

# 'Runtime' App | Report

## Team Play-Doh

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### ABSTRACT

'Runtime' is our fitness app. During the time between planning the project and implementing it, the functionality has changed slightly to adapt to feedback we received during the peer feedback on the project description and feedback gathered on the actual app. The final functionality is as follows:

- Allows users to import their own GPX files and the interface then shows the route you took. Uses Google Maps API to show a visual representation of the route and uses start and end markers to show where the route began and finished
- Evaluates the data and gives you statistics on your distance travelled, average speed, top speed, start time, end time, total run time, average heartrate, average cadence and total points tracked
- Users can hover their mouse over the route on the map and it will show you your heartrate, cadence and the time at that particular point
- If you upload multiple GPX files, all the routes will appear on the same map, but the statistics section will change to show the stats of the most recently uploaded file
- There is a contact form at the bottom
- The hyperlinks at the bottom right take you to the appropriate social media site

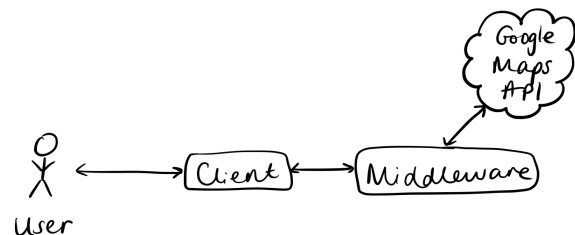
### INTRODUCTION

The target audience for this app are adults who are intimidated by, or who are unable to (due to time or energy) attend traditional running clubs, but are still interested in tracking their process and statistics when they run. The feel of the app is to be as unintimidating and as commitment free as possible, so there is no information showing what users *should* be achieving, only information to show what they have achieved. We have designed a web app to be used on computers or mobile devices so users can see their data whenever they want.

### IMPLEMENTATION

When implementing our app, we used a variety of technologies. Firstly we used GitHub for version control and to make sure everyone had the latest version when wanting to work on the app. The interface itself was made using HTML, and CSS was used to make the site visually appealing to users. Due to the scope of the project, we took inspiration from an open source HTML template which we then adapted and edited to suit our requirements. We have referenced this in the 'References' section below. In order to parse and read in the GPX file, we used Javascript and JQuery. In order to produce meaningful data from the data within the GPX file, we used JavaScript, for example this would allow us to pull out information such as the start time and end time and calculate the duration of the run. The contact form at the bottom of the site uses HTML and JavaScript. In order to create the logo, we used images (also referenced below) and Adobe Photoshop.

Diagram to show the overview of the architecture:



It may be worth mentioning that the app may only work on certain web browsers, i.e. Chrome and Safari. We had trouble making it work on Mozilla Firefox, but are unsure as to why this may be the case.

## **PEER ASSESSMENT**

### Project Description

In terms of the project description, both sets of feedback we received commented on the fact that the scenarios seemed realistic and the app would be useful and beneficial to the type of people we described in the user stories. One of the reviews said that it was clear we had designed the app with the user in mind. Additionally, both said that the wireframes had a good design and that the full screen app would be beneficial. Both also said that the menu seemed functional and useful. However one said that it may be difficult to see the routes properly if we layered them on one map, but it is completely optional for users to upload more than one GPX file so we can leave it up to the user to see whether they want to do this or not. They also pointed out that the small statistics box may not be big enough, so we made the statistics section a lot bigger on the actual site. Finally we also received the feedback that it may not be clear how to use the app so we should include instructions. We aimed to make the app as user friendly as possible so thought that users would not necessarily need instructions, but if we had time at the end of the project, we could add this.

### End Product

With regards to the feedback on our prototype, many of the positive comments were about the usability of the app and the general look of it in terms of things like the colour scheme and the side bar. The negative comments mostly focused around the statistics part of the site, because it was not fully complete at the time of evaluation, but these comments were still useful in allowing us to know what sort of thing users would potentially find useful.

## **EVALUATION**

The method we used to gain feedback for our prototype was an informal interview conducted while users were piloting the code. Eleven individual interviews were conducted, as well as one interview where two participants took it in turns piloting the code and reviewing it together. All users gave consent at the beginning of the interview to participate and their feedback to be

used. The interview began with one of our team members giving a very basic description of what the app is supposed to do, followed by the user(s) testing the code on their own with as little instruction given as possible. The reason for this was to test how intuitive our app would be to users who had never used the app before.

The interview began with them importing the test GPX file (e.g. lugano) and users were encouraged to comment aloud as they used the app. This provided a large range of qualitative and descriptive information that proved to be useful in improving the app. Once the user was satisfied that they had explored the features as much as they wanted, they were asked a list of structured questions and asked to explain any answers provided. The users were asked what they liked the most and what they liked the least about the app. They were also asked if they were to add a feature to the app to improve the app, what would that feature be, and if they could change an existing feature, what would they change. The feedback provided a list of positives, negatives, and suggested changes that can be seen in more length in the feedback evaluation appendix. In terms of qualitative information, a note was kept of how often a criticism or compliment about the code came up. This allowed us to see the most pertinent issues that would need to be fixed.

## **RESULTS**

Listed below is a brief summary of the evaluation results. The evaluation appendix covers this to a greater extent and provides quantities for the feedback below.

### Positive Comments:

The main positive comments from the feedback were about the usability of the app. Users were happy about the colour scheme, layout, and general feel of the app. Some of the users commented on the intuitiveness of the application, with mentions being given to the automatically scrolling sidebar on the right hand side, and the one page design. Some users felt that having social media options present would be a great addition once fully implemented, and others mentioned enjoying playing around with the messaging form at the bottom of the page.

### Negative Comments:

Most of the negative comments received were about the statistics section of the app. At the point of evaluation the statistics part was very much still under construction and so was sent to evaluation with mainly placeholder statistics. This drew the attention of the vast majority of the users. The main criticisms received about the stats were: meaningless variable names (e.g. longitude instead of distance), meaningless statistics, and the layout of the statistics. The layout at this stage was a scrolling list of stats one under the other and due to this a large amount of the negatives and subsequent suggestions pertained to fixing the layout and stats. With regards to the functionality of the app the main criticisms were that previously loaded files were not stored, and as such a new file has to be loaded in each time the user wants to swap to a different data set. Some users commented on features that were not as yet implemented such as the placeholder buttons for the apps social media links.

### Suggested features or changes:

Many suggestions were related to various ways to fix the statistics page, such as grouping by theme, and alternative layouts to the top to bottom structure that was implemented at the time of the evaluation. Other suggestions relating to the map and display that were given included: having start and end markers for the tracks, being able to see the stats at each point by hovering your mouse over a track point, and having highest and lowest stats marked along the run and allowing the stats to be viewed by clicking the markers. Other suggestions included implementing a profile system to save previous runs and provide met statistics. Further positives, negatives, and suggestions, along with the quantities that these comments came up can be seen in the evaluation appendix.

## **DISCUSSION**

As the app was still under construction at the point of the evaluation, the feedback received was, for the most part, unsurprising to the team, and we were expecting most of the criticisms we got. There were suggestions that the team had not thought about however, and the feedback and suggestions helped to solve the issues we were aware of but were not sure how to tackle.

After receiving the feedback the team continued to work on the app and implement suggested changes. The team focused on the most highly suggested changes and fixing the most highly criticised aspects of the app.

The changes that were included were:

- Including start and end markers
- Restructuring of statistics (now has more meaningful statistic names, useless stats removed and more meaningful stats included, reformatted to group by theme)
- Stats page filled out so now has less whitespace
- Stats are now to fewer decimal places (feedback from one user stated that there is no need to see their average heart rate to fourteen decimal places)
- Have removed NaN values for most stats and instead displayed "N/A"
- Made logo clickable to return to top of the page
- Map now snaps to top so map is first thing the user sees after uploading the GPX file
- User can mouse over track points to see the stats at that point

Due either to time constraints or suggestions conflicting with more popular suggestions, not all suggestions were able to be implemented. However, the team did manage to improve on most of the negatives and suggestions made. In future the team would like to implement the remaining suggestions into the app such as implementing the profile system and social aspects of the app, as well as trying to implement the less frequently criticised aspects of the app.

## **CONCLUSION**

Overall, we think that the project has been successful. We designed an app with a reasonable and meaningful scope, have received detailed feedback throughout the course of the report, and implemented a lot of the features that the feedback suggested in order to constantly improve the app by adapting the functionality and making it more user friendly. We identified every team member's strengths and weaknesses at the beginning of the project and every team member contributed equal effort throughout. We are very happy with the end result and we hope you enjoy reviewing it.

## REFERENCES

- <https://runtime.io/images/header%20runtime%20lt.svg> - used for logo
- <http://www.clker.com/cliparts/g/2/y/L/K/5/girl-running-hi.png> - clipart used for logo
- <http://www.promoversgroup.com/css/ferryman.png> - clipart used for 'distance'
- [https://image.freepik.com/free-icon/stopwatch\\_318-47288.jpg](https://image.freepik.com/free-icon/stopwatch_318-47288.jpg) - clipart used for 'time'
- <http://moziru.com/images/speedometer-clipart-black-and-white-7.png> - clipart used for 'speed'
- <http://www.benjaminkeen.com/google-maps-coloured-markers/> - used for maps icons
- <https://html5up.net/read-only> - HTML template
- <https://github.com/2136280m/runtimeIS> - link to the github repository we used to manage the project code