- It felt off when I adjusted the tween to reverse, I then tried to graph it and also took some screen recordings - eventually concluded they were the same if I swapped ease in and out when swapping tween values

```
// Old way to Animate
// Enter animation settings
/*
animation = Tween<double>(begin: 100, end: 150).animate(controller)
..addListener(() {
  setState(() {});
})
// reversing animation code
..addStatusListener(status) {
  // Forever reverse the animation
  if (status == AnimationStatus.completed) {
    controller.reverse();
  } else if (status == AnimationStatus.dismissed) {
    controller.forward();
  }
});
*/
//.addStatusListener((status) => print('status'));
```

<- to check animation status

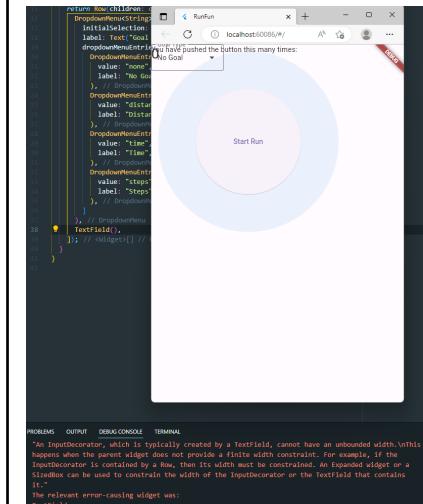
```
final Animation<double> curve = CurvedAnimation(
  parent: controller,
  curve: Curves.easeInCirc,
  reverseCurve: Curves.easeOutCirc,
);
animation = Tween<double>(begin: 100, end: 150).animate(curve)
..addListener(() {
  setState(() {});
});
```

	<ul style="list-style-type: none"> Couldn't get the 2 animations to align, even when swapping the 2 states, the avatarglow would always occur at completely the wrong time, when the animation went in rather than when it went out - decided to leave it as it is 	<p>Commented code is old animation and below that is new animation</p> <p>reverseCurve property - CurvedAnimation class - animation library - Dart API (flutter.dev)</p> <p>Animation graphs</p>
14/1/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Started looking at how to implement the Navbar, as the app was taking forever to compile Installed dev build of flutter Tested UI on phone <p>Challenges:</p> <ul style="list-style-type: none"> VS code thought I was using a screen reader Tried to see current result on my phone but it was not coming up a build device, on running <code>flutter devices</code> in the terminal, I found that it was not authorised for some reason - Stack overflow showed me how to fix, needed to revoke and then regrant permission Was running out of storage on laptop, but clearing 6GB recycle bin helped Android compiling using all of my RAM Found out that since the dropdownmenu widget was only recently added it was not accessible using a normal build of flutter, I now have the choice of using a dev build or 	<p>Device not authorised</p> <p>intellij idea - Android Flutter Debug - Device Not Authorized - Stack Overflow</p> <p>Everything about the BottomNavigationbar in Flutter by Mahesh Jamdade Flutter</p>

- waiting till Jan 25 to implement this - ended up installing the dev build
- Waiting for things to download and update, including all relevant platform specific SDKs
 - Changing to a dev build has changed my colour scheme to purple (its okay as I havent set up colours yet)
 - When I tried to implement a row widget to house both my goal type input and goal text input, I got an error and the visual output was not as expected, luckily the message was very informative and told me to constrain the text widget using a sizedbox or expanded. The problem was that sized box required space in pixels and expanded uses all remaining space
 - Put text in an expanded as a placeholder, will work more on it another day

[Community | Medium](#)

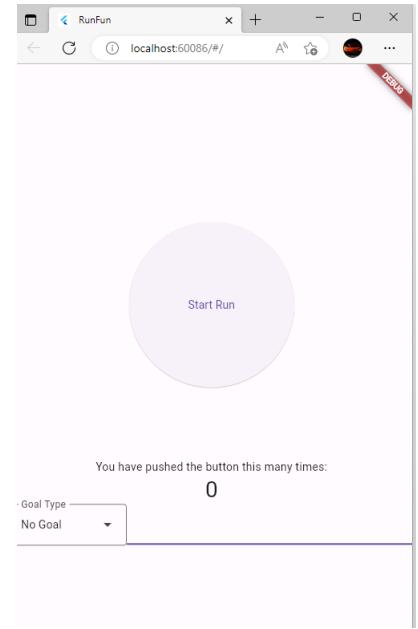
[IndexedStack class - widgets library - Dart API \(flutter.dev\)](#)



The row error

[Row class - widgets library - Dart API \(flutter.dev\)](#)

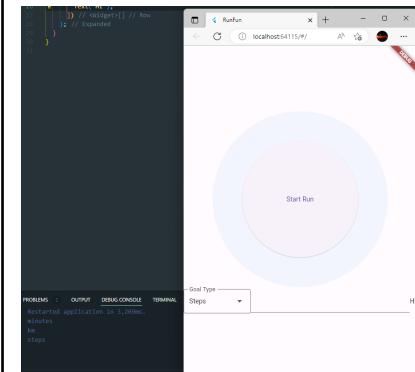
Funny documentation



Final result from today

18/1/2023	<p>Achievements:</p> <ul style="list-style-type: none"> • Learnt about dart classes in an effort to finally implement provider • Finally, implemented a basic provider scaffold (but haven't been able to test its data transfer abilities) • Fixed up variable casing • Was able to implement logic that updates when a user selects a value from the dropdownmenu • Wrapped some components in flexible widgets for sizing reasons, fixed up main menu sizing, it still gets messed up due to the column length on wide devices <p>Challenges:</p> <ul style="list-style-type: none"> • Still confused as to how to pass data between screens • Didn't really understand the point of getters and setters • Didn't use capital F for a function type, so I struggled for a while as I waded through error messages • Dart null safety was shouting at me for 20 mins as I forgot to add the word late 	<p>Send data to a new screen Flutter</p> <p>Dart Programming - Classes (tutorialspoint.com)</p> <p>Dart getters and setters - DEV Community </p>
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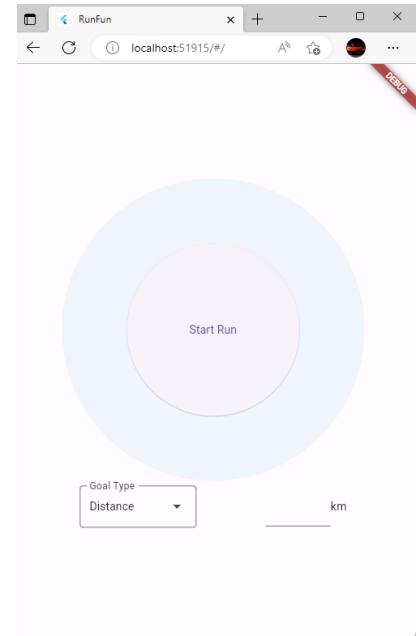
- I hate dart (mostly)
- Still need to format the textbox
- The number of tabs I open while coding
- Took much longer than it looks like in the logbook
- Got an error with the flexes



First working logic, tested with print calls

[Flexible \(Flutter Widget of the Week\) - YouTube](#)

```
═════ EXCEPTION CAUGHT BY WIDGETS LIBRARY ═════════════════════════════════════════════════
The following assertion was thrown while looking for parent data:
The following ParentDataWidget(s) were providing parent data to the same RenderObject:
  Expanded(flex: 1) (typically placed directly inside a flex widget)
  Flexible(flex: 1) (typically placed directly inside a flex widget)
```



Todays finished work, the value of the textfield needs to be controlled with a controller at a later time

20/1/2023

Achievements:

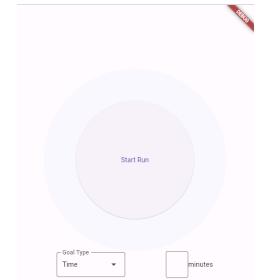
- Added enable/disable functionality from the text input based of whether no goal is selected
- Made it so that the input box only accepts numbers

Challenges:

- Did true and false the wrong way around for the text input enabled checker, this was easily found and fixed
- Border did not look good on input box

[Language tour | Dart](#)





While a border did look good when disabled it ruined the app look when it was enabled so I opted against adding one (see previous entry for a non border design)

23/1/2023

Achievements:

- Changed goalboxlogic to a variable, which should allow it to be recalled from a variable and make the code cleaner by using variable names rather than functions within the code
- Decided that preserving screen state was less important than having clean animations when using a navigation bar, hence I would not need to use an indexed stack to preserve state
- The second article stated that the website I was looking at was having some issues, so I was able to avoid having used it

Challenges:

- Looks like changing flutter channels deletes all your previous packages, so my revanced install got messed up
- No idea how to make circular icons
- Not sure if I will need to set icon colours myself or if flutters built-in methods will work

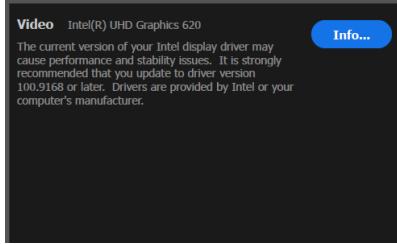
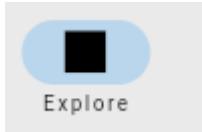
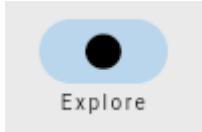
Notes:

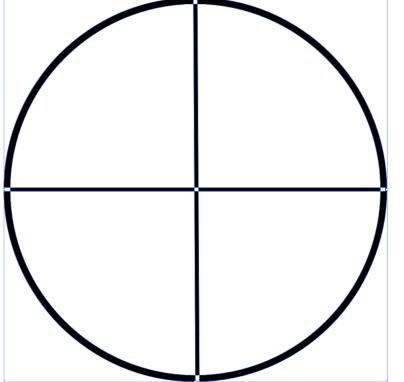
Fun fact: It seems like the UTF 16 HEX code of the beer emoji overlaps with the add sign in the material icon font.

[How to build a bottom navigation bar in Flutter - LogRocket Blog](#)

[How to Add Custom Icons to Your Flutter Application \(freecodecamp.org\)](#)

[Custom icons in Flutter \(flutterclutter.dev\)](#)

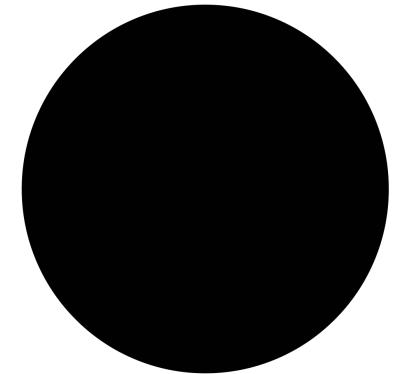
25/1/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Decided that I should start focussing more on assets now, so I will leave the implementation of the navigation bar for later, so I used <code>flutter create --sample=material.NavigationBar.1 mysample</code> to create a sample project to work with Installed new graphics driver <p>Challenges:</p> <ul style="list-style-type: none"> Adobe was angry about my graphics drivers Realised there are extra steps in illustrator for generating SVGs that can be converted to icons such as converting everything to union paths Accidentally clicked create android emulator when trying to change to edge compilation, so I had to restart VS Code Illustrator just couldn't make the SVG in a way that the online icon generators would like it and I gave up for the day 	 <p>Video Intel(R) UHD Graphics 620 The current version of your Intel display driver may cause performance and stability issues. It is strongly recommended that you update to driver version 100.9168 or later. Drivers are provided by Intel or your computer's manufacturer.</p> <p>Info...</p> <p>Adobe raging about graphics drivers</p>  <p>Explore</p> <p>Attempt 1: fail</p> <p>How to use custom images · fontello/fontello Wiki (github.com)</p>
26/1/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Added ADB to PATH Outline stroke, compound path, manually select and outline stroke, compound path, upload to SVGOMG, upload to Icomoon, update code <- Todays workflow that was tested <p>Challenges:</p> <ul style="list-style-type: none"> Windows explorer kept crashing We failed again 	<p>The Making of Octicons The GitHub Blog</p> <p>SVGOMG - SVGO's Missing GUI (jakearchibald.github.io)</p>  <p>Explore</p> <p>Attempt 2: another fail - different icon file this time, so thats why we got a circle</p>

27/1/2023	<p>Flutter forward didn't have anything too interesting, I could probably use the new stable version, but I'm not bothered as doing so would make me need to pull all the packages again</p> <p>Achievements:</p> <ul style="list-style-type: none"> • Tried using a premade icon from Icomoon and it worked, so the issue is my icons • Found out that the alignment issue is probably related to the width and height not being equal, while one of the previous links suggested some hacks which included copy pasting the SVG multiple times, Stackoverflow users have suggested to use a dedicated program to resize the fonts <p>Challenges:</p> <ul style="list-style-type: none"> • The premade icon was off centre • Changing the size the 22 improved the situation bt dd not rectify the issue • We now have 2 issues - making custom fonts appear, making custom fonts align properly • Outline stroke kept creating white blanks in my icon in illustrator • Tried to use a number of pathfinder methods but none of them worked • Why is working with vectors so hard, either the whole thing gets filled or nothing gets filled 	 <p>Icomoons icon does work properly, but is off centre</p>  <p>Changing the size to 22 made it slightly more central</p> <p>flutter - Custom SVG-Font Icon not centered in Icon Widget - Stack Overflow</p> <p>svg - Flutter - Deformed/overflowing custom icons using Fluttericon.com - Stack Overflow</p> 
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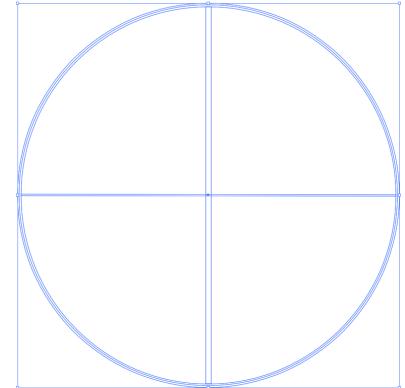
Compound path overlaping
and creating white boxes at
circle edges

[Solved: Why does compound path overlaps items with white? - Adobe Support Community - 9052422](#)

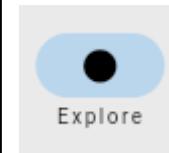
[Illustrator's Pathfinder Shape Modes in 2 Minutes! - YouTube](#)



One of many failed settings



What on earth is this



Attempt 3: fail

28/1/2023

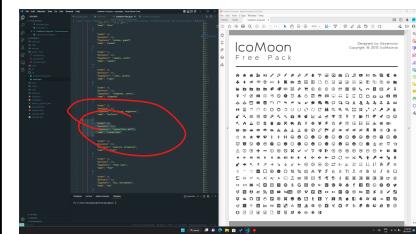
The plan for today was to analyse SVG code from working icons so I can determine the differences with my illustrator creations

Achievements:

- Found the wifi icon by examining the pdf and then locating the file title within the json using its position (pdf lines were 24 icons long)
- I found 2 important things in the icon file, the icon was likely off centre as the height was 20 while the width was only 16, the icon was all in one large path
- Tried downloading a more complex SVG then putting it through the whole process to see if it still works - it worked, somehow they are making everything with paths

Challenges:

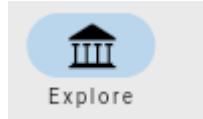
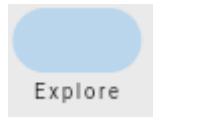
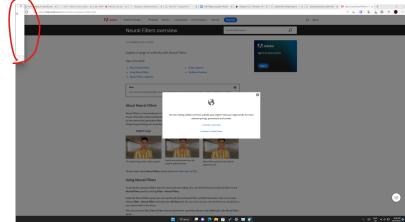
- Tried to use SVG crush to put everything into one path but it gave a javascript error:
Unsupported SVG node style
- Tried things like using the paint bucket but still didn't work, I have no idea how people make icons



The icon search



SVG crush error

	<ul style="list-style-type: none"> • All the other people can use fills and thick/thin lines, so why is mine not working <- it might be illustrator • Found that my illustrator icons were filled with white in the middle, possibly why they might no be working (or at least contributing to it) • I have no idea what to do, the only thing I can try is to not use illustrator 	 <p>The icon works when using the icomoon default settings</p>
29/1/2023	<p>Achievements:</p> <ul style="list-style-type: none"> • Installed Gimp • Processed SVG file in Gimp • Uninstalled gimp • Installed inkscape • I GOT IT TO WORK I GOT IT TO WORK I GOT IT TO WORK • Found the ReVanced navigationbar in navigation_view.dart - they had a clean way to implement to colour switching which I was looking for and provided a more advanced example for me to learn off • Created my first navbar prototype (see challenges for its drawbacks) • Created my second navbar prototype which did all of its jobs but messed up the positioning of some the elements above it • Was able to fix the issue by wrapping the column holding the upper elements in an expanded it did make the code a bit messy though <p>Challenges:</p> <ul style="list-style-type: none"> • Gimp removed stroke properties, there is no way to retain them - at least we got the correct format with only one big path • Icomoon would not accept the strokes and told me to convert them to fills, but I thought that was just for different stroke thicknesses, turns out it was for the whole thing and it got ignored. The positive is that it came up looking like some of the provided icons in the early inkscape preview, in the second part it disappeared like in the program • The working icon was a little thin • Flutter docs have not outlined how to make a navigationbar that updates to a filled icon, i will check how ReVanced has done it but may probably use my own implementation that runs on provider 	<p>html - is there a tool to create SVG paths from an SVG file? - Stack Overflow</p> <p>Docs (icomoon.io)</p>  <p>Attempt 4: fail, but we know why</p>  <p>Inkscape installer got stuck in corner</p> <p>SVGOMG - SVGO's Missing GUI (jakearchibald.github.io)</p>

- My first navbar prototype was not at the bottom of the screen, it did not darken the background of the selected element and was not smart enough to decipher whether an icon should be filled or not
- My second navbar prototype worked well with all the features previously lacking having been added (bar the background shadow), however it messed up the positioning of the button and goal menus above it

Has become my svg code viewer of choice

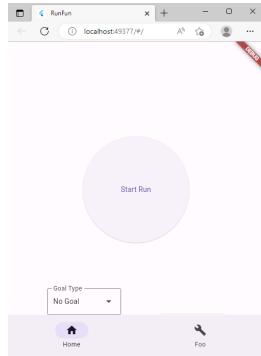


Attempt 5: Its thin but it works

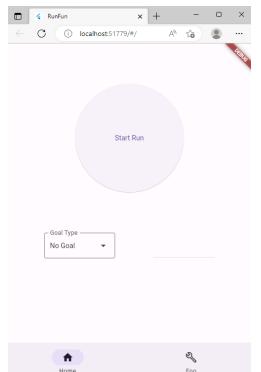
[Material Symbols and Icons](#)
[- Google Fonts](#) - inspiration

```
bottomNavigationBar: NavigationBar(
  onDestinationSelected: model.setIndex,
  selectedIndex: model.currentIndex,
  destinations: <Widget>[
    NavigationDestination(
      icon: model.isSelected(0)
        ? const Icon(Icons.dashboard)
        : const Icon(Icons.dashboard_outlined),
      label: FlutterI18n.translate(
        context,
        'navigationView.dashboardTab',
      ),
      tooltip: '',
    ), // NavigationDestination
    NavigationDestination(
      icon: model.isSelected(1)
        ? const Icon(Icons.build)
        : const Icon(Icons.build_outlined),
      label: FlutterI18n.translate(
        context,
        'navigationView.patcherTab',
      ),
      tooltip: '',
    ), // NavigationDestination
    NavigationDestination(
      icon: model.isSelected(2)
        ? const Icon(Icons.settings)
        : const Icon(Icons.settings_outlined),
      label: FlutterI18n.translate(
        context,
        'navigationView.settingsTab',
      ),
      tooltip: '',
    ), // NavigationDestination
  ],
)
```

ReVanced navigationbar implementation



First navbar implementation with some issues



Second navbar with most things fixed, the button position is now broken though

Flutter forward did actually have some interesting stuff that I found out about after watching a youtube video: better debugging, some 3d stuff, material 3 improvements, dart 3, unfortunately I watched it in incognito (didn't want my youtube feed to become all flutter related as is starting to happen) and now cannot find the link

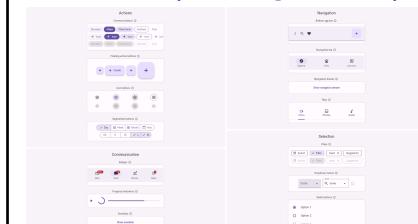
Achievements:

- Looked through the improved material3 demo: I may use tabs for the leaderboards or an extended fab with a segmented button, the two types of dropdown menu are interesting, their text inputs with decorations seem useful
- Learnt that I can shift click with pen tool in adobe illustrator and it will construct the angle to a multiple of 45
- Splitting the bottom of the house into 2 parts (one as a reflection of the other) helped make the alignment easier
- Made my first (relevant to project) icon prototype

Challenges:

- Couldnt find the inkscape pen tool
- Decided it wasnt worth the time trying to use inkscape (learning where everything is, doesnt like pixels, doesnt align/anchor etc.) and I should just make SVGs in illustrator that I can push into inkscape for export purposes
- Couldnt work out how to make sure the gaps between part of the same path were equal
- Cant get that thickness the preprovided icons have, I may download an SVG of them and see what they have done so they can get that kind of thickness

[Material 3 \(flutter.github.io\)](https://material.flutter.dev/)

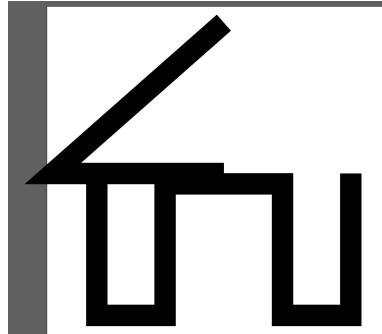


Flutter's material 3 demo is now much more comprehensive and lets me see more widgets in action with the things they can do

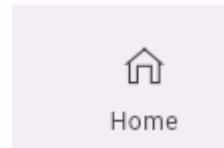
[Inkscape Paint Bucket Tool Secret Hack - YouTube](#)

[The Pen Tool — Inkscape Beginners' Guide 1.0 documentation \(inkscape-manuals.readthedocs.io\)](#)

[How to draw with the Pen, Curvature, or Pencil tool in Illustrator \(adobe.com\)](#)



A primitive house



Home

The icon inside the app



The accidental pixel discovery (dot point 2)

[Create pixel-perfect art in Illustrator \(adobe.com\)](#)

31/1/2023

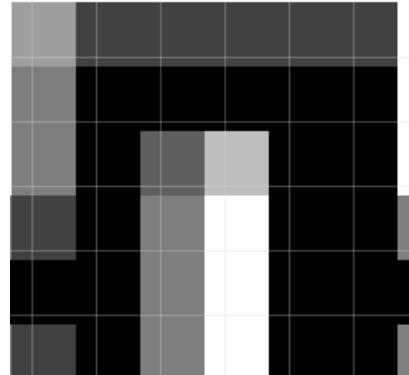
Achievements:

- On analysing Google's version of the SVG files, I realised that they are just drawing two objects on top of each other and then putting the non-used area as clear, this would be much easier than drawing strokes. However it would be harder to make sure that all the black lines are the same size but I do not know how they drew it originally this is just a guess using the information in the file.
- By accident found that they are using 2px borders on a 24x24px board
- Read about creating "pixel perfect designs", since my ones were not aligning to pixels on a 24x24 board
- Eventually I gave up on making the top of the design pixel perfect as it was too hard

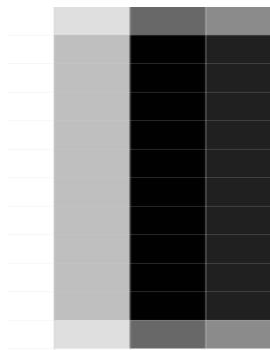
Challenges:

- When using the pixel preview and then switching to normal view I found that many of my diagonal objects did not align. To rectify this I used pixel preview in combination with the normal view and pixel snapping tools
- I have no idea how google made a perfect triangle at the top if they were using rectangles - I was not able to align my top such that it did not have any gaps with the existing shape

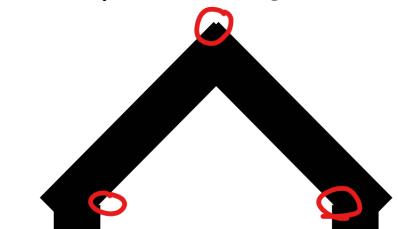
- I could not mirror my rectangles properly because one of them was not pixel perfect
- Tried to make an icon in MS Paint but the alignment was all off
- Spent Around 2.5hrs to not much success
- Spent Around 3.5hrs to not much success



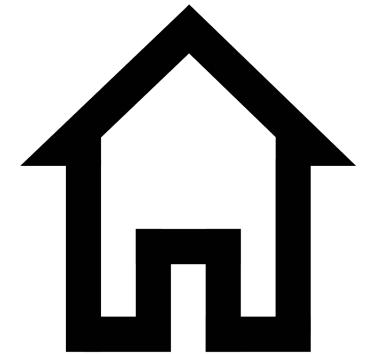
Not pixel perfect (the bottom of the house which should not be antialiased)



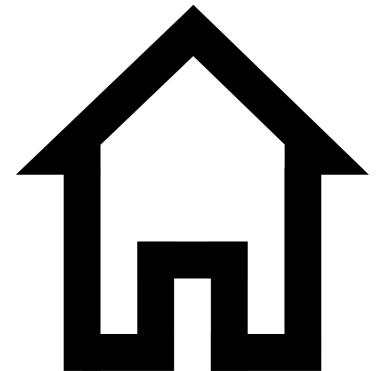
An off-pixel rectangle



A common misalignment



Not pixel-perfect house



Before stroke to path



After Stroke to path

1/2/2023

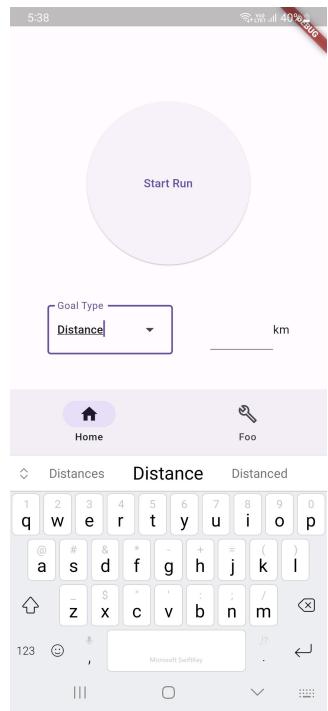
Achievements:

- Fixed up keyboard changing widget position issue
- Tried one more time and it miraculously worked.... I dont even know what I did different. This is what I think I did: Remove all strokes, the triangle outline stroke in illus (not sure), the same in inkscape
- Accidentally found the Inkscape layout view sidebar which allowed me to see what was not a path and what was a path
- Fixed up my naming scheme to make icon testing faster as I will not need to go to the icon references to update them with new names

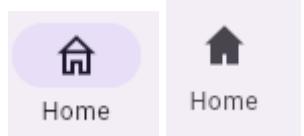
Challenges:

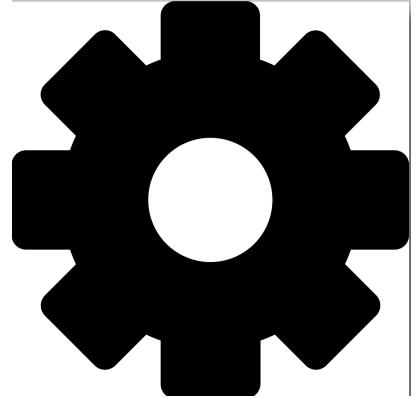
- When the keyboard came up on my phone, it would cause the widget positions to change, I think due to the use of an expanded widget
- Icomoon was being a bit glitch with the sets, so I just tagged my final icons
- Inkscape fill was not working with combine, so I then worked out that I could fill by filling the triangle and making lots of rectangles in photoshop

Sidenote: I am contemplating changing the app name to FlutterFit or FlutterFitness

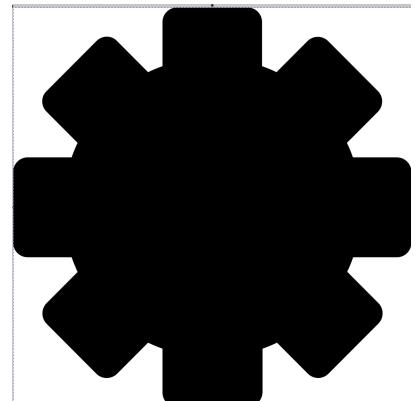


Keyboard forcing navbar up

		<u>When the keyboard appears, the Flutter widgets resize. How to prevent this? - Stack Overflow</u>
		
2/2/2023	<p>Mr Dunne is away today...</p> <p>Achievements:</p> <ul style="list-style-type: none"> • Thankfully starting to make progress on icons • Made a settings icon and its filled sibling • Remade the both settings icons as they were not thick enough <p>Challenges:</p> <ul style="list-style-type: none"> • When trying to round rectangle corners, the object kept rotating, this is ironic because I used to keep accidentally rounding corners but now I am unable to do so at all, looking online it may be because I am using a touch device, will skip for now and look into it when I get home - worked it out, wasn't using the direct select tool, was using the select tool • Path union was turning everything into one colour as one path can only be of one colour - this was rectified by first running a "path difference" to take a hole out of the black path and then running a "path union" to combine all other objects • The settings icon was not thick enough originally • When remaking the icons the middle circle was giving a bit of issues in inkscape due to its stroke but was fixed when I converted to path with the stroke intact on inkscape 	<u>Round corner widget rotates object instead of roun... - Adobe Support Community - 9859994</u> <u>Re: Round corner widget rotates object instead of ... - Page 2 - Adobe Support Community - 9859994</u> <u>How to Make Settings icon in Adobe Illustrator - IconScout Blogs</u> <u>Union changes colors. (inkscape.org)</u>



Pre union



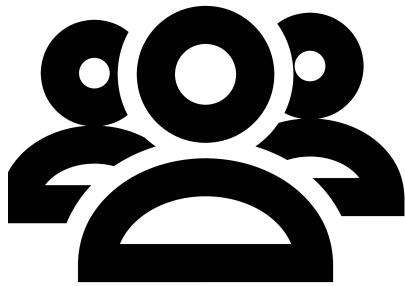
Post union



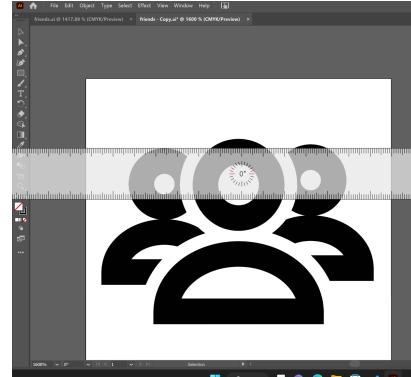
Tiny thickness disparity



A bit better

3/2/2023	<p>Achievements:</p> <ul style="list-style-type: none"> • Found the code for the updated material3 demo • Took my history icon from yesterday and did the inkscape stuff on it to make a final icon and added it to program • Making a friends icon was too hard, I will probably use one from online • In my study period made a pretty decent friends icon, I used an invisible white layer behind the top layer to create the white outline effect • Made its sibling filled icon, after encountering some problems <p>Challenges:</p> <ul style="list-style-type: none"> • Switching to Inkscape midway through everytime • Had to use a ruler to help align people at the back • Paths can only be one colour so I could not merge while using the white layer, instead I would need to cut • Minus front in pathfinder would also remove the white layer, so I had to make a copy of it, move the new white layer back into the middle and then apply the minus front a second time to cut the other side • When making the filled icons the subtraction was not working with the filled ones as outline stroke changes the path fill such that it becomes its own path that has a bit of overlap with the outside path, furthermore I think the strokes on the white layer were causing an issue - had to use pathfinder union function to make a union path so that the outline stroke was truly 	<p>samples/material 3 demo at main · flutter/samples (github.com)</p>  <p>The first trio</p>  <p>The new friends icon prototype</p>

- an outline - after this pathfinder worked as expected when subtracting
- Forgot to outline stroke on the middle person, so inkscape was giving issues
 - Thought that the home icon and its filled version had a different gap in the middle but found they were the same on inspection of a zoomed version



Using a ruler

[Illustrator Tutorial: Cut out a shape from another – Pathfinder Tool \(y-designs.com\)](#)

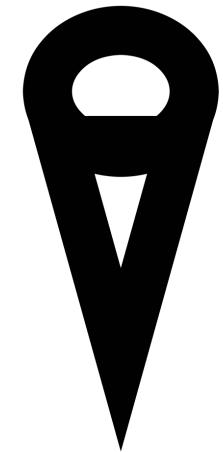


Successful cutting



Inspiration icon

		 <p>What inkscape does when you dont outline path</p>
4/2/2023	<p>Achievements:</p> <ul style="list-style-type: none"> • Read an adobe article which gave me further understanding about pathfinder and compound shapes • Watched a youtube video so I could get an idea as to how other people are doing it, their methods are pretty much the same as mine, but I learnt that you can hold alt to resize both sides at once • Tested out a VS code font viewing extension • Finally made a location icon (that I'm satisfied with) and added it to app • Updated flutter in the hope that the fixes to dropdownmenu were out (they were not) • Tested everything on mobile <p>Challenges:</p> <ul style="list-style-type: none"> • When running a compound path, my circle fill would get removed and then the inside circle would not be circular, to override this behaviour, I used path finder to make a cut out of the triangle in the shape of the circle • Encountered a very annoying problem where pathfinder unite world not work properly, there were no solutions online despite many having the same issue, I will try updating • After updating adobe wanted me to update my intel drivers again.. I gave in • Again I didn't make it thick enough 	How to combine objects in Illustrator (adobe.com)  <p>Very failed attempt</p>

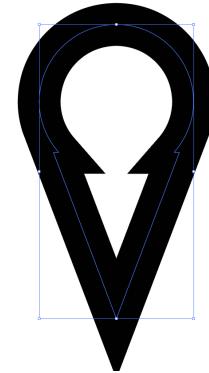


The middle circle is cut out when compounding since the bottom triangle appears again, overriding fill



Cut shape

[Learn How to Draw a Map Location Icon in Adobe Illustrator | Dansky - YouTube](#)



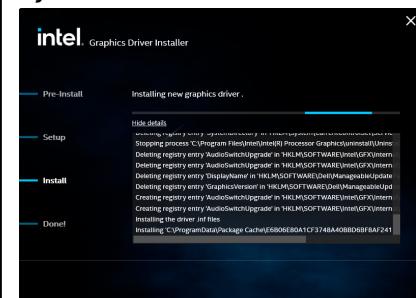
unite not
working due to stroke

[vector - Illustrator: Using
'Unite' Function in
Pathfinder Window Creates
Erroneous Anchor
Points/Shifts Shapes -
Graphic Design Stack
Exchange](#)

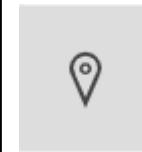


My pathfinder unite wasnt

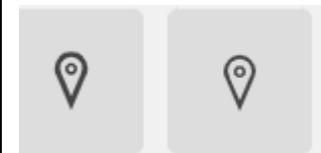
working properly, seems like a known issue judging by the above link



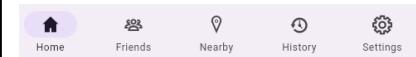
Updating...



Not thick enough

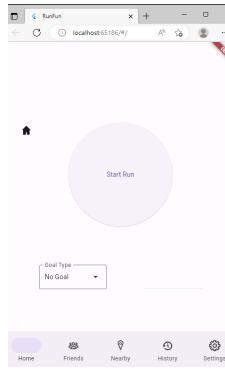


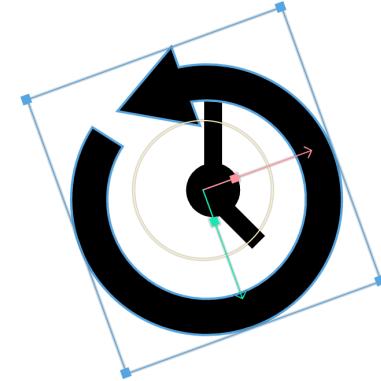
New and old



Within the app the middle circle looks too thin

6/2/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Made an animation for the settings icon (however the animation curve for this animation is not final) Decided how I will animate the rest of my animations (home - bounce, friends - gradually fill each person, location - expand, history - spin the arrow, settings - done) Researched on how to make animations outside of flutter that can be imported into flutter Restructured my widgets folders and reordered file imports for consistency reasons <p>Challenges:</p> <ul style="list-style-type: none"> I didn't type <code>RotationTransition</code> correctly, so VS Code and flutter got angry at me and I could not work out why, for a while 	dart - Flutter Custom Animated Icon - Stack Overflow Flutter: Use SVG and custom animated icons ITNEXT Flutter Flare 2D Animation Basics (fireship.io)
7/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Got a sample of animation position working on a test program Found that my animation was not running its reversed version at all (duration or curve) though debugging, this was because my animation was not reporting an <code>animationstatus.completed</code> Finally got the animation to work after manually coding in a reverse function, however the animation goes again on the first mouse movement after loading the app, this will need to be investigated later <p>Challenges:</p> <ul style="list-style-type: none"> The animated position widget would not be ideal to animate a bounce, so I had to find another way (edit: since it supports curves, it might be ok, even though it needs things to be inside a stack) Both dartpad and the embedded flutter sample were not working, so I had to run the file locally Turned out <code>AnimatedPositioned</code> didn't accept controllers and only explicitly allowed you to define values (which would usually be fine but I needed a reverse curve), so I switched to <code>PositionedTransition</code> as suggested by the docs <code>PositionedTranistion</code> seemed too hard, so I went back to <code>slidetransition</code> as I found that offsets accepted y values I was having a little bit of trouble converting my code for a animation of type <code>double</code> to one of type <code>offset</code> 	AnimatedPositioned class - widgets library - Dart API (flutter.dev) PositionedTransition class - widgets library - Dart API (flutter.dev) SlideTransition class - widgets library - Dart API (flutter.dev)

	<ul style="list-style-type: none"> The animation was not reversing and the home icon was stuck high in the air The reverse curve property was not working and the animation wasn't bouncing, when falling Tried stable branch but then couldn't start the app as it seems dropdownmenu wasn't merged into stable 	 <p>the home icon has gone far away</p> <pre><code>AnimationStatus.reverse AnimationStatus.forward AnimationStatus.reverse AnimationStatus.forward</code></pre> <p>The curve is definitely reversing but the reversecurve is not being used</p>
8/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Made left and right filled icons for the friends icon Animated friends icon <p>Challenges:</p> <ul style="list-style-type: none"> Had to search through files to find the correct friends icon to edit Had to redo some work as I could not use an Illustrator file which already had the outline fill applied to the strokes, luckily I had saved copies for this reason Kept forgetting to outline fill when completed with my modifications and subtracting areas Animation had to be shortened and now the timings aren't clean 	 <p>The new icons</p> <p>javascript - Switch statement for greater-than/less-than - Stack Overflow</p>

		<pre><code>@override Widget build(BuildContext context) { // This allows us to build a Rive based on animation value. // While using if statements is not clean, it is much faster // than other methods, in terms of performance // https://stackoverflow.com/questions/6889973/switch-statement-for-greater-than-less-than double stage = animation.value; // when stage increments by 1, it means 1000 milliseconds have passed // Since we have a duration of 8.3s, we can start at 0.1s // and off screen, so that animation can be seen if (stage < 0.2) return const Icon(Icons.friends); if (stage < 0.7) return const Icon(Icons.friendsAltFilled); if (stage < 1.2) return const Icon(Icons.friendsAltFilled); if (stage < 1.7) return const Icon(Icons.friendsFilled); // Final return statement, for the sake of null-safety and in case of errors return const Icon(Icons.friendsFilled); }</code></pre>	Advice has been taken from above link
9/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Exported correct illustrator file with settings required by Rive, then imported <p>Challenges:</p> <ul style="list-style-type: none"> Had to use the beta Rive as Rive 1 was no longer accepting sign ups Our family needed to go somewhere so I was not able to keep working 	www.2dimensions.com Doesnt work Importing Assets - Rive Guide Some things I need to take care of when importing SVGs into Rive Flutter Flare 2D Animation Basics (fireship.io)	
10/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Was able to get a working design in the editor by first only animating the circular line around the clock and then attaching the arrow to it Found that Rive has its own package and I should not use the Flare one, the only problem with this is that now I will need to read the docs so I can understand this package rather than using the guides available for the flare one Found the cause of the sizing issue, the icons seemed to be applying some kind of padding to themselves inside their navigation destination widget, while the Rive Animation was taking as much space as it could Made a workaround using container to limit the width and height to 24, Flutter recommended I change to using a SizedBox instead, so I did <p>Challenges:</p>	 Broken rotation	

- My objects were not completely aligned so the rotation was not working properly, on further testing I found out that this was because the arrow was being added to the outside object and hence the rotation area was being changed as the object was now wide
 - The code could not find the asset
 - The initial sizing and background of the icon were wrong (background white, size too big)
 - Realised the colour was also wrong
 - My sizedbox workaround got me 90% of the way there, but was still a bit off visually - on further inspection I found that the Sizedbox was doing its job, however the animation itself included whitespace around it
 - Rive would not let me make a copy of my file, after some trial and error, it worked when I went to a my projects rather than recent

How to Create Flutter Animations with Rive?

Holdapp

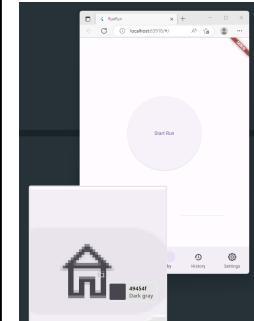
[rive | Flutter Package](#) (pub.dev)



Sizing and background
were a little off



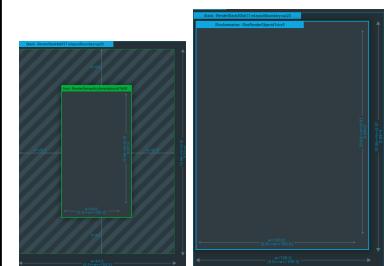
Positive progress



Had to use powertoys
zoom colour picker tool to

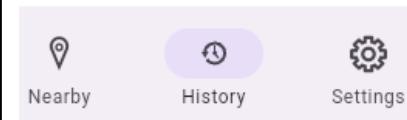
get a correct colour value

[Layout - Rive Guide](#)



What I want vs what I got

[Container class - widgets library - Dart API \(flutter.dev\)](#)



The workaround was just a little too small

11/02/2023

Achievements:

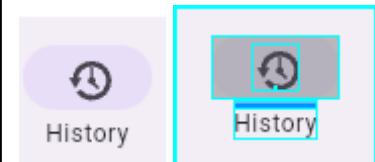
- Made a history animation that looks presentable on desktop
- Found a nice flutter app called droidhole which I looked through - I may want to use the phenix package (to refresh when a user logs in), had a look at their implementation of navigationbar, but ultimately decided that I owls have to clone the repo and have to look through it locally to get a better idea
- Made a list of assets that remain: nearby animation, nearby icon for map, walk/run icons, timer/ruler/step, world/country/~~friends~~, start run sound, notification sound

Challenges:

- I eyeballed the size and the animation was looking good but off-centre - I found that this was because it was being clipped very slightly at the edges
- When I was centering the logo, it had included the arrow as part of it (which adds extra width to the logo, messing up the centreline), so it didnt look very centred
- Despite moving the icon towards the left of the Rive file, the rive renderer was not placing it where I wanted (ie. was ignoring my left movement)
- Even trying to expand the shape such that it didnt get clipped dint work



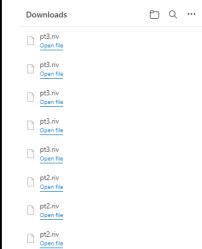
Too big



Almost there but off centre, the layout view gives a clue why



Still rendered incorrectly



lots of attempts

JGeek00/droid-hole:
Pi-hole® client made with

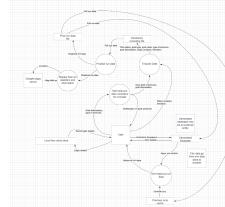
		Flutter (github.com) Introducing Flutter's new animations package - LogRocket Blog
12/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> I might have found a solution for the dodgy dart auto formatter, use commas I think I have understood how the apps have implemented their swithcer, they pretty much make a scaffold with body as a pagetransition switcher and a navbar underneath as an argument. Then when the navbar changes they update the index in the provider and refresh the stateful widget with the new page as the body Successfully changed name of app to Flutter Fitness, then unchanged name as when I did the find and replace, the formatter messed things up <p>Challenges:</p> <ul style="list-style-type: none"> I don't know whether I should stack scaffolds or not, I guess trial and error will eventually bear the solution Forgot how to declare variables that are not initialised Took half an hour trying to fix an issue due to one of my files not being imported\ Tried to implement a caching mechanism for the history animation but failed The location icon animation was going off centre when its container resized Tried compiling for android but it was too hot and my laptop got very laggy and eventually I gave up waiting 	Wrong indent while formatting nested children in an array · Issue #1363 · Dart-Code/Dart-Code (github.com) Change Dart/Flutter formatting in VSCode - Stack Overflow <pre> @Override Widget build(BuildContext context) { return ViewModelBuilder<NavigationViewModel>.reactive(onModelReady: (model) => model.initialize(context), viewModelBuilder: () => locator<NavigationViewModel>(), builder: (context, model, child) => Scaffold(body: PageTransitionSwitcher(duration: const Duration(milliseconds: 400), transitionBuilder: (Widget child, Animation<double> animation, Animation<double> secondaryAnimation,) { return FadeThroughTransition(animation: animation, secondaryAnimation: secondaryAnimation, fillColor: Theme.of(context).colorScheme.surface, child: child,); }, child: model.getViewForIndex(model.currentIndex),), bottomNavigationBar: NavigationBar(onDestinationSelected: model.setIndex, selectedIndex: model.currentIndex, destinations: <Widget>[</pre> <p>Main nav code of switcher - from revanced (droid holes one was more complex)</p>

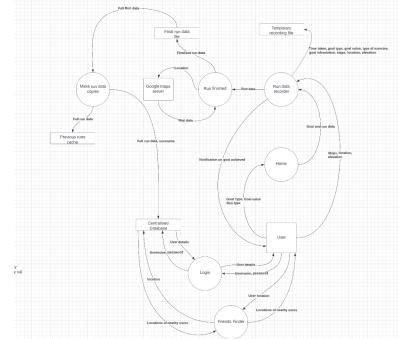
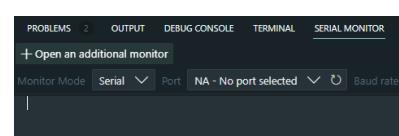
```

Widget getViewForIndex(int index) {
    switch (index) {
        case 0:
            return const HomeView();
        case 1:
            return const PatcherView();
        case 2:
            return const SettingsView();
        default:
            return const HomeView();
    }
}

```

Logic code returning a widget, I will need to adapt my code to do this as well

13/02/2023	<p>As was foretold, Mr Dunne was away today and we got to work on our major projects in class</p> <p>Achievements:</p> <ul style="list-style-type: none"> Worked on Data flow diagram Updated ndk in the hope that I will be able to compile for android without errors when I get home, I also deleted some old android sdks to free up some storage, hopefully that does not cause any issues Got the app working successfully on android <p>Challenges:</p> <ul style="list-style-type: none"> Didn't bring my usb c cable so I cant compile today Tried signing up for azure devops to do compilling work, but seems that they have a known issue preventing me from doing so Didn't know I had to add my asset to pbsec.yml to get it transferred onto the phone or it wouldn't work My history asset wasnt originally loading on android, stack overflow revealed that you had to write the asset path with the assets folder at the font 	<p>How to fix - “One or more plugins require a higher Android NDK version” error on Android studio. by Brian Mutinda Jan. 2023 Medium</p> <p>Azure for Students account - DevOps Organization creation fails with error "Value cannot be null. Parameter name: ClientId setting is not initialized in Registry" - Microsoft Q&A</p>  <p>DFD</p>

		Flutter image not displaying: "Unable to load asset" - Stack Overflow
14/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Worked on Data flow diagram Clarified whether my current diagram was too detailed (it was) <p>Challenges:</p> <ul style="list-style-type: none"> Had to swap my login and friends finder functions as it was more convenient when working with my cached login details function 	 <p>New DFD</p>
18/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Implemented provider for the exercise type box Created exercise type box and modified goal_row widget to go inside a combined one so that only one combined widget is summoned on the home widget There is a new serial monitor that I checked out Updated app with more streamlined dropdownboxes by capitalising all occurrences of the values so that they are easier to display and require less conversion overhead Made stopwatch icon Was able to only use adobe Illustrator to make the required SVG, hopeful this means that I can streamline some of my SVG development pipeline, by removing the need to use inkscape for some SVGs Made some sort of shoe icon, with great difficulty <p>Challenges:</p> <ul style="list-style-type: none"> Could not align the exercise type box The dropdownmenu widget does not resize to cover all available space only its dropdown part does Dropdownmenu does not have easily accessible docs (doesnt often come up in search) 	 <p>Layout issues</p>  <p>Shiny new tool</p> <p>prefer interpolation to compose strings (dart-lang.github.io)</p> <p>DropdownMenu class - </p>

results) and no real guides, I had to look through the docs to find out how to add an icon to my dropdownmenu, unfortunately they did not give any examples, only stated that it was a parameter in the widget declaration

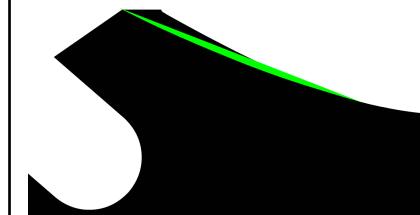
- Adobe stock doesn't work on DET school accounts
- Tried sourcing a shoe asset but the white gaps were too small, so it did not look good in the app
- Rejected my shoe icon
- Struggles too much making shoe icons, since I was not making pixel perfect designs, the SVG output was a little different to what was expected and hence I ended up finding an icon that I could use from the internet - When taking the google material symbol icon, I had to set the stroke weight and size appropriately - it took 2 attempts to find one that matched the theme of my app

[material library - Dart API \(flutter.dev\)](#)

Adobe Stock is not available on your account.
If you believe this is an error, please contact your IT administrator.
[Why am I seeing this?](#)

Bruh

[shoes flat style icon 13448990 Vector Art at Vecteezy](#)



Trying to fix a botched corner



rejected

shoe design, there are small issues in the curves that are not very visible in this screenshot

19/02/2023

Achievements:

- Made the dropdown menu leading icon update on icon change using a map
- Added leading icon to dropdown entries

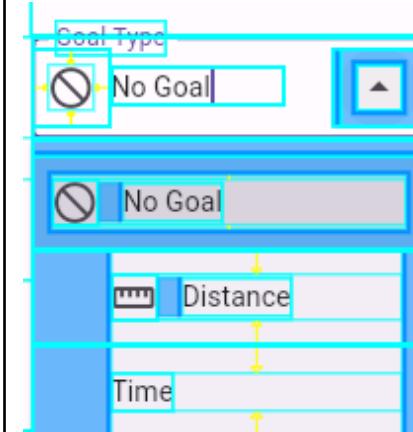
Challenges:

- Adding a leading or trailing icon to the goal type menu made it very fat - I could not find any workaround for this, while debugging I found that cause which was that the text was begin expanded to the length of the menu items children, however I could not find a way to prevent this - using styles and themes did not work, eventually I made the icons only come up when selected which avoided some of the issues but was an inferior experience
- Yet again encountered issues compiling for android

[Dart Programming - Map \(tutorialspoint.com\)](#)

```
Fix issue Angular require a Higher Android API version  
Fix this issue by adding the following to C:\Users\muzam\AndroidStudioProjects\app\build.gradle:  
android {  
    compileSdkVersion "25.1.8937393"  
    ...  
}
```

Not again



No goal is attempted fix and distance is original, notice that both still occupy the full space

20/02/2023

Achievements:

- Made a switcher for my pages, adapting code from revanced and droidhole, I thought it would be harder, but luckily I was able to implement it quite quickly
- Added animation package required to implement a simple page switcher
- Testing on dartpad indicated that requirestfocusontap may have been merged in the beta channel, so I updated flutter to the latest beta channel build
- Built app for android and found that the dropdown and page switching functions were working appropriately on my phone as well
- Made going to no goal, clear the text input box

Challenges:

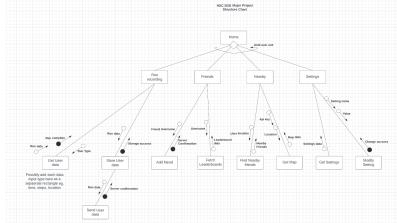
- Since I implemented page indexes and I did not have any other pages made, I kept getting errors when clicking on navbar items, to work around this, I added scaffolds as placeholders for other widgets which will be inserted in the future
- While the page switching initially worked, the animations were not coming up, compiling in release mode rather than debug confirmed that it was only debug mode causing the issues (this was not unexpected as debug mode specifically states it is not indicative of final performance)
- Tried to get both icons to show on the dropdownmenu without expanding it, but no success
- Encountered a big issue where the navbar widget would keep reloading and hence running the animation everytime a new option was selected within the home menu - Implementing a repaint boundary did not stop the problem for some reason

[animations | Flutter Package \(pub.dev\)](#)



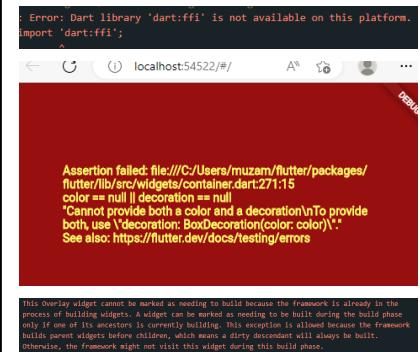
Colourful repaint testing

[android - Flutter : How to Debug which widgets re-rendered on state change - Stack Overflow](#)

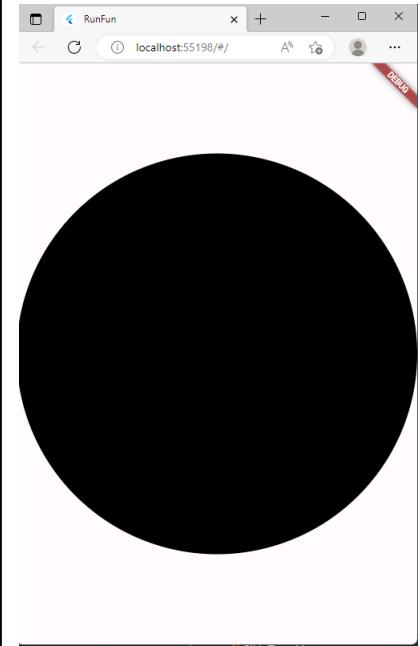
22/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> I have prepared meeting notes, for my Part A project meeting on Friday <p>Challenges:</p> <ul style="list-style-type: none"> When the app sometimes starts up, the dynamically sized circle is very small, this is because the media query call seems to be being made before any value is 0, I will need to make some kind of workaround by either waiting for a size to come up (likely performance hit) or just estimating a size 	MediaQuery.of(context).size .height returns 0 on startup in release mode · Issue #25827 · flutter/flutter (github.com)
23/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Learned about using futures in Flutter, which will be useful for networking code and also may come in handy for constructing a workaround to the media query 0 issue Worked on Structure chart Finalised meeting notes for tomorrow <p>Challenges:</p> <ul style="list-style-type: none"> Getting non-rounded rectangles for use in Structure chart decisions Laptop battery ran out while finalising meeting notes for tomorrow 	A Guide to Using Futures in Flutter for Beginners by Dane Mackier Flutter Community Medium JSON and serialization Flutter  Rounded rectangle – Lucidchart (zendesk.com)

24/02/2023	<p>Mr Dunne was absent due to a family emergency, so the project meeting has been delayed until Monday</p> <p>Achievements:</p> <ul style="list-style-type: none"> Looked though how to make a sliver title using appbars or sliverappbars Separated some import statements to make them more clear Looked at using named an unnamed routes in flutter, so I can progress to the next stage of my project Learned about staggered animations Found out how to animate the background and the 3,2,1, go Cleaned up logic file It suddenly came to my mind that it might be provider causing the erroneous (but not all bad) refreshing of my navbar widgets, in which case I should make a separate provider to keep track of what index my app is on Coded a function to take values from the text input box Coded a function to store final user selections for their exercise With great difficulty got some kind of animation working for the next stage <p>Challenges:</p> <ul style="list-style-type: none"> Devops was not even compiling a simple echo statements, it seems you have to request their free tier now because lots of people were using it for crypto mining Unsure whether to code a login screen first or if I should do the actual running stuff Was trying to use the code at the staggered animations flutter documentation page, but I found that it was incorrect when looking at the Github repo code Making the container a circle - I was able to solve this by adding shape: Boxfit.circle under a boxdecoration class style for the container Had to look into whether to use onchanged or onsubmit or many of the other ways to take the text input (from the goal value textbox), as I realised I had not done so Tried to use a float in Flutter, found out they didnt exist, on a brighter note, I was able to understand things like two's compliment that they had mentioned on their webpage VS code imported some random library by itself, which gave me an error App gave me error on start after I modified lots of code Fixed my first error and then got another error (thankfully the lords of stack overflow had the solution) My animation stuff wasnt doing anything 	<p>Change in Azure Pipelines Grant for Private Projects - Azure DevOps Blog (microsoft.com)</p> <p>Differences between SliverList vs ListView in Flutter - Stack Overflow</p> <p>Navigate with named routes Flutter</p> <p>Staggered animations Flutter</p> <p>How to update a Text widget automatically - Flutter - Stack Overflow</p> <p>And</p> <p>dart - Flutter: How to receive new Data and update Widget without rebuildung - Stack Overflow</p> <p>Animate the properties of a container Flutter</p> <p>Disable/Override Back Button in Flutter - The Right Way (2023) - FlutterBeads</p> <p>Numbers in Dart Dart</p>
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- Found 2 issues: didnt call a separate function to start moving the animation controller and also had not imported a dart library that VS Code did not warn me about, while the animation somewhat works, it still stops at the edge of the screen, I will need to find a way to modify its behaviour - possibly using clipping



dart - Flutter - Cannot build because the framework is already building - Stack Overflow



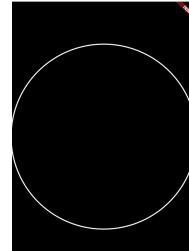
25/02/2023

Achievements:

- Pipeline worked on 8th attempt, but output not stored
- With great difficulty, made a sound effect
- Created the black animation and circle

Challenges:

- My circle animation was not clipping the way I wanted, it would not simulate exceeding the boundaries of the screen
- Animating the boxshape of an animated container did not give a smooth animation rather it just changed midway
- Could not find the right curve for the animation
- My container was not getting its restricted width and height
- The guides for building flutter on Azure Pipelines were not very good
- My first Azure build failed
- Realised that I had not implemented any mechanism to store the files that were compiled
- Kept getting “bad indentation of a mapping entry” in my yaml file
- Couldnt decide which audio package to use, just_audio or audio players
- Tried to make a nice sound effect for the start button press, but then tried to download [Download "Bell Alert Notification 6" Royalty-Free Sound Effect - Storyblocks](#), but was hit with a paywall



The white circle should have been smaller

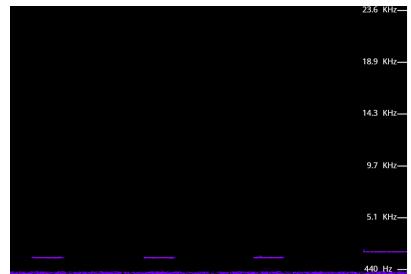
[dart - Why Flutter Container does not respects its width and height constraints when it is inside other Container - Stack Overflow](#)

```
solving dependencies in opt/hostedtoolcache/Flutter/3.8.0-10.1.pre/...  
_fe_analyzer_shared 52.0.0 (54.0.0 available)  
analyzer 5.4.0 (5.6.0 available)  
archive 3.3.2 (3.3.6 available)  
args 2.3.2 (2.4.0 available)  
coverage 1.6.2 (1.6.3 available)  
dds 2.7.4 (2.7.5 available)  
dds_service_extensions 1.3.2 (1.3.3 available)  
devtools_shared 2.21.0-dev.0 (2.21.1 available)  
petitparser 5.1.0 (5.2.0 available)  
source_maps 0.10.11 (0.10.12 available)  
test 1.22.2 (1.23.1 available)  
test_core 0.4.22 (0.4.24 available)  
vm_service 10.1.2 (11.1.0 available)  
vt dependencies in opt/hostedtoolcache/Flutter/3.8.0-10.1.pre/linux/  
rror: No pubspec.yaml file found.  
is command should be run from the root of your Flutter project.  
[Error] Error: The process '/opt/hostedtoolcache/Flutter/3.8.0-10.1.pre/linux/bin/flutter取决於 FlutterBuild
```

	Job 3	20230225.2	HackintoshwithUbuntu.runfun
	Job 2	20230225.1	HackintoshwithUbuntu.runfun
	Job 1	20230224.3	HackintoshwithUbuntu.runfun

		<p>Publish and download artifacts in your pipeline - Azure Pipelines Microsoft Learn</p> <p>YAML error in azure-pipelines.yml: "Bad indentation of a mapping entry" - Benjamin Day Consulting, Inc. (benday.com)</p>
26/02/2023	<p>Achievements:</p> <ul style="list-style-type: none"> • Made numbers come up • Animated those numbers • Styled those numbers appropriately • Imported and worked out how to use audio library • Made both sounds • Made both sounds only play the required number of times • The cloud compile actually worked and generated a downloadable apk • Updated meeting notes, since the rescheduled date is tomorrow <p>Challenges:</p> <ul style="list-style-type: none"> • Had no idea how to use audioplayers and cache audio as well, Stackoverflow directed me to a good link • Audio was giving a file not found error, I found that I had forgotten to register the audio assets • Flutter could not find my folder because I missed a trailing / • Audiocache class does not exist anymore, they just havent updated the documentation • Forgot to initialise the countdown variable underneath its function declaration, so was getting errors • All my animation times had to be changed since the user didnt have enough time to react after the first animation and hence the total duration needed to be extended • Tried to get hot reload working for my app, so I do not need to navigate to the route each 	<p>audioplayers/getting_starte d.md at main · bluefireteam/audioplayers (github.com)</p> <p>"NotSupportedException: Failed to load because no supported source was found." - flutter audioplayers on web debugging - Stack Overflow</p> <p>Hot reload Flutter</p>

- time, but eventually found that hot reload is not supported on web
- The text was too small on the second animation
 - My countdown audio functions were not being called
 - My countdown.value calls were all checking for greater than, while it works, it means that each if statement was actually being called redundantly behind the scenes, so I had to change the code
 - Had issues since the animated widget was rebuilt every time, any state information from the last rebuild was not available - I rectified this by moving the tracker variables outside the class
 - Tried caching using player.setsource but then the sounds wouldn't play
 - Google thought my app was unsafe
 - Google docs struggled to load the logbook on my phone when I wanted to upload a screenshot



Sound spectrum analysis to help me choose right audio frequency

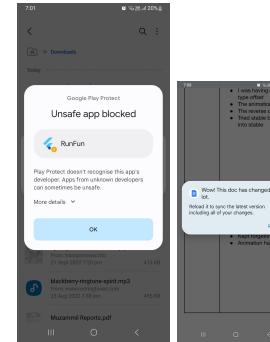
```
// Only give text a value once the second animation starts
if (countdown.value >= 0.01) {
  print("In!");
  // Create a required text widget, with a unique key
  numberWidget = const Text("3",
    key: ValueKey<int>(3),
    style: TextStyle(fontWeight: FontWeight.bold, color: Colors.white, fontSize: 60));
}

if (countdown.value > 1.01) {
  if (countdown.value == 1.01) player.resume();
  numberWidget = const Text("2",
    key: ValueKey<int>(2),
    style: TextStyle(fontWeight: FontWeight.bold, color: Colors.white, fontSize: 60));
} // Text

if (countdown.value > 2.01) {
  if (countdown.value == 2.01) player.resume();
  numberWidget = const Text("1",
    key: ValueKey<int>(1),
    style: TextStyle(fontWeight: FontWeight.bold, color: Colors.white, fontSize: 60));
} // Text

if (countdown.value >= 3.01) {
  // Play the final audio sound
  if (countdown.value == 3.01) {
    print("Hello!");
    player.setSource(AssetSource('sounds/go.wav'));
    player.resume();
  }
  numberWidget = const Text("GO!",
    key: ValueKey<int>(0),
    style: TextStyle(fontWeight: FontWeight.bold, color: Colors.white, fontSize: 60));
} // Text
```

\geq if statements which trigger but then also trigger the next if, so correct output lower performance



28/02/2023

Achievements:

- Looked at text to speech libraries and apis, finalised a choice between either fluttertts or a cloud provider (eg. Azure or Google). The problem with cloud providers is that while they do have more realistic speech and are more versatile, they also require me to ship an api key with the app. However using a plugin relies on hoping that a text to speech library is already installed on a device and adapting to the numerous different configurations available
- Tested out githubs new code viewer (still in preview)
- Made the black animation background a closing animation, now I will need to make a fade in for the statistics screen later. I also need to design a statistics screen
- Looked at other libraries to use for statistics

Challenges:

- Choosing a text to speech method

[flutter_tts | Flutter Package \(pub.dev\)](#)



Github new code viewer

[geolocator | Flutter Package \(pub.dev\)](#)

[location | Flutter Package \(pub.dev\)](#)

[pedometer | Flutter Package \(pub.dev\)](#)

[geolocation - flutter geolocator package not returning the longitude and latitude values - Stack Overflow](#)

		google maps flutter Flutter Package (pub.dev) flutter local notifications Flutter Package (pub.dev)
04/04/2023	Achievements: <ul style="list-style-type: none">Did exams Challenges: <ul style="list-style-type: none">Did not do any major project work	
11/04/2023	Achievements: <ul style="list-style-type: none">Added a mandatory weekly update to logbook as the notification said it should include one Challenges: <ul style="list-style-type: none">Did not do any major project work, enjoyed period after exams	

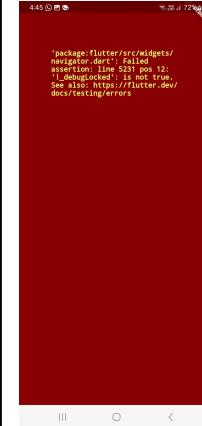
13/04/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Got back into the major project grind by refamiliarising myself with the code base (luckily there were some comments) Updated the animation function to use a constant variable rather than the same value hardcoded many times to make it more maintainable Implemented some code to override back button behaviour, it is a template which will need to be updated when further routes are added to the app <p>Challenges:</p> <ul style="list-style-type: none"> Forgot how to start my code and struggled for a bit Was trying to use alert dialogue to override back button behaviour asking for confirmation, but it was not working with willpopscope, I found out that I needed to use show dialogue with an alert dialog inside it I could not test my back button override code as I was on windows and the back button is on android Finding a way to prototype the look and feel of the run stats screen When looking for components to use for the run stats, I found out about little which can be used for the run history page Made a list of stats to compile: distance, steps, time, elevation change maybe: cadence, current km time, goal -> row 1: distance, steps row 2: time, current km time, row 3: goal 	 <p>When you forgot how to run your own code</p> <p>showDialog function - material library - Dart API (flutter.dev)</p> <p>AlertDialog class - material library - Dart API (flutter.dev)</p>
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Date	Work Completed	References / Links
16/04/2023	<p>The new Flutter quick start guide seems to show a lot of new features that I didnt know about like extracting widgets, but I dont have time to go through it</p> <p>Achievements:</p> <ul style="list-style-type: none"> Made a new doc to temporarily store log book entries because the old one was overloaded Compiled the app to android myself rather than using MS pipelines, because I needed hot reload On fixing the navigator being called multiple times error by calling the navigator on the animationstatus complete signal rather than at the final value of the animation, the error where the future was required to stop navigator raising an error disappeared and so I 	<p>dart - Error thrown on navigator pop until: '! debugLocked': is not true." - Stack Overflow</p>

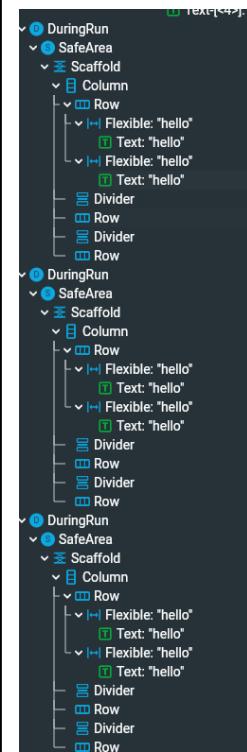
- removed the use of a future
- Modified the back button blocking code so that it forms its own widget and can be easily reused

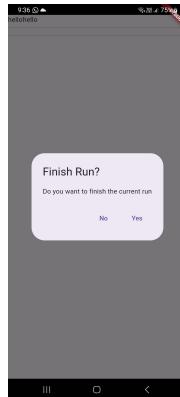
Challenges:

- When using hot reload I encountered errors since due to some navigator issues (navigator for some reason can not be called inside navigator) but this was fixed by wrapping the same code in a future on the advice of stack overflow
- The during run page seemed to be getting duplicated on top of itself many times -> the use of a bit of print debugging showed that it was being called up to 183 times
- My willpopscope was being lost when navigating to a new page
- Forgot how to pass parameters to a stateless widget and had to research how, it turned out that I had done it correctly but forgotten to prepend "this."



Screenshot of error on device



		<p>Multiple of the same page</p>  <p>The navigator may have been called up to 183 times</p> <p>How To Pass Parameters To A Custom Widget DevBrains</p> <p>Your first Flutter app (google.com)</p>  <p>The finish run confirmation</p>
18/04/2023	<p>Achievements:</p> <ul style="list-style-type: none"> • Found out how to implement space around styling for my text • Started using the built in refactoring capabilities which have sped up my workflow eg. wrapping a line of text with a center • Found a good google font to use and installed library • After testing the google font, added it to my assets so it does not need to be tested over the network 	<p>Basic Flutter layout concepts Flutter</p> <p>TextTheme class - material library - Dart API (flutter.dev)</p>

	<ul style="list-style-type: none"> Made a preliminary UI scaffold for the during run view Generated an app icon using AI Modified slightly in adobe photoshop Used package to generate and add an icon to android After much searching I found the source of the colours issue, the library had not inserted a # in the colors.xml file since I had copy pasted a HEX code into its config file that did not include a # <p>Challenges:</p> <ul style="list-style-type: none"> The flutter text documentation lacks code examples, also most of the documentation links to material 3 but the actual documentation for material 3 flutter is in a different location Accidentally clicked restart instead of hot reload and had to navigate through the app again Couldnt find where to put GoogleFonts.config.allowRuntimeFetching = false I had to double all of my flex values because I wanted to use half a flex Could not get rid of some unused space under the text in my running stats view, later realised this was just my flex taking up space The app icon was coming up with a background when the app was pressed, I needed an adaptive app icon My laptop ran out of storage and adobe photoshop got angry Stack overflow went down 😞 Started getting a colour resource value error from gradle after creating an adaptive icon The padding on the icon was too small and needed to be edited 	Typography.material2021 constructor - Typography - material library - Dart API (flutter.dev) <pre>child: Center(child: Text("Second text", style: TextStyle(fontWeight: FontWeight.bold, fontSize: 30))) // Center Flexible</pre> <p>Refactored code</p> flutter launcher icons Dart Package (pub.dev) <p>ADD REST OF IMAGES</p>
19/04/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Made running and walking icons in adobe illustrator Edited them in inkscape <p>Challenges:</p> <ul style="list-style-type: none"> When exporting the SVGs from illustrator some random lines kept appearing, I could not work out why. Eventually I just manually edited the SVGs in inkscape to cover up some of the blemishes as editing them in Illustrator was not making much of a difference 	Illustrator file

Exported SVG



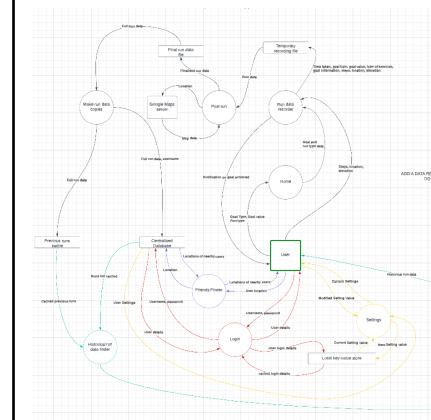
21/04/2023

Achievements:

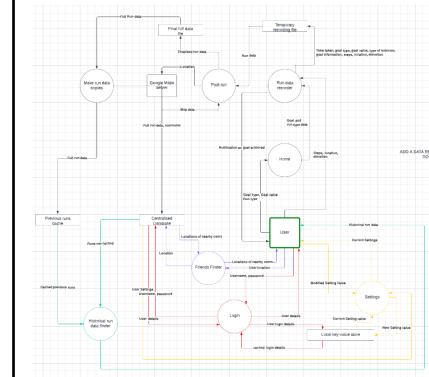
- Worked on Data flow diagrams
- Worked on structure chart
- Looked at previous student examples
- Added some colour to DFD level 1 so it is easier to follow

Challenges:

- Realised I missed a section for the settings on structure chart
- Struggled to layout DFD so it was less messy
- Not sure whether I should convert my DFD to use straight lines or not



Curved DFD



Straight DFD

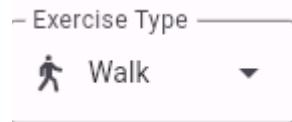
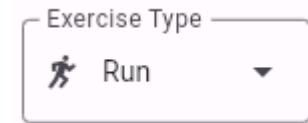
22/04/2023

Achievements:

- Added some comments to code
- Started setting up submission folder and moving things into it
- Changed to Goal and type container to contain an extra widget for the type selection rather than having it directly coded in the parent widget, then I cleaned up the parent by changing it to a stateless widget
- Added the leading icons that I created earlier to the exercise type choosing widget
- Converted the during run screen to use a table so that the values were aligned perfectly
- Added a fade animation to the during run screen so that its entry was more smooth
- Read about the fake async tester in Flutter

Challenges:

- Attempted to clean up the main menu code by removing what I thought was a redundant column, turns out it was keeping the Expanded() from taking infinite space, lesson learnt: if it aint broke, dont fix it
- Forgot where I saved the sound information
- Took me a very long time just to trim some recordings of the animations since Premiere Pro kept messing up the export very slightly especially with the location icon which glitched at the end of its animation without fail, VLC trim record outputted an empty video - Adobe express eventually did the trick
- I found that the flexs in the during run stat page were not aligned completely due to each row having items with different widths, so I decided to convert to a table on the advice of stack overflow
- Flutter does not allow tables with empty cells, so I had to place a bunch of empty containers
- Wanted to create larger rows but using padding would have made the space left for the text smaller, later I remembered that I could use sized box instead
- The divider would not go across only one row, to get around this I created a row of dividers with the first and last containing an inset
- There is no way to make empty cells in flutter, the officially recommended way is to use a bunch of empty containers
- Got a FAB to show up but it was too close to the bottom of the screen
- The whole screen kept going black for a second before the fade animation started, then it would also fade, this was in fact because I wrapped the scaffold in the fade transition as well and only the children needed to be wrapped



The new icons in action

[dart - How to align multiple row in Flutter? - Stack Overflow](#)

<https://github.com/flutter/flutter/issues/42523>

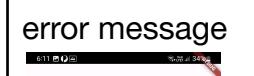
	<ul style="list-style-type: none"> The animation variable was not accessible from inside the build method, I forgot to initialise it earlier and just declared it as a local variable The animation looked a bit janky and misaligned when testing, however when I ran on the release compiled version of the app it ran fine and as intended Azure pipelines takes around 12 minutes to build Considering that my Gantt chart scheduled me to finish my project around now, I am very behind. I have made a home screen and started a screen for run recording. Luckily Part A is mostly complete now, so at least that part is ok. 	
24/04/2023	<p>Mr Dunne has posted the Part A submission box, the assignment seems much more urgent now, despite nothing having changed</p> <p>Achievements:</p> <ul style="list-style-type: none"> Adjusted gap in between opacity animation and previous animation ending Struggled to choose an implementation for my stopwatch Watched a Youtube video that gave me a quick rundown of the Google Maps in flutter package, showing me lots of features I previously did not understand Got a dartpad working with an example stopwatch Decided I can use the broadcast property so that the location stream can be listened to more than once Updated my goal input box to have stronger validation, support decimals, have a max length and to update the goal string based on the goal type selected Added more variables to the logic controller and made them fetchable Created a new logic controller and notifier for the run variables Integrated the new controller from above into the existing codebase Created new regex to stop bad inputs Made regex dynamic so that it can adapt to the type of goal chosen Got stopwatch working in my app I THINK I FOUND THE INPUT ISSUE, IT MAY HAVE BEEN BECAUSE I WAS CREATING A TEXT CONTROLLER WITHIN THE BUILD METHOD SO A NEW TEXT CONTROLLER WAS BEING MADE EVERY TIME - PUTTING IT IN THE INITSTATE MADE IT WORK, IT WORKS!!! Researched about how to use polyline to draw on google map Installed geolocator and made required changes to gradle.properties and the android manifest 	<p>Build a Simple Stopwatch in Flutter by Diganta Kalita Analytics Vidhya Medium</p> <p>Create a Stopwatch App with Flutter by Charlee Li ITNEXT</p> <p>Asynchronous programming: Streams Dart</p> <p>Asynchronous programming: futures, async, await Dart</p> <p>Flutter Highlight any area, Draw Circle or Polygon on Google Map - Episode 1 - YouTube</p> <p>[google_maps_flutter] Certain map updates don't take effect · Issue #103686 ·</p>

	<p>Challenges:</p> <ul style="list-style-type: none"> Had no idea what a stream is and how to use it Not sure whether to use geolocator or location (I feel like I have had this debate before) Google maps seems to have some issues that require you to use an older platform view to avoid, I will need to keep this in mind The list of random todos around the code is starting to stack up as many parts rely upon others or will be tested later Numerical keyboard wasn't getting added despite the numerical <code>withOptions</code> version working fine Way too many tabs open Can't use provider in <code>initState</code> Got a very big error message, in one place the message suggested that I may not have scoped the provider correctly, this reminded me that I had forgotten to initialise the provider at the start of the app code - If I had not remembered this I would have assumed the problem was stemming from me using provider within an <code>initState</code> The time wasn't refreshing - it took me around 20 minutes to find out that Dart also requires you to pass a specific start method to a stopwatch in order for it to start counting time The goal text was overflowing if a number too long was entered audioplayers kept sending too many messages into the debug console, making it difficult for me to find printed values - there is no solution as the developers themselves have acknowledged this problem and said that it is dependencies spamming the logs and that as such they cannot fix it Found issues in my input validation that allowed numbers with a trailing decimal and those with multiple decimal points through When trying to fix the multiple decimal point error, I only solved it partially which stopped two consecutive decimal places but not those separated by a number I had a working regex, but when using Flutter with it, my input was deleted when the input was illegal rather than preventing the character from being inputted, thankfully people on StackOverflow had the same issue and suggested deleting the \$ sign at the end, this worked A new issue cropped up where when I changed the goal type and did not specifically refocus on the text box or did not enter an invalid input, it would not take any input When switching goal type the text input stopped taking inputs - I tried finding the issue and after a long time found that it may be an issue with the Flutter framework - I thought this issue 	<p>flutter/flutter · GitHub</p> <p>How to use data from Provider during <code>initState</code> in Flutter application - Stack Overflow</p>  <p>Flutter not accepting a numerical only keyboard as something that exists</p> <p>audioplayers/getting_started.md at main · bluefireteam/audioplayers · GitHub</p> <p>Flutter TextField regex clears text input - Stack Overflow</p> <p>TextField ignores user input, and cursor is rendered wrong in the middle of the text · Issue #120631 · flutter/flutter · GitHub</p>
--	---	--

was new but going through previous apks shows that the issue had occurred previously as well

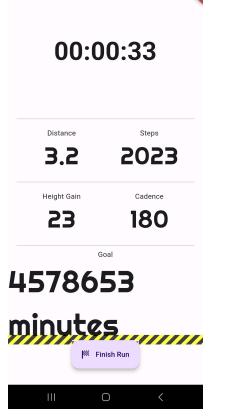
- There were 3 android manifest files

```
S11 W/ [Provider] Could not find the correct Provider<RunView> above this RunView Widget
This happens because you used a 'BuildContext' that does not include the provider of your choice. There are a few common scenarios:
- You added a new provider in your app's root and performed a hot-reload. To fix, perform a hot-restart.
- The provider you are trying to read is in a different route.
Providers are "scoped". So if you start off with a provider inside a route, then other routes will not be able to access that provider.
You used a 'BuildContext' that is an ancestor of the provider you are trying to read.
Make sure that RunView is under your MultiProvider/Provider/RunNotifier.
For example, instead of:
...
Widget build(BuildContext context) {
    return Provider<Example>(
        create: () =>
    Example(),
    child: ...
);
Will throw a ProviderNotFoundException because context is associated with the widget that is trying to read it.
```



A scary

error message



Layout issues

Flutter Highlight any ...

25/04/2023

Part A is due tomorrow morning (essentially today)

Achievements:

- Instead of doing the remaining diagrams, continued working on code

[MSL Altitude on Android by Wackymax · Pull Request #1057 ·](#)

- Downloaded, compiled and ran the geolocator example app
- Used the VS code debugger to get a good idea of what the position object holds
- Updated run logic to handle the new distance and altitude gain values
- Temporarily stored locations, altitudes and times in arrays, I plan to move these to files as intended at a later time
- Retrieved location other data at intervals and set up a stream to listen
- Made code for calculating altitude gain
- Moved location permission collector to main function and reverted changes to main ontifier file
- Implemented different levels of rounding for different stats
- Got distance in metres to 2 decimal places updating - it can be converted to a more suitable unit later
- The altitude measurements were changing when MSL support was off, for now I will leave it this way
- Finished off structure chart
- Finished DFD lvl 2
- Merged temporary logbook file with main logbook file
- Collated files for Part A submission

Challenges:

- There seems to be no documentation on NMEA and MSL support for either location or geolocator beside a long github issue and pull request - luckily there is some documentation within their code in the form of detailed comments which vs code picks up and displays when typing or hovering over a function
- Needed a way to get access to wakelock permission
- The example app used a relative folder for the package so I had to change the pubsec.yaml so it used the actual package since I did not download the whole github repo The example app had an error bundling assets - I just commented out the images and kept skipping the errors
- While the position object definitely has an altitude property that can be accessed with position.altitude, printing the position only gives latitude and longitude
- My laptop struggles for storage when compiling multiple apps
- Had to wait for flutter to reinitialise and app to recompile from scratch after deleting all of its caches

[Baseflow/flutter-geolocator
\(github.com\)](https://github.com/Baseflow/flutter-geolocator)

```
▼ Locals
  ▼ position: Position (Latitude: -3...
    accuracy: 24.052000045776367
    altitude: 86.70000457763672
    floor: null
    heading: 0.0
    isMocked: false
    latitude: -33.7707568
    longitude: 150.9687112
    speed: 0.0
    speedAccuracy: 0.0
  > timestamp: DateTime (2023-04-24 ...
    hashCode: 208899712
  > runtimeType: Type (Position)
    ...
```

The position object example

An error for when I didnt have location permissions

Bad state: No element

[How do you round a double in Dart to a given degree of precision AFTER the decimal point? - Stack Overflow](#)

	<ul style="list-style-type: none"> When asking for the permission with the button press, teh animation was starting while the permission handler was on screen I couldnt change a void callback to an async The flutter linter did not like me using buildcontext across an async gap Got some bad state no element error, checking stack overflow I found out that this could be when referencing an element that does not exist and I found that when calculating the differences in length and altitude I had referenced the previous element, which does not exist on the first run My stattable was not refreshing with the latest values so I moved them to the constructor and passed them through Did not have wake lock or notification permission The location permission ruined the flow of the app and its animations when run on the start pressed All my altitude readings were the same this may be an issue with the library, but I vaguely remember getting different readings when running the example app - turns out that was speed The step counter failed to get any data - I had to install a whole new plugin just to debug why, later it revealed that my application was not getting the acivityrecognition permission Was trying to process an event block when I needed event.steps 	86.70000457763672, 2023-04-25 02:49:16.664Z 86.70000457763672, 2023-04-25 02:49:17.233Z 86.70000457763672, 2023-04-25 02:49:17.802Z 86.70000457763672, 2023-04-25 02:49:18.371Z 86.70000457763672, 2023-04-25 02:49:18.939Z 86.70000457763672, 2023-04-25 02:49:19.589Z 86.70000457763672, 2023-04-25 02:49:20.043Z 86.70000457763672, 2023-04-25 02:49:20.646Z 86.70000457763672, 2023-04-25 02:49:21.784Z 86.70000457763672, 2023-04-25 02:49:22.922Z 86.70000457763672, 2023-04-25 02:49:23.490Z 86.70000457763672, 2023-04-25 02:49:24.060Z	Altitude wasnt changing
		coreLibraryDesugaringEnabled option in android/app/build.gradle causes immediate flutter crash (java.lang.NoSuchMethod) on Android 12L/13 · Issue #110658 · flutter/flutter (github.com)	
27/04/2023	Achievements: <ul style="list-style-type: none"> Refactored the clock timer into its own widget so that it could refresh at a rate different to the rest of the stats The altitude reported some change in rare circumstances under the settings force location manger false and use msl altitude false, it should also be noted that for this to occur, I had to set the minimum reporting distance to 0 so as to not miss any datapoints Added notification permission Converted the stat table to a stateless widget Calculated cadence Added the text to speech and a manual volume override before and after it 	86.70000457763672, 83.5999984741211, 20 83.5999984741211, 2 83.5999984741211, 20 83.5999984741211, 2 83.5999984741211, 2 83.5999984741211, 2 83.5999984741211, 2 83.5999984741211, 2 83.5999984741211, 2 83.5999984741211, 2 83.5999984741211, 2 83.5999984741211, 2 83.5999984741211, 2 86.70000457763672, 2 86.70000457763672, 2	Activity permission

- Took care of a case where a user would enter 1 and the goal text would still display an ‘s’ at the end
- Cleared 7 todos

Challenges:

- My phone has gone back to reporting the same altitude all the time - testing in apps from the play store shows that it may just be my gps sensor which is bad since they report the smae measurements
- I have to move around every time I want to test the app
- Could not get phone to reliably provide altitude updates despite increasing height by around 3.5 metres
- After running through extensive analysis using a number of third party apps and resetting the GPS sensor multiple times, I concluded that both fused provider and the native GPS api were not reporting correct altitude measurements on my phone, this means that my code may be correct but the problems are from the hardware in my phone
- The flutter local notifications package is insanely hard to setup
- After making some initial notification setup, realised I don't even need them now for the task at hand
- Added package parameters to the wrong bulid.gradle file

[dart - How to implement vibration with Flutter for both Android and iOS? - Stack Overflow](#)

[java - Write continuous stream to file flutter/dart - Stack Overflow](#)

https://pub.dev/packages/json_serializable

[flutter local notifications | Flutter Package \(pub.dev\)](#)

[Flutter: Local Notifications \(How to\) in iOS and Android – Part 1 – Simple local notification | by Abdur Mohammed | Medium](#)

```
* What went wrong:
A problem occurred evaluating root project 'android'.
> Could not find method implementation() for arguments [an

* Try:
> Run with --stacktrace option to get the stack trace.
> Run with --info or --debug option to get more log output.
> Run with --scan to get full insights.
```

[java - Gradle - Error Could not find method implementation\(\) for arguments \[com.android.support:appc](#)

[compat-v7:26.0.0\] - Stack Overflow](#)



cool

GPS sensor testing

28/04/2023

Mr Dunne was absent from class today, he has marked our exams but says he cannot give them back until a bit later

Achievements:

- Spent most of the class time commenting code
- Started working on server
- Got some utility functions out of old code
- Updated utility functions to be more reusable (eg. removing the fact that some functions appended .txt automatically and some didn't) and made some new ones for things like pickling data which was done manually previously

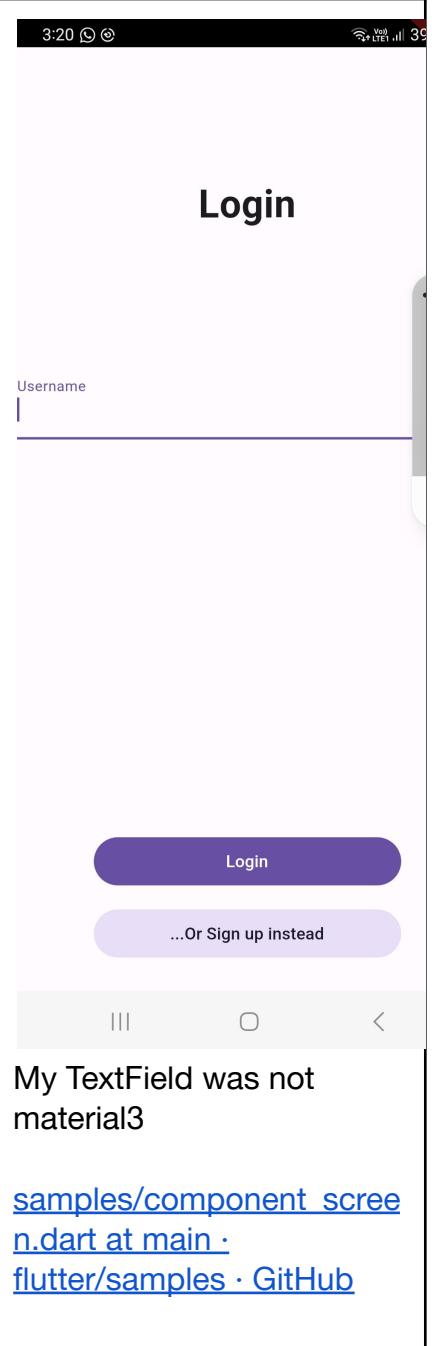
Challenges:

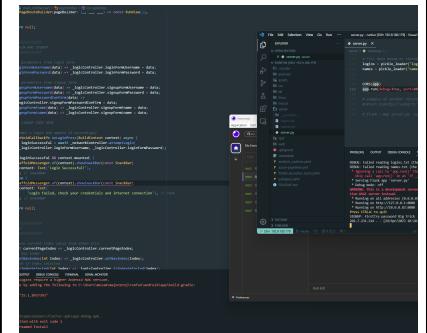
- Our class time was reduced because our year advisors wanted to give us some information about camp
- Tried using Dart casing with python code but it felt wrong so reverted to using _ to separate

[python - How do I pass a variable by reference? - Stack Overflow](#)

	<p>words</p> <ul style="list-style-type: none"> The C++ in me wishes that you could pass variables by reference in python, it makes functions cleaner and more efficient in my opinion Had to re enter git credentials on the server computer 	
29/04/2023	<p>VS code Flutter refactoring is a lifesaver, I'm so thankful that I found it by accident</p> <p>Achievements:</p> <ul style="list-style-type: none"> Made an initial run data endpoint Used hot reload to help me rapidly prototype many login screen layouts Animated the transition to the login screen Found the flutter material3 demo site but based on master so more updated Found the parameters I needed by looking at the material3 demo source code Made login UI Made some code to link login UI with stored variables Got the api working finally Got a temporary form of login working - more work to be done <p>Challenges:</p> <ul style="list-style-type: none"> The use of expanded was causing errors again Buttons are too small by default so I had to make the login button larger The text was not bold enough with built in Flutter presets Didn't like the look of elevated button in this scenario but then I found that filled button worked fine Using a tonalButton didnt work but a quick google search told me that I had to use filledbutton.tonal My textfield was not showing up as its material3 version Could not work out how to make the textfield outline colour red Trying to use a variable setter in dart was giving me errors because I was first trying to return when a void was required and then I didnt explicitly create brackets and used inferential ones where they are not valid in setters Didnt forward port on my VM so my API wasnt working Set both source port range and destination port range when I only needed to set destination port range Since I had changed my utility functions they made an object nonetype and hence my api 	 <p>Incorrect expanded use</p> <p>Material 3 https://flutter-experimental-m3-demo.web.app</p>

- failed
- I hate networking
 - Found out that flask was not listening for all connections by default
 - Git didn't like pulling and pushing at the same time
 - Couldn't get https working on server and also was not bothered to setup an nginx reverse proxy
 - My server is not saving files across restarts or not reading from them properly
 - Too many things to manage simultaneously - Insomnia (api tester), server vs code, local vs code, web browser, phone
 - Clicked button and nothing happened, turned out I hadn't called the onPressed method



		<p>dart - Flutter - Changing the border color of the OutlineInputBorder - Stack Overflow</p> <pre>Int: You have divergent branches and need to specify how to reconcile them. Int: You can do so by running one of the following commands sometime before Int: your next pull: Int: Int: git config pull.rebase false # merge (the default strategy) Int: git config pull.rebase true # rebase Int: git config pull.ff only # fast-forward only Int: Int: You can replace "git config" with "git config --global" to set a default Int: preference for all repositories. You can also pass --rebase, --no-rebase, Int: or --ff-only on the command line to override the configured default per Int: invocation. Int: --no-edit to specify how to reconcile divergent branches.</pre> <p>Git moment</p> <p>Send data to the internet Flutter</p>  <p>A mess of windows</p>
30/04/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Made an initial signup screen Added navigation to and from signup screen Updated api endpoint to dispense names as well Implemented sharedpreferences storage of username, password, first name and last name Changed server endpoints to return a list for some queries Successfully tested the signup and login features Calculated all end or run variables <p>Challenges:</p>	<p>Build beautiful charts in Flutter with FL Chart - LogRocket Blog</p> <p>user interface - Set column width in flutter - Stack Overflow</p>

	<ul style="list-style-type: none"> The only (practical) way to get https working will be to migrate some of my existing resources so I can make another VM FL chart was very hard to understand It is not easily possible to stop listening to a stream from outside a stream flutter -> found I needed to modify my code from using a stream to using a streamsubscription Needed to research how to escape a string in dart 	
03/05/2023	<p>Got back from camp</p> <p>Achievements:</p> <ul style="list-style-type: none"> Looked for post run design inspiration from strava and Nike run club <p>Challenges:</p> <ul style="list-style-type: none"> Not sure how to design post run screen Why is making stuff scroll so hard 	 <p>Inspiration for my post run design from Nike Run Club</p> <p>SingleChildScrollView class - widgets library - Dart API (flutter.dev)</p>
04/05/2023	<p>Got Part A and Option topic results back today</p> <p>Achievements:</p> <ul style="list-style-type: none"> Finally got a clearer idea of how to make simple line graphs by looking at a new guide Tried a new snackbar type with an ok option Got a graph working somewhat Styled the graph Got a simple post run table Got preliminary scrolling code working Made a route to the post run view <p>Challenges:</p>	<p>Design Stunning Charts with fl_charts in Flutter (atatus.com)</p> <p>flutter - Why does this error occur: The instance member '!*' can't be accessed in an initializer. "?" - Stack Overflow</p>

- After looking at ReVanced code, decided I may want to convert my listview that I am using for scrolling into a customscrollview with slivers, but this will have to be sorted out later as I want to get a working prototype first before experimenting with more advanced features
 - Thought I had installed graphing library, but when writing code to graph got a bunch of linter errors which led me to check my pubsec.yaml and find out that it had not been installed
 - In dart you cannot use the data passed ot a widget outside of the build method, I wanted to follow good programming principles and keep my build method such that it is okay to be called multiple times, I found that I could use initializer expressions and adapted my code from some of th animation controllers I had previously made
 - Didn't camelcase a variable name definition and then spent a lot of time looking for the reason for my error
 - Couldn't find a way to dismiss my confirmation for end run while also them popping the previous routes
 - Got confused with file names when dealing with icons since I was doing multiple icon things at the same time (both notification bar icon and notification centre normal icon)
 - Android resource linker could not find my icon files - later I found out that I needed to put these files in the mipmap directory not the drawable directory despite the icon generator saying that you should use the drawable directory
 - Table was not getting any horizontal width to use because I had set fixed column width instead of flex column width
 - I was trying to force a button to become smaller using a sized box but I think it was not working because since this was applied using hot reload
 - Couldnt work out how to change background on graph

[dart - How to push and pop until to a specific route in flutter - Stack Overflow](#)

```
[1] what went wrong?  
Execution failed for task ':app:processDebugResources'.  
> A failure occurred while executing com.android.build.gradle.internal.res.LinkApplicationAndroidResourcesTask$TaskAction  
    > Android resource linking failed  
      ERROR: C:\Users\muhammadjapriyadi\Documents\Android\MyFirstApp\app\intermediates\packaged_manifests\debug\AndroidManifest.xml:27: AAPT: ar
```

Failing to update
notification icons for
background location
message

How to Change the Android Notification Icon/Status Bar Icon for Push-notification in #flutter? - Stack Overflow

[Android Asset Studio - Notification icon generator](#) (romannurik.github.io)

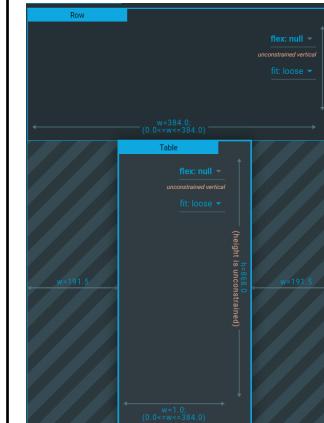
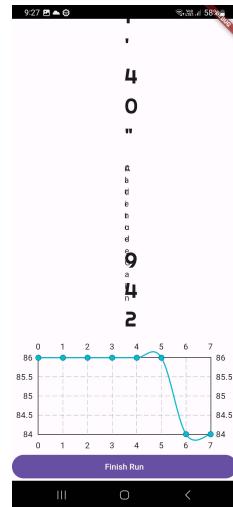


Table not getting enough width



Scary error



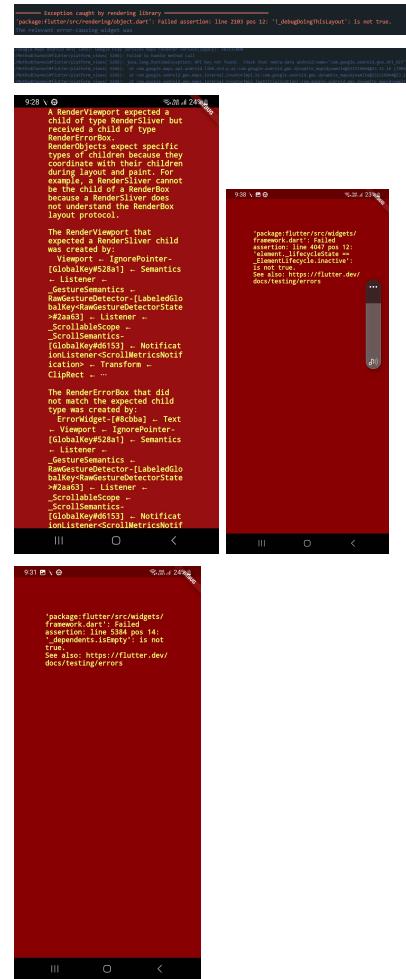
A graph appears but the table has no width

05/05/2023	We received more information about Part B today including examples and the knowledge that our Part B meeting will be on Monday Achievements: <ul style="list-style-type: none">Converted all Snackbar popups to use a globalkey and a function for more reusable codeAdded more comments	 Lots of files being worked on at once
------------	---	--

- Started filling meeting notes
- Converted listview to a customscrollview using slivers
- A map appears

Challenges:

- Left a const inside my snackbar code and that caused my value being passed through to the custom Snackbar not work
- Couldnt make a custom Snackbar reusable widget since the showsnackbar option only accepts a Snackbar Widget
- When testing the app, only my little brother has another android phone in my family and it is very similar spec to mine - my friends do have android phones but it would be difficult to be able to gain proper test data for this app from their devices, I may have to change my code to support ios as well and then compile on azure pipelines
- I needed to reauthorise the wireless debugger, which required plugin my phone in and matching up the ports (network ports) in adb
- Needed to refactor code to use slivers since I switched to a custom scroll view
- Got lots of errors
- Got button at bottom of screen to respect the size given to it



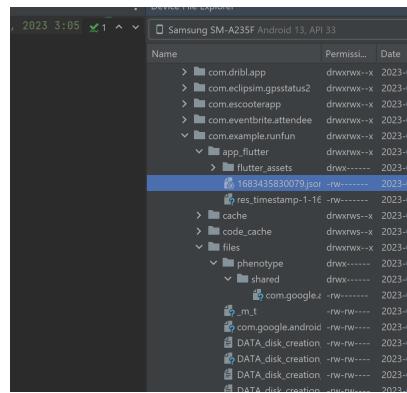
A curated selection of errors

[dart - Flutter: Object was given an infinite size during layout - Stack Overflow](https://dart.dev/guides/language/errors#infinite-size)

		java - API Key not found when adding Google Maps to Flutter - Stack Overflow
06/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Updated google maps styling with things like rounded corners, colour changes and line width, touch events, padding changes etc. Made and added custom map markers Refactored the stat table so that it could be used again later with the history function <p>Challenges:</p> <ul style="list-style-type: none"> My firewall / router randomly died, I spent 3 hours trying to fix it to no avail, later I saw that I was using the wrong port, I had to upload a new firmware and it worked again but wasted lots of time Moving around on the map is really dodgy I had the correct code, but I think the google maps widget doesn't update on a hot reload so my code hasn't updated and I thought my custom gesture detection wasn't working I can't set a filename to include a :, which ruins my plans of setting the filename as the datetime Dart:io wasn't imported so my Directory object was coming up as an unknown type 	dart - Google map in Flutter not responding to touch events - Stack Overflow
07/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Got more work done on networking code, stored run data in cloud Stored run data in local cache Modified most timestamps into milliseconds from epoch Installed intl package and added dates and times to postrun screen Updated stepsperkm formula Compiled release version and went on an actual walk to test Updated date display Updated time to km Added more data to json Fixed formatting issues on postrun screen Improved erroneous GPS detection Tested time formatters on dartpad 	<pre>Exception caught by widgets library The following LateError was thrown building Postrun(dirty, dependencies: [RunLogic], state: RunLogicState): LateInitializationError: Field 'avgSpeed' has not been initialized. The relevant error-causing widget was Postrun ... When the exception was thrown, this was the stack #0 RunLogic.avgSpeed (package:runfun/run_logic.dart)</pre> <p>Error relating to variables being used before ready</p> <p>Json does not like datetime</p> <p>How do I format a date with Dart? - Stack Overflow</p>

	<ul style="list-style-type: none"> ChatGPT helped me format the date <p>Challenges:</p> <ul style="list-style-type: none"> It is raining so I can't effectively test my app The google maps custom markers were not appearing As I added more networking code, some variables were being used before their values were ready so I had to assign them a 0 value and then notify listeners later My datetimes would not encode to json I had updated the json on my client code but not on the server code I kept thinking my code was not working, since the error updated but I had not restarted the server code Python wouldn't automatically create the file I needed - on researching I found out that python w+ does not create directories I could not access my local document storage on my phone My finish icon was actually appearing but it was just really really small The end flag kept getting misaligned since the image did not touch the bottom of its dimensions 	<pre>202.7.232.166 - [07/May/2023 02:44:03] "POST /rundata HTTP/1.1" 500 - [{"id":1,"name": "John Doe", "lat": 33.770736, "lon": -33.770742}, {"id":2,"name": "Jane Doe", "lat": 33.770741, "lon": -33.770743}, {"id":3,"name": "Bob Smith", "lat": 33.770741, "lon": -33.770744}], [{"id":1,"name": "John Doe", "lat": 33.770736, "lon": -33.770742}, {"id":2,"name": "Jane Doe", "lat": 33.770741, "lon": -33.770743}, {"id":3,"name": "Bob Smith", "lat": 33.770741, "lon": -33.770744}], 2023-05-07 02:44:03,360] ERROR in app: Exception on '/rundata [POST] Traceback (most recent call last): File "/home/ubuntu/.local/lib/python3.10/site-packages/flask/app.py", line response = self.full_dispatch_request() File "/home/ubuntu/.local/lib/python3.10/site-packages/flask/app.py", line rv = self.handle_user_exception(e) File "/home/ubuntu/.local/lib/python3.10/site-packages/flask/cors/extensio return self.app.full_dispatch_request(*args, **kwargs)) File "/home/ubuntu/.local/lib/python3.10/site-packages/flask/app.py", line rv = self.dispatch_request(*args, **kwargs) File "/home/ubuntu/.local/lib/python3.10/site-packages/flask/app.py", line return self.ensure_sync(self.view_functions[rule.endpoint])(**view_args) File "/home/ubuntu/runfun/server/server.py", line 123, in rundata time + record['start']] KeyError: 'epoch' 202.7.232.166 - [07/May/2023 02:44:03] "POST /rundata HTTP/1.1" 500 -</pre> <p>The error updated but I had not restarted the code and hence got tricked</p> <pre>File "/home/ubuntu/runfun/server/server.py", line 125, in rundata with open(f'{username}/time.json', 'w') as f: FileNotFoundError: [Errno 2] No such file or directory: 'og/168342689540.json' 202.7.232.166 - [07/May/2023 02:51:03] "POST /rundata HTTP/1.1" 500 -</pre> <p>Python not automatically creating file</p> <p>Python using open (w+) FileNotFoundException - Stack Overflow</p>
08/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Updated some places which didnt respond to the exercise type Checked that files were being created correctly on local device Changed client code to also user folders so that if a new user logs in, they do not receive the data of the old user Found a really cool way to compare the contents of both the server list and the client run list in python using sets Made an endpoint for checking what data needs to be exchanged with the client cache Made code for checking client saved date Made code for exchanging server saved data Attempted to construct a simple ui for the history Network code works to some extent <p>Challenges:</p>	<p>flutter - How to open/find the file created by path_provider? - Stack Overflow</p> <p>flutter - Accessing file explorer without having a android studio project - Stack Overflow</p> <p>How to open an existing Flutter Project in Android Studio - Stack Overflow</p>

- Couldn't find how to access the files that I was caching on device
- My app was named com.example.runfun not com.android.runfun so I couldn't find it when I was looking though the folders
- Found out that if I do not make the state of my widgets private, I can access a global key from anywhere - then realised that wouldnt work
- Making a simple card is very hard
- Was wondering why may app was doing nothing when the navigation bar was not even calling the history view
- Sunk another whole day into major project without doing any other subject's work
- The refresh indicator kept appending to the list because every time I refreshed it got the same data from the server and append it, to counter this I sued a set instead of a list



Browsing files in android studio file explorer

[flutter - How to use a global key outside the file widget had been defined - Stack Overflow](#)

[How do I list the contents of a directory with Dart? - Stack Overflow](#)

[dart - forEach vs for in: Different Behavior When Calling a Method - Stack Overflow](#)

```
>>> import os
>>> os.listdir("og")
['1683426899540.json', '1683432155099.json', '1683435830079.json']
```

Server Side python testing

[python - Get difference between two lists with](#)

		Unique Entries - Stack Overflow						
09/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Worked on major project at athletics carnival - the grind never stops Tested recording function while going to and from the school Added a login check to the history page to force login before view history Updated login check to execute BEFORE navigating to all pages rather than just after navigating to the history page Fixed order issue by sorting file paths alphabetically FINALLY got the history page working - a medium article helped me and I was able to adapt their code to be more useful to my usecase <p>Challenges:</p> <ul style="list-style-type: none"> Screen was really hard to read in bright light at athletics carnival Have not worked on any other subject in the past 4 days A set wasnt working properly for storing some Maps - I tried to use a set which stored names and then called the map based on filenames to get the data, but that was too hard so I just reset the storage set everytime the user reloads rather than reusing the old data despite it being the same I was passing an anonymous async function as the inline return value of a normal function and it wasnt working, this was fixed by turning everything into one async function The history was not sorted Was not sure how to identify which button was clicked, a Stackoverflow answers for a closely related question had code using i as a callback which was a good idea Files cant be sorted directly so I had to make a sorting function My loading icon kept jumping to the top of the screen when I wrapped it in a column The snackbars would not hide themselves automatically Initstate cant be async Null checking in a future builder made me have to add around 10 null checks for essentially no reason The historical run page future builder never returned any data Got error type 'List<dynamic>' is not a subtype of type 'List<int>' when parsing saved data, despite this list being fine when I uploaded the data, instead of following the solutions online 	 <p>Walk Finished 1.20 kilometers May 9, 2023 2:55 PM - May 9, 2023 3:11 PM</p> <table border="1"> <thead> <tr> <th>Time</th> <th>Steps</th> <th>Speed (km/h)</th> </tr> </thead> <tbody> <tr> <td>00:16:35</td> <td>1619</td> <td>4.33</td> </tr> </tbody> </table> <p>Time per km: 13'51" Steps per km: 1351 Cadence: 98 Altitude Gain (m): 47</p> <p>Altitude Graph</p>  <p>Run Map</p>  <p>Waves Fitness Centre, Baukuh</p> <p>Walk back from roxborough park, the map did not get captured correctly in the screenshot but was fine when displayed in real life</p> <pre>I/flutter (12504): May 9, 2023 9:20 AM I/flutter (12504): May 9, 2023 9:47 AM I/flutter (12504): May 7, 2023 3:03 PM I/flutter (12504): May 7, 2023 2:02 PM I/flutter (12504): May 9, 2023 2:55 PM I/flutter (12504): May 9, 2023 9:20 AM I/flutter (12504): May 9, 2023 9:47 AM I/flutter (12504): May 7, 2023 3:03 PM I/flutter (12504): May 7, 2023 2:02 PM</pre> <p>Refresh has doubled data, set not working properly</p>	Time	Steps	Speed (km/h)	00:16:35	1619	4.33
Time	Steps	Speed (km/h)						
00:16:35	1619	4.33						

which did not really apply to my scenario, I tried to give the compiler less information about the data (by removing type indicators) but still no progress

Epoch date	Human-readable date (GMT)
1683588023	2023-05-08 23:20:23
1683589625	2023-05-08 23:47:05
1683435830	2023-05-07 05:03:50
1683432155	2023-05-07 04:02:35
1683608113	2023-05-09 04:55:13

Analysing epochs to determine file order

Sort Text Lines ↗

Input Text

```
data:www:000.com.example.netflixapp:Autolog 1683588023.json  
data:www:000.com.example.netflixapp:Autolog 1683589625.json  
data:www:000.com.example.netflixapp:Autolog 1683435830.json  
data:www:000.com.example.netflixapp:Autolog 1683432155.json  
data:www:000.com.example.netflixapp:Autolog 1683608113.json
```

• Alphabetical Random Reverse Sort

Output Text

```
data:www:000.com.example.netflixapp:Autolog 1683432155.json  
data:www:000.com.example.netflixapp:Autolog 1683588023.json  
data:www:000.com.example.netflixapp:Autolog 1683589625.json  
data:www:000.com.example.netflixapp:Autolog 1683608113.json  
data:www:000.com.example.netflixapp:Autolog 1683435830.json
```

alphabetical sort test

[Flutter- Using for loops or lists to create custom widgets with editable properties - Stack Overflow](#)

[flutter - Sort List by alphabetical order - Stack Overflow](#)

```
print(filePath);
final String data = await File(filePath).readAsString();
print(data);
Map<String, dynamic> ruserdata = jsonDecode(data);
print(ruserdata);
return ruserdata;
```

Print debugging at its finest

[Parsing complex JSON in Flutter. Parse different types of simple and... | by Pooja Bhaumik | Flutter Community | Medium](#)

10/05/2023

Achievements:

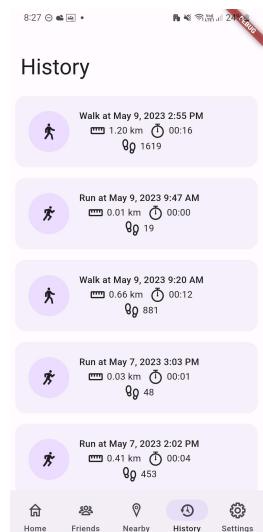
- Finished setting up history page
- Made server side nearby location endpoints and storage
- Found a library to measure distances between locations and help handle the nearby location features
- Found new information that using provider does not mean that I have to use stateful widgets, I always thought the change notifier called stet state but it in fact rebuilds the widget regardless, I am not changing my existing code because it is too much effort for something that may only break more things
- Made send and get apis and got them working
- Got something to appear on map (this took a few hours, despite not getting many entries in the logbook)

Challenges:

- Deciding where to start the nearby location getter code
- Gave in and converted home to a stateful widget, I wanted to not do so for performance reasons
- The login server seemed to randomly stop working - later after debugging, I found that the data was being saved as the plain username and password rather than the hashed version, for some reason the code still worked while live but not when reading from the file
- Couldn't get the nearby map to the current position
- Google maps widget has this weird property where it likes to take infinite space
- After much coding where no testing could be done, no markers showed up
- Some HTML thing was coming up in my json
- I forgot to sign up my test user
- Another night till 11pm working on major project

```
Running on http://127.0.0.1:5000
Press CTRL+C to quit
{'og': '000'}
LOGIN: og 000
202.7.232.166 - - [10/
```

Found the reason my login wasn't working on restart

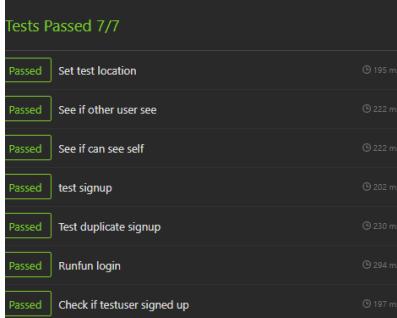


Final history page

```
# A function to hash things
def hasher(tohash):
    returnval = tohash
    returnval = returnval.encode("utf-8")
    # Hash it
    returnval = hashlib.sha1(returnval)
    # Storing hashed in hex form
    returnval = returnval.hexdigest()
    return tohash
```

Rogue function returning its input val

		<pre> 1: [2: [3: "og" 4:], 5: [6: "Syed Ahmad" 7:], 8: [9: -33.7479101 10:], 11: [12: 150.9921412 13:], 14: [15: 258.1435822845659 16:] 17:] </pre> <p>A working api</p>
11/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Found the reason why the map was not updating immediately, the code was getting the data from the server but was not doing anything with it Found out that you can use devtools within insomnia app Fixed slow nearby load Got custom nearby markers <p>Challenges:</p> <ul style="list-style-type: none"> Forgot to bring my HDMI cable and adaptor to SDD The illustrator object was being pasted in with its background, so I had to edit it out Illustrator links files by default so I had to find out how to embed file ChatGPT trolled me with false information about how to use Insomnia test suites, luckily I found their documentation, but it was quite far down the google search results Was comparing last update time in test suite Made a location icon but getting the size right was difficult Tapping a location wasn't making a card The Card took all remaining space The card kept disappearing when the new data was being fetched - I found that my data function was used the passed through value for searching rather than the variable tracking the displayed value which was more global in scope 	<pre> I/flutter (21169): getting last location I/flutter (21169): data from server I/flutter (21169): got data from server I/flutter (21169): Getting prefs I/flutter (21169): Getting username I/flutter (21169): getting last location I/flutter (21169): data from server </pre> <p>Found an issue, gets data from server and does nothing with it</p> <p>Unit Testing Insomnia Docs</p>

12/05/2023	<p>Also got my IPT assignment today and its Unity, one of the main reasons I used Flutter was so that I could avoid running Unity on my laptop, bruh</p> <p>Achievements:</p> <ul style="list-style-type: none"> Added divider to card by using a sizedbox to provide a minimum constraint for it Separated the card widget Added closing functionality and icon to the card Finished card Continued working on unit tests for api Made a rough plan for the leaderboards view <p>Challenges:</p> <ul style="list-style-type: none"> A divider wasnt appearing Making things align to the left side of the card was surprisingly hard Added more text to signup menu 	 <p>Tests passing</p> <pre> Place with segmented row thingy at top Fall in bottom right to help you adjust version // Stored in some kind of indexed thingy where index can simply be updated // Material or probably card will be used to display the table, flex table // Code will compute stats from last 7 days starting from sunday </pre> <p>A rough plan for the leaderboards view</p>
13/05/2023	<p>I am very thankful I found out about insomnia when testing my apis for another project, or testing for this one would have been so difficult</p> <p>Achievements:</p> <ul style="list-style-type: none"> Read documentation on how to implement tabs before starting Planned out the API roughly Added country storage to server code and relevant endpoints Added friend storage to server code and relevant endpoints Made python test data sender Mostly done leaderboard serverside <p>Challenges:</p> <ul style="list-style-type: none"> Python returns none when adding or removing from an object unlike other languages where they return a boolean this means I have to add extra checks to find whether an object is already within a set Listing only folders from a directory in python was surprisingly hard Python doesn't have a builtin datetime to epoch function (I thought this would have been basic functionality) 	<p>https://stackoverflow.com/questions/8298018/add-to-set-returns-a-boolean-in-java-what-about-python</p> <p>python - How to sort a list of lists by a specific index of the inner list? - Stack Overflow</p> <pre> 202.7.232.166 - - [13/May/2023 09:20:31] "POST /signup HTTP/1.1" 200 - [2023-05-13 09:20:33,436] ERROR In app: Exception on /leaderboard [POST] Traceback (most recent call last): File "/home/ubuntu/.local/lib/python3.10/site-packages/flask/app.py", line 219 response = self.full_dispatch_request() File "/home/ubuntu/.local/lib/python3.10/site-packages/flask/app.py", line 148 rv = self.handle_user_exception(e) File "/home/ubuntu/.local/lib/python3.10/site-packages/flask_cors/_extension.py return cors_after_request(app.make_response(f(*args, **kwargs))) File "/home/ubuntu/.local/lib/python3.10/site-packages/flask/app.py", line 148 rv = self.wsgi_app(environ, start_response) File "/home/ubuntu/.local/lib/python3.10/site-packages/flask/app.py", line 109 return self.ensure_sync(self.view_functions[rule.endpoint])(**view_args) File "/home/ubuntu/runfun/server/Server.py", line 412, in leaderboard worlddistance = ranker(userdata[week], 1, username) File "/home/ubuntu/runfun/server/Server.py", line 98, in ranker rankeddata.append([rank, userdata[e], userdata[index]]) IndexError: list index out of range 202.7.232.166 - - [13/May/2023 09:20:31] "POST /leaderboard HTTP/1.1" 200 - </pre>

- Didn't know that Idle deletes variables after running code
 - Got confused between datetime and datetime.datetime
 - My oracle VM randomly crashed on me again
 - I keep typing array when searching google for things related to python lists
 - Making the endpoints for the leaderboards has taken 3.5 hours, I realised that I should just have made this feature less advanced - I haven't even tested it yet so I don't know if it even works
 - Small issues like leaving out (), adding duplicate .json, not resigning up with new parameters that were not caught since I couldn't test, not updating save file, not referencing index before other index in list of list, assuming size of list, not taking into account my code was mutating a list so using wrong index, attempting to serialise a timedelta, did not reverse sort - but all added up as I could only debug after writing all the code
 - The whole api returned null...
 - Time ranking is still dodgy

2 errors, two of many

```
{  
    "countryDistance": null,  
    "countrySteps": null,  
    "countryTime": null,  
    "friendsDistance": null,  
    "friendsSteps": null,  
    "friendstime": null,  
    "worldDistance": null,  
    "worldSteps": null,  
    "worldTime": null  
}
```

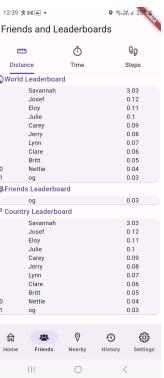
Bruh

```
[["og", "og", 0, 1]]  
og  
[]  
[["og", 2, 3]]  
hello  
[["og", 2, 3]]  
og  
0  
[["og", 2, 3]]  
hello  
[]  
og  
[]  
[["og", datetime.timedelta(seconds=2087)]]  
og  
[]  
[["og", datetime.timedelta(seconds=2087)]]  
hello  
[["og", datetime.timedelta(seconds=2087)]]  
og  
0  
[["og", datetime.timedelta(seconds=2087)]]  
hello  
[]  
og  
[]  
[["og", 3020]]  
og  
[]  
[["og", 3020]]  
hello  
[]  
og  
0  
[["og", 3020]]  
hello  
[]
```

debugging

test data

		coming in
14/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Got preliminary leaderboards UI working, things like padding and elevation need to be fixed (this probably deserves more than one dot point) <p>Challenges:</p> <ul style="list-style-type: none"> No idea whether I should use a FAB to change between world, country, friends or show them in some kind of scroll view (which I dont know how) The week changed, so I had to propagate new fake data Returned void to my future builder so it was perpetually stuck as loading The scrolling on the leaderboards page only scrolled the top section While the ranker was working mostly correctly for some reason only with the times it would mess up the original user rank by sorting correctly but setting the rank number to its time value - It took me a while to figure out that what was happening was that one of my edge case tests had triggered and I had not handled it properly by setting the rank to the previous value rather than the previous rank 	<p>https://api.flutter.dev/flutter/widgets/NestedScrollView-class.html</p>  <p>4 VS code editors open at once, each with multiple tabs</p> <pre> 1, "Savannah", 75 1, [2, "Eloy", 74], [74, "og", 74], [4, "Julie", 73] </pre> <p>Something is slightly wrong</p> <pre> # If not first index, check if ranks are the same as previous if (i > 0) and (userdata[i][index] == userdata[i-1][index]): rank = rankeddata[i-1][2] </pre> <p>Line with error that stumped me for a while (dot point 5)</p>



A beta version of the leaderboards page

15/05/2023

Achievements:

- Updated server code
- Tested server user output features (but they didn't work completely)
- Made a list of current issues / things to do: home screen width variable not working, fix not working location, code a friends UI, make settings UI, move sharedpreferences to a single call, not working with back-to-back runs, cancel run on 0 distance needs to be added , havent tested with larger datasets, handle network errors properly, schedule notifications
- Found the reason that position updates were dodgy now, since I was creating a new position stream on startup for the nearby users feature, passing it settings meant that it overrode the settings used for the during run position stream, I can either nullify the original stream then restart it or refactor my code to use getcurrentlocation every time it needs to update nearby
- May have fixed the not so good scrolling on the leaderboards, but I will need to compile in release mode to check

Challenges:

- Finally brought adaptor to school today but it didn't work
- Went on a test run and the data recording was very dodgy, hardly recorded anything
- WHY DID EVERYTHING BREAK

[Is it possible to have multiple streams with different location settings? · Issue #939 · Baseflow/flutter-geolocator \(github.com\)](#)

[MediaQuery.of\(context\).size.height returns 0 on startup in release mode · Issue #25827 · flutter/flutter · GitHub](#)

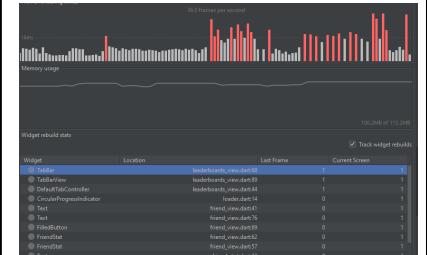
16/05/2023

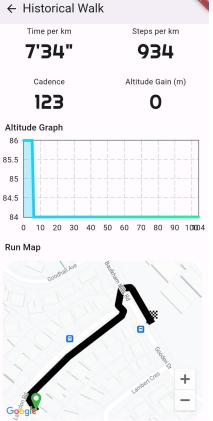
Achievements:

- Attempted to fix the location issue, cant test until I get home
- Refactored location and nearby code to work better with other parts of code it may have

```
[Futter (2023.1): [E0001] flutter/runner/lib/main.dart:4:14: Unhandled Exception: Null check operator used on a null value
  final _AppNotifier _appNotifier = _AppNotifier();
          ^                                 ^
[Flutter (2023.1): #48 _AppNotifier._trackLocation]
[Flutter (2023.1): #49 _AppNotifier._onAppStart]
[Flutter (2023.1): #50 _AppNotifier._onAppStart]
```

Essential changes to code

	<p>been breaking</p> <ul style="list-style-type: none"> • Made a very barebones view user details UI which needs lots of work • Found out how to use refresh indicator and future builder together properly <p>Challenges:</p> <ul style="list-style-type: none"> • Need to modify some of the server return values (such as returning username as well to make things for the UI easier) • Sunset is very early and I couldnt be bothered to go test app at around 4:30 • The changes broke stuff and caused errors • I thought that I was almost done but have now realised that there is still lots to go • Hot reload was not preserving my navigator state edit: probably should have watched take 2 of the flutter widget of the week which teaches best practices 	<p>broke stuff</p> <p>How can I make rounded TextField in flutter? - Stack Overflow</p> <p>Hot reload with FutureBuilder doesn't keep the navigator state : r/flutterhelp (reddit.com)</p> <p>FutureBuilder (Widget of the Week) - YouTube</p> <p>flutter - How to use RefreshIndicator to update FutureBuilder state? - Stack Overflow</p>
17/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> • Fixed bugs on leaderboards page • Finished friends system and tested it briefly • Added proper refresh indicator to friends page • Refactored Futurebuliders to follow good programming practices • Did lots of looking up as to how to show a modal or whether I should use a popup • Started makign teh settings UI • Debugged widget refreshes but did not find the info I wanted • Fixed textfield label animation on friends page • Made api endpoints for changing first name, last name and deleting data - but not tested yet • Early modal design is working on settings page <p>Challenges:</p> <ul style="list-style-type: none"> • Even when changing things into initState, I couldn't use hot reload properly, it would keep going back one navigator screen 	 <p>It may be the tabbar</p> <p>python - Appending turns my list to NoneType - Stack Overflow</p> <p>dart - Flutter setState to</p>

	<ul style="list-style-type: none"> Forgot how to load up devtools in edge Had to use android studio because it has some exclusive tool that could allegedly help, me Thought only the dart plugin was enough but turns out you also need a flutter plugin While the tool worked it essentially told me nothing Wasted too much time trying to get hot reload working for something I can do without it Was tallying up run data of sent user not the request one Tried testing the friends system and was getting that nonetype was not iterable - I was assigning using an operator that mutates the set Remembered that I haven't even started notifications My refresh indicator was not able to be triggered - ended up being quite hard to fix since I need to wrap the inside things with a refreshindicationr due to the nested scroll view and without making the code really messy it would have been difficult to keep everything in one widget so I could use a normal setstate call, hence I had to pass through a function Didnt put brackets around a function so it wasnt running Finally found how to stop the textfield label animation - seems I just needed the right search query Found a new bug where a textfield on another tab does not unfocus when changing tabs I was hoping I would finish everything besides bug fixes but was not able to - Another whole day spend on SDD, hopefully the main coding will be finished by tomorrow 	<p>another class? - Stack Overflow</p> <p>flutter - How to disable TextFormField default animation - Stack Overflow</p>  <p>Storage space cutting it very close</p>
18/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Tested the tracking function, things are working again the location accuracy was very good, I will have to try without MSalitiude, since the altitudes were dodgy Converted server to round numbers and output minutes instead of seconds Got the name updater working Updated leaderboards are refreshed text to have better styling Country UI and country updates work Updated view user to also display country Got the nearby related location setting working Made an about dialogue Now I am very close to finishing most functions of the app, after this only documentation and bug fixing will remain <p>Challenges:</p>	 <p>a quick morning test while going to my bus stop, it was very</p>

- Started app in release mode and the login shared preferences seemed not to be working - was trying to assign country name to a bool
- Hit a random function key which took me to source code of library which I accidentally edited
- The settings page text alignment was slightly off
- Screen was still resizing despite `resizeToAvoidBottomInset`, but I luckily found somebody with the same issue on github which prompted me to add the same property to my pageswitcher and it worked fine
- Went to try out whether the altitude was working correctly since it did not in the morning, first I ran with the latest version and I only got my altitudes when going downhill no uphill updates, then I ran it on a build 2 days old and got one uphill altitude registered, after this I ran using previous builds such as those dated from the athletics carnival and another known working build which progressively showed better results, finally I tried again with the latest build and it worked fine, meaning that the problem was my phones GPS
- Got a sync issue where the history page was stuck on “history loading” - Debugging helped me to find out that it was because the files uploaded when using a previous version of the app (as was done in the previous dot point) did not include all of the information required by the latest version of the app
- Compiling - at least I can do other stuff while app compiles - release compiles rae around 15 minutes long but done on cloud and normal compiles are around 1 minute long
- Deleted old version run files from server, but client decided to sync them back on (at least the feature works)
- Typed in the wrong settings getter for the switch and couldn't work out why errors were being thrown
- Pretty much finished the app at the expense of another late night and no other subjects being done

accurate even getting the side of the road and my crossing locations correct, but had dodgy altitude

```
[  
  "Syed Ahmad",  
  false,  
  0.4400000000000006,  
  5,  
  749,  
  "og"  
]
```

Server giving too accurate measurements

[`resizeToAvoidBottomInset: else` is not working · Issue #116851 · flutter/flutter \(github.com\)](#)

```
error: type 'Wall?' is not a subtype of type 'String'  
error: type 'Wall?' is not a subtype of type 'String'  
error: type 'Wall?' is not a subtype of type 'String'  
error: type 'Wall?' is not a subtype of type 'String'
```

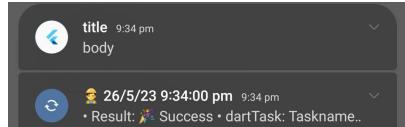
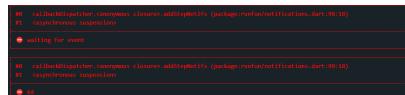
Error stopping history propagation

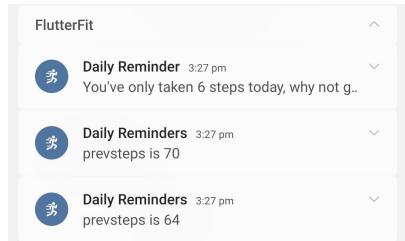
↳ 1684404588230.json	U
↳ 1684404998106.json	U
↳ 1684405382106.json	U
↳ 1684405683110.json	U

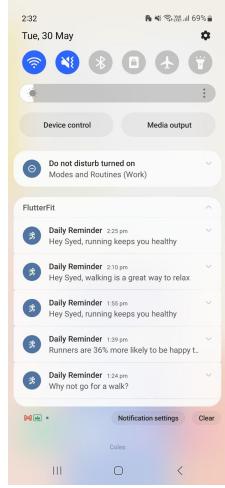
	<ul style="list-style-type: none"> Using source control to revert is a bit annoying to test scenarios with different run data but at least it works The history icon didn't update to dark mode because it was using a rive animation Build method for the history icon was a bit dodgy and was causing visual glitches 	<p>The dark side</p>
20/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Added a feature which cancels a run if a user quits in the intro animation or before recording distance, this also mitigates issues when a user ends a run before the code has started recording Sent out app for testing <p>Challenges:</p> <ul style="list-style-type: none"> Distance had not been initialised before use so was giving me errors The animation controller was not disposed on the pre run animation 	
21/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Fixed issue that occurs when a user tries to run multiple runs back to back and then no audio plays Fixed the bottom axis of the altitude chart giving numbers by removing it, I had previously intended to use datetimes to calculate time intervals to use as the x-axis but my code was not passing time data to the graph generation widget and I was not willing to modify the many parts of code that rely on this widget to do so Testing results are positive so far The goal value gets updated in back to back runs Samsung has finally added a number with options keyboard that pops up rather than the full keyboard (actually could be MS since I use their keyboard, but good nonetheless) 	

	<p>Challenges:</p> <ul style="list-style-type: none"> When testing back to back runs, the cadence value was off, it started at around 1000 - the issue was that my logic file was not resetting its local copy of the current step count on a new run starting Went on 2.4g network so sending app was really slow Completely forgot that I wanted to add notifications as well to make use of random number generation and because I said I would in my proposal 	
22/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Added more comments - finished most comments Seems like a previous version of me has already done most of the scaffolding for the notifications, they seem to have understood the documentation much better than current me can <p>Challenges:</p> <ul style="list-style-type: none"> The dart extension does not refactor imports when transferring more than one file Why are notifications so hard to use 	flutter_local_notifications Flutter Package (pub.dev)
23/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Researched more about how to add scheduled notifications Started testing documentation Found that I should use gunicorn instead of waitress for my WSGI server <p>Challenges:</p> <ul style="list-style-type: none"> Didnt have time to try implementing notifications further today It is better to convert all notifications code into a class The signup page did not properly validate empty inputs 	https://medium.com/p/45d1ebd61d0c https://medium.com/vijay-r/schedule-local-push-notifications-in-flutter-99487ea9f891 https://news.ycombinator.com/item?id=23109037
24/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Continued working on testing the solution documentation Got another test subject <p>Challenges:</p> <ul style="list-style-type: none"> Havent heard back from some of my previous testers yet, but they have used the app 	

	<ul style="list-style-type: none"> Had to be careful to show tests in correct order eg. not show a test that depends on leaderboard refresh to be working fine before the leaderboard refresh test 	
25/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Worked on structured walkthrough <p>Challenges:</p> <ul style="list-style-type: none"> The images were very big for a word document Getting red circles where the user should tap to be aligned to centre 	 <p>Images taking up a page each, need resizing</p>
26/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Worked on testing documentation Renamed files to make code easier to follow Got work manager to send a simple notification Got some notification sending working <p>Challenges:</p> <ul style="list-style-type: none"> Small laptop screen makes it slightly harder to work with large documents Sending dynamic notifications that call code to generate the notification may not even be possible on android, some people who wanted this functionality had to make their own forks of plugins and write platform specific code I can't use firebase notifications since they rely on sending messages to the device and the device displays them, rather than running some code and then generating a message All the guides make sending notifications look really hard because they do things step by step but people on stack overflow have much cleaner ways, but their examples are incomplete The main Flutter workmanager guide by the devs is very integrated with a lot of other stuff that is not useful, so I had to find another one by another person who sought to make a better one Got "Instance member 'initialize' can't be accessed using static access" error from linter, I just needed to add () in some places Was trying to use prints to debug whether work manager was working but it took me a long time to realise that since it runs on a different thread it doesn't give prints to my console I only want the first value from the pedometer stream Sending a notification caused error in main app thread 	<p>Callback when scheduled notification is shown · Issue #21 · MaikuB/flutter_local_notifications (github.com)</p> <p>scheduled local notifications that update in the background in flutter - Stack Overflow</p> <p>How to run Flutter in the background? by Tim Rijckaert VRT Digital Products Medium</p> <p>How to run Flutter in the background? by Tim Rijckaert VRT Digital Products Medium</p>  <p>Error</p>

		 <p>A sent notification</p>
27/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> • Tried out the app this morning but with a loop inserted within the notification sending code and then it worked somewhat outputting a value but only once. It was then I remembered that the pedometer library had a limitation that it couldn't fetch steps before app install which may have been what was causing the issue • Started finding a really sketchy way to debug using a third party logging framework and throwing exceptions as breakpoints and printing in exceptions to see data • I think I got the issue, I was listening to the steam but since the rest of the code kept executing on its own thread and hence sent the notification before the stream work was done <p>Challenges:</p> <ul style="list-style-type: none"> • I dont know what the issue is and it is very hard to debug since this is a background process • Work manager is glitchy with hot restart so warrants a full recompile every time • Code is becoming spaghetti code • I dont think it is possible to make the pedometer run in the background so I gave up on this feature 	<p>Step Count</p> <p>The step count represents the number of steps taken since the last system boot. On Android, any steps taken before installing the application will not be counted.</p> <p>A warning that I forgot about</p>  <p>Workaround to get prints in a background process</p> <p>google fit api - Pedometer with Daily steps counter using flutter - Stack Overflow</p> <p>dart - How to run task in background even if the app is closed and get the latest result generated by the task and display it when app is opened? - Stack Overflow</p>

		 <p>FlutterFit</p> <p>Daily Reminder 3:27 pm You've only taken 6 steps today, why not g..</p> <p>Daily Reminders 3:27 pm prevsteps is 70</p> <p>Daily Reminders 3:27 pm prevsteps is 64</p> <p>debugging</p>
28/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Made code to calculate time until next notification <p>Challenges:</p> <ul style="list-style-type: none"> Needed to stop workmanger from rescheduling periodic task - most of the information was not for Flutter but for normal android coding The scheduled notification was not coming Testing the notification gap duration required waiting 20 mins My luck wasnt great so I had to wait another 20 mins to see whether the random was working properly, also the gaps werent exactly 20 mins 12:00, 12:21, 12:46 	<p>android - Check if WorkManager is scheduled already - Stack Overflow</p> <p>Flutter workmanager: registration a new task with the same name - Stack Overflow</p> <p>I/flutter (11640): 0:01:10.290125</p> <p>Time calculation is working</p>  <p>Scheduled notification 20 mins after the first</p>
29/05/2023	<p>The submission box for part B is now live</p> <p>Achievements:</p> <ul style="list-style-type: none"> Made lots of progress on structured walkthrough and testing documentation, almost finished 	

	<p>testing documentation</p> <p>Challenges:</p> <ul style="list-style-type: none"> The how to run instructions in addition to the structured walkthrough will be marked in which case they will require a lot of work The yesterday scheduled 16:30 notification came at 21:32 that day 	
30/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Grinded out whole comparing with design specifications Updated document with my testing results Added some more stuff to testing Got notifications working after disabling battery optimisation (not something i wanted to do, as it kinda makes user experience worse in my opinion) Got a dif editor on every package version and dependency version discrepancy when compiling a new commit with the current version of the pipeline (which should be the same but maybe its because a dependency updated...) IT TOOK 4 HOURS BUT I FINALLY GOT IT, THE PROBLEM WAS A DEPENDENCY OF A DEPENDENCY <p>Challenges:</p> <ul style="list-style-type: none"> Azure pipelines compile failed for some reason, I think some idiot pushed non working code to the rive extension github The notifications were still not working properly despite using workmanager Tried forcing Rive version down and then forcing the Flutter version down, but still wouldn't compile on Azure pipelines, this means that the issue is seperate to the guy pushing his code a few days ago since this version of Rive was from 46 days ago I dont know why things still compile on my laptop (could be because I'm still compiling in debug mode) and I dont think I have enough storage space left to try compiling in release mode I HAVE TRIED MORE FLUTTER VERSIONS AND IT IS STILL NOT WORKING, it also seems not to be library related since Rive 0.10.4 compiles fine on my pc It wont compile on versions it compiled on before, could this be an ubuntu issue? The forum where people had the same issue as me seems to be having trouble verifying me, so I will leave them to suffer 	 <p>Notifications finally working kinda reliably</p>  <p>Compile failed due to rive error</p> <p>Discuss and Get Help FlutterFlow</p>

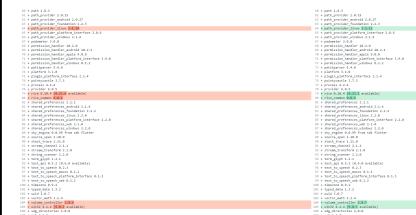
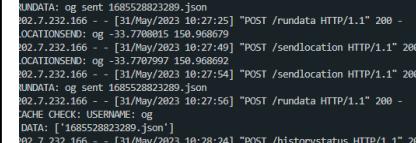


Some guy pushing not working code 😡



The pipeline suddenly stops working after a number of successful runs in previous days



		 <p>Dif editor</p>
31/05/2023	<p>Achievements:</p> <ul style="list-style-type: none"> Regretfully wrapped nearby view in a futurebulider In debugging another issue I fixed my first issue where, the run data was dodgy on the server - this was because only have the rundata was being reset (the part in the logic file) and the part in the notifier was being left the same. Because of this the server data was being overwritten with the same file with the same file anatomy but only half the relevant data Almost finished testing the solution Fixed lots of small bugs around the app <p>Challenges:</p> <ul style="list-style-type: none"> I thought there was an edge case where I divided thighs by 0, but in fact it was 0 being divided by something so it was ok The step count still wasn't resetting for some reason despite the code indicating it should - After a bit of analysis I found that it was not really an error in the code but the fact that the pedometer was reporting the total steps taken and I wasnt resetting the runOnce variable which handled it Got lots of false cheating positives, it was because my more than sign was the wrong way around There is a slightly rare bug that if the app hasn't been opened for a while (or is freshly installed) and the user goes to the nearby page it stays blank for a while before loading Because of my old text field implementation, going to the login page, then going out, the going back, then submitting meant that text input was retained without being visible to the user Making lastlat and lastlong nullable warranted a whole bunch of null checks Futurebuilder kept rebuilding on every setstate Something with the run history suddenly glitched out and it is now wrong - I dont know what 	<p>flutter - How to check 'late' variable is initialized in Dart - Stack Overflow</p> <p>https://stackoverflow.com/questions/60990519/future-builder-keeps-rebuilding-on-every-setstate</p>  <p>Logs showing my device not saving the second run</p>

	<p>happened, I even have screenshots of the proper data from when I did it - I have no idea why it has stopped working now, looking through the logs doesn't even show any time the run data was sent which is strange</p> <ul style="list-style-type: none"> • File was not syncing to server in back to back runs • Gave up on finding the cause of the dodgy information with the run data 	
01/06/2023	<p>Achievements:</p> <ul style="list-style-type: none"> • Got gunicorn working • Finished essentially all remaining documentation in the double SDD today • Combined the two log book files • Finished the rest of the documentation at home • Tested the program again with the updated code and it worked fine • Started getting files ready for submission (put in correct folder structure etc) <p>Challenges:</p> <ul style="list-style-type: none"> • Went on a couple of runs simultaneously to properly test the fixes from yesterday, they did not work. When I got home, I found that I did not commit these fixes to git and hence they were still on my computer but not included in the azure pipelines built apk • There were small errors with my old insomnia tests eg. usernames were wrong, had not accounted for changes in how the api returns data • MS word added a small line at the end of the table of contents which ruined the formatting a little • I didn't realise how much work writing just the how to run code document would be • Found a last minute bug where no entering any value into the goal on subsequent runs could cause bugs, this took annoyingly long to fix • Notifications were a pain to get working on release mode, they mostly work but seem to be a bit late and my phone keeps randomly blocking my app from even requesting notifications as soon as it gets installed 	