



ACCA5033: CHANGEMAKERS AND VALUE CREATION

Assignment 2: Project Management & Innovation

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1. Introduction

The project idea that will be used for this assignment is a centralised running app.

The current market of applications related to running/fitness fragmented, as there are several different apps all with different functions, features and purposes. This abundance of separate applications has led to a frustration with having to constantly switch between apps and having several different sources of data, leading to information overload for the user. Therefore, the need for a more convenient, combined store of all these apps' functions and features has become apparent.

The project idea is to design and build an application that combines and integrates several key features from popular running-related apps, such as Strava, Garmin Connect, Runna, MyFitnessPal and Spotify, into one 'super app' offering runners a convenient, centralised hub that they can use to fulfil all of their running needs in one seamless experience.

2. Task 1: Project Management

Q1: Project Management & Planning

Project Scope & Solution

As mentioned in the introduction, the problem that is being faced is that there are so many fragmented running apps available on the market that the average user has become frustrated with constantly switching between them. This highlights how the proposed solution, a centralised running hub app, will be able to satisfy the needs of the target user by combining core functionalities and features.

Technologies

Front-end technologies, which focusses on elements that the user interacts with, such as the graphical user interface. These identified technologies include HTML, to create the structure and content of the application's pages and CSS, to create the styling and layout of the app's pages. JavaScript, a programming language that allows interactive, dynamic controls to be added to web pages, combined with React, which is a JavaScript library for building user interfaces, are both also essential to designing and building an application.

Back-end technologies, which focusses on the background data and infrastructure that makes the application work. These identified technologies include PHP, which is a server-side scripting language that can be embedded within HTML, and Node.js which allows server-side JavaScript code to be written. Additionally, ASP.NET, a web application framework developed by Microsoft, has been identified due to its typical use of building web applications.

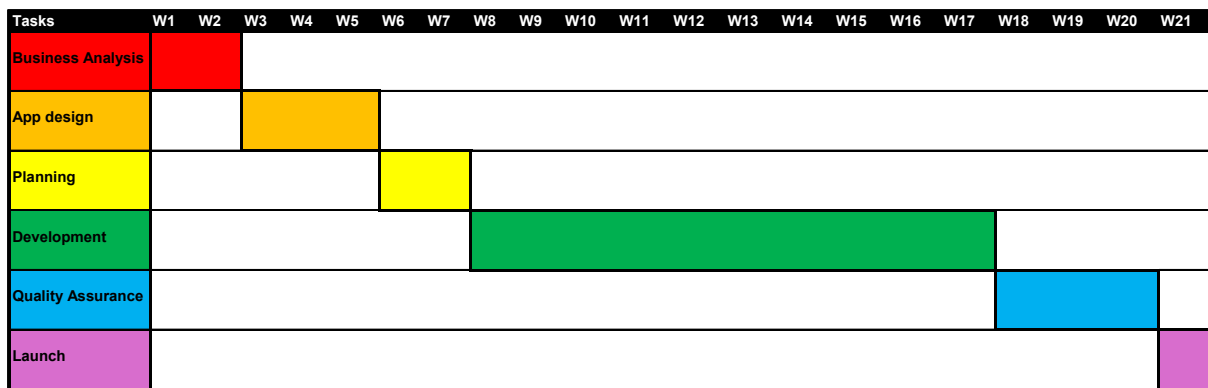
Visual Studio is the IDE (Integrated Development Environment) that has been selected, which is a software application where code can be written and tested in.

In order to integrate other apps data (such as MyFitnessPal, Spotify, Garmin etc.) into this application, APIs (Application Programming Interfaces) must be used. An API is “a set of protocols that enable different software components to communicate and transfer data”. [1] REST-ful (Representational State Transfer) APIs have been identified to provide a way of accessing and manipulating resources from several applications into the centralised app.

A relational MySQL database, which uses a tabular structure to store data, will be used to store and organise structured data. [2]

Project timeline and schedule

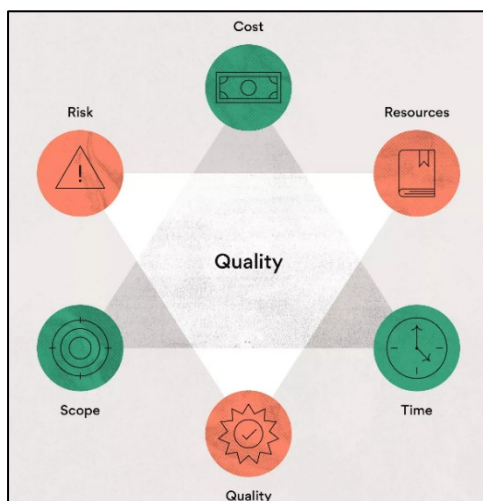
- Business analysis: 2 weeks
 - Define target audience
 - Study audience needs
 - Conduct market research and competitor analysis
 - Outline app requirements
- App design: 3 weeks
 - Create blueprints
 - Design application structure
 - Select tools/frameworks
 - Create wireframes, mock-ups and interactive prototypes
- Planning : 2 weeks
 - Plan scope, budget, timelines etc.
 - Assemble development team
 - Select development method
 - Create project timeline
 - Establish a risk management strategy
- Development : 10 weeks
 - Develop front-end and back-end code
 - Regular code reviews
 - Debugging
- Quality assurance : 3 weeks
 - Functional, performance, compatibility and security testing
 - Automated Quality Assurance tasks
- Launch: 1 weeks
 - Deploy to target audience
 - Perform beta testing [3]



(Figure 1 – A Gantt chart showing the project timeline)

Constraints

“The triple constraints of project management—also known as the project management triangle or the iron triangle—are scope, cost, and time.”



(Figure 2 – The six constraints in project management [4])

Scope is “a project’s magnitude in terms of quality, detail, and deliverables” which must be managed by “creating detailed project plans and getting project stakeholders to sign off on everything before production begins” in order to prevent ‘scope creep’.

Cost is “the project budget as a whole and anything of financial value required for your project” which can include salaries, equipment, facilities and materials.

Time is the focus on time management and deadlines. As the project timeline progresses, there will be consequences such as missed or extended deadlines, adjustments to calendars and less time for planning, which must all be assessed and managed.

Additionally, other constraints such as risk, resources and quality must all be managed throughout a project’s life cycle. Scope, cost and time are the most impactful constraints as “these three constraints can be difficult to manoeuvre around each other while maintaining project quality”. [4]

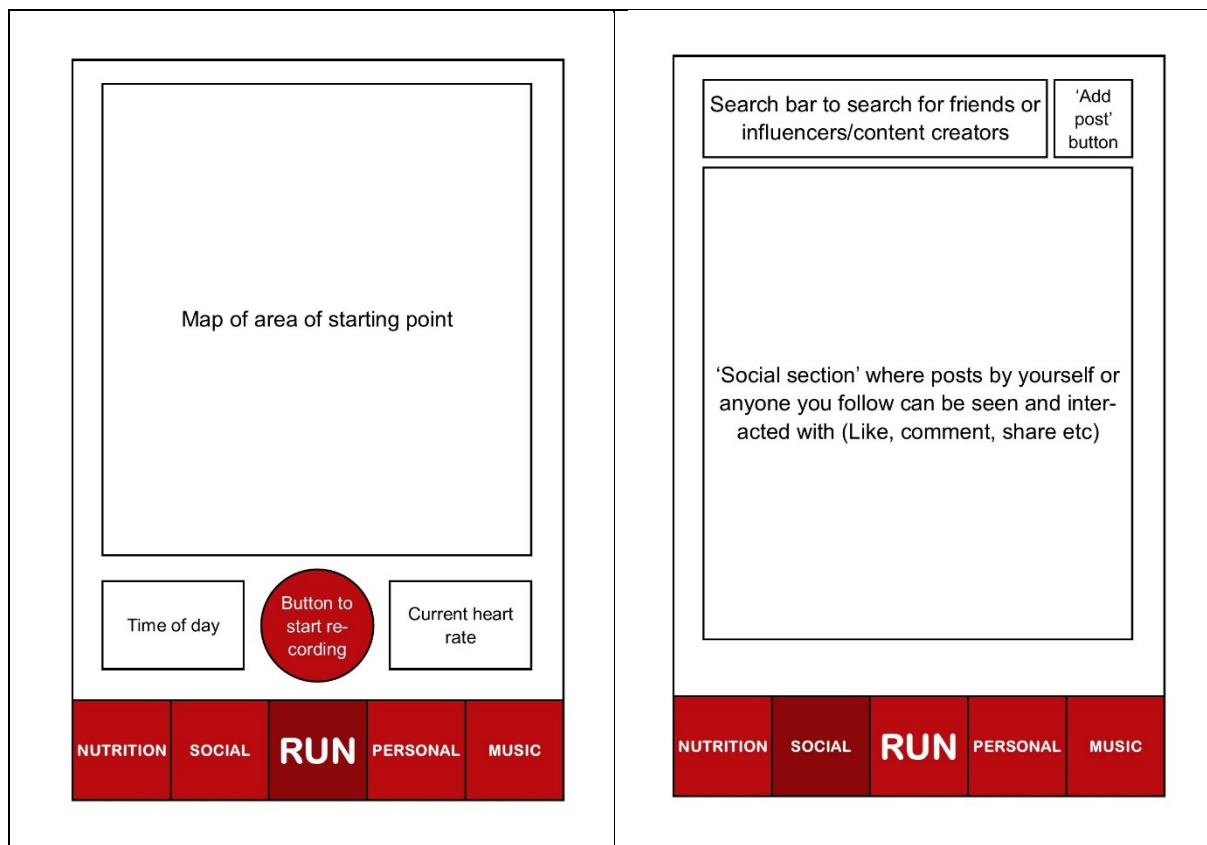
Development method

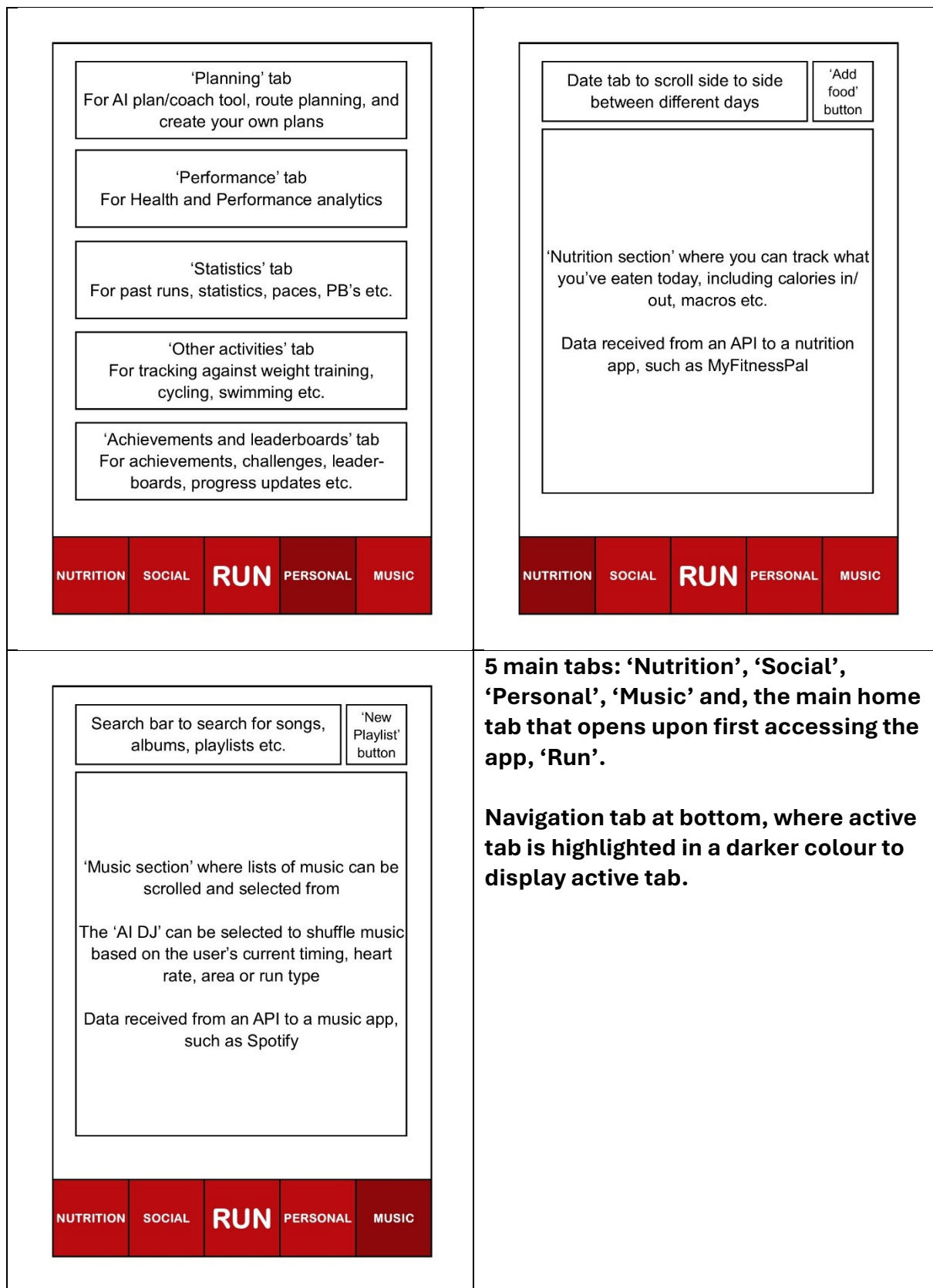
A software development method “refers to structured processes involved when working on a project. It is a blend of design philosophies and pragmatic realism that stretches back to the early days of computing.”

The Agile methodology has been selected, as it “ focuses on how to satisfy the users instead of emphasizing documentation and rigid procedures”. This methodology is an iterative model, involving short ‘sprints’ with regular feedback loops to constantly fine-tune the product. This allows the project team to prioritise the needs and flexibility of the user. This is perfect for this project as the app can be constantly fed back on to ensure all desired features and functionalities are included and sufficient. [5]

Q2: Project Design

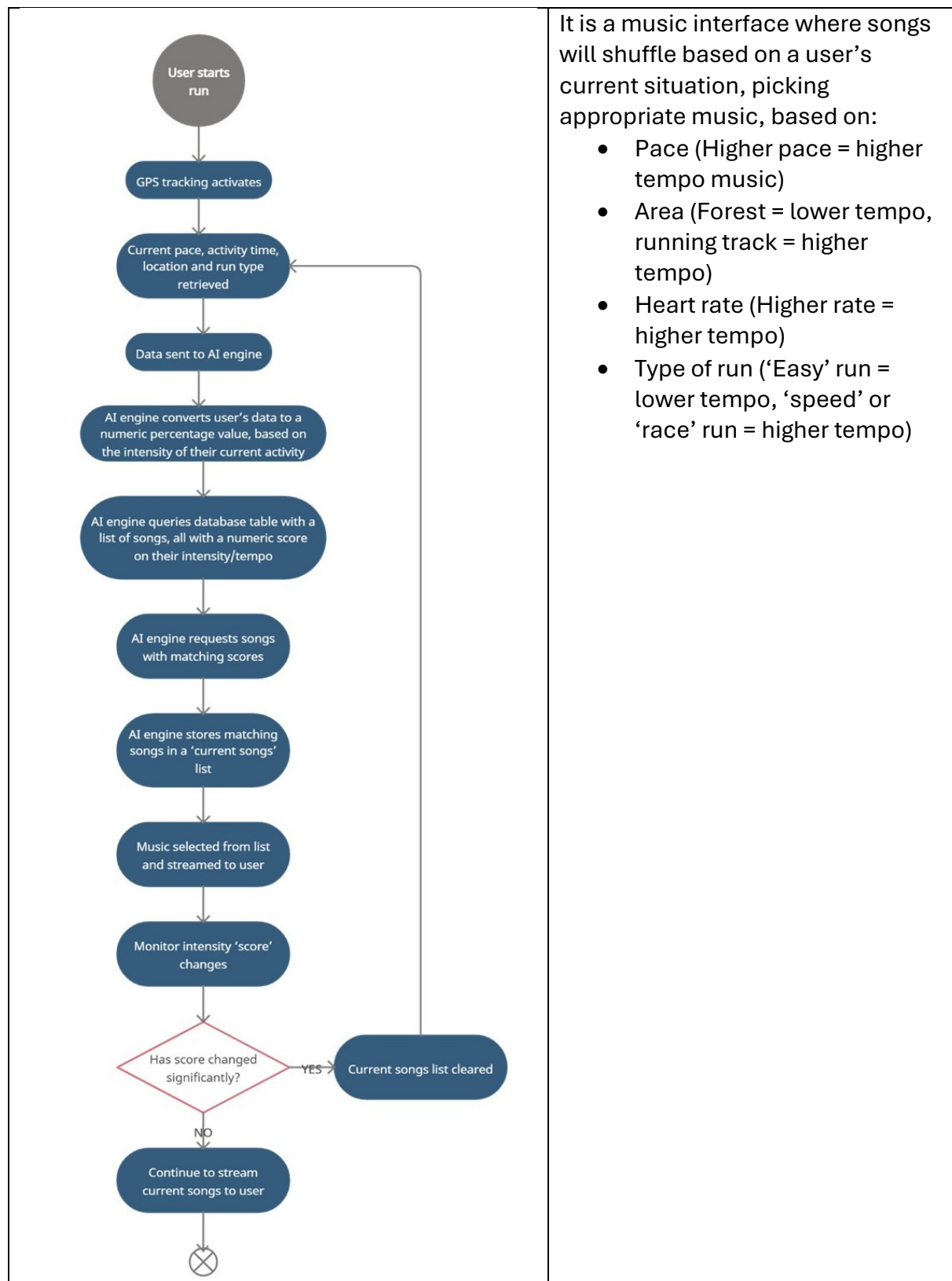
Wireframe diagram of the main app interface





(Figures 3, 4, 5, 6, 7 – Wireframe diagrams for the app)

UML diagram for the AI music player



(Figure 8 – UML activity diagram for the AI music player, created on www.creately.com [6])

3. Task 2: Enterprise & Innovation

Q1: PEST & SWOT analysis

The following analysis will be based on Strava, a market competitor for this project's app with several similarities and links between the two.

PEST

Political

- Must comply with GDPR and CCPA, or else will face huge fines.
- Government health and public health agencies initiatives may provide opportunities for collaboration.

Economic

- Global economic conditions can directly affect Strava's revenue through subscriptions being cancelled due to less disposable income.
- Fitness technology is expanding constantly, due to increasing consumer spending on fitness wearables.
- Strava uses a 'freemium' model, offering both free and premium levels of access.

Social

- A growing global trend of social fitness and community, such as run clubs, shows that Strava is well-placed (as one of the market leaders) to capitalise on this trend.
- The rise of online fitness communities, which Strava excels at, which came about due to the isolation of COVID-19 allowed Strava to increase its user base.
- Fitness culture and trends, particularly on social media, have allowed Strava to capitalise on the modern consumer's needs.

Technological

- Advancements in GPS technology and data accuracy has allowed far more people to record and share their activity, further increasing Strava's user base.
- Strava's integration with wearable technology and devices has allowed them to constantly attract new and existing users. However, dependence on integrated devices could pose a risk if integrated companies stop improving their services.
- The development of AI has allowed far more entry-level users to create their own tailored plans, which will encourage more new user's to download Strava in order to track and share their runs. [7]

SWOT

Strengths

- Strong global brand recognition, as well as a strong community and social features, encouraging user engagement and retention.
- Freemium business model with growing revenue, allowing a large user base to be attracted and converted into paying subscribers.
- Wide range of supported activities and device integration, allowing streamlined data collection and boosting accessibility, which is crucial for user retention.

Weaknesses

- Reliance on subscription revenue, meaning they must continue to improve the premium features or risk losing their main source of income.
- Competition in the fitness app market, against competitors such as Nike Run Club and Peloton, who could be impacting Strava's growth.
- Potential for data privacy concerns, meaning Strava must ensure their security systems are robust to retain their user's trust and to comply with GDPR.

Opportunities

- Expand into new fitness verticals, by reaching beyond running and cycling and diving deeper into different activity types to diversify their user base and income streams.
- Develop more personalised training and coaching, which could further improve their premium services and retain their subscribers
- Strengthen partnerships and integrations, allowing to further streamline the user experience.

Threats

- Intense competition from other fitness apps, leading to market saturation and the need for innovation to maintain growth.
- Changes in data privacy regulations, which could lead to greater costs to comply with and to limit data usage.
- Difficulty in converting free users to paid subscribers, which could lead to future inability to generate substantial revenue. [8]

Legal and ethical considerations

Legal

- Data privacy regulations, such as GDPR and CCPA must be complied with when collecting, using and storing personal data.

- Terms of service, user agreements, copyright adherence and company responsibilities means that Strava must actively monitor and manage user-generated content.

Ethical

- Transparency in data collection, processing and sharing must be apparent in order to put the user's worries at ease.
- Strava's application must be designed with accessibility for all, to not exclude users with disabilities. [7]

Q2: Enterprise

Name and logo



(Figure 9 – The logo for TheRunHub app, created on www.canva.com)

The logo features:

- The company name, TheRunHub, and the company slogan, “Running made simple”, which refers to the simplicity of the centralised app.
- A theme of red (#ba0b11), which will be used as the main theme of the app.

- A cartoon of a running man, so that the viewer can instantly associate the logo with running.
- Musical notes, which is a reference to the app's USP, the sophisticated music section.

Business Type

The company's business type would be a Private Limited Company (PLC). A PLC's advantages include:

- Limited liability, which protects assets
- Easier to raise funding through shares
- Enables splitting up ownership and management
- Adds credibility as it's seen as more legitimate by customers and investors [9]

Business Strategy

The main strategy that will be used for this app is a 'freemium' strategy. This involves releasing a free, basic version of the app, whilst also offering a more advanced, premium version of the app with more advanced features and functionalities, through a paid subscription, which "allows businesses to acquire a large user base while eliminating the initial cost barrier." [10]

The premium features would include:

- AI tailored training plans and coaching
- Advanced health and performance analytics
- More new innovative features added in the future
- AI music system

A larger target audience could also be acquired by:

- Forming brand partnerships with sportswear brands (e.g. Hoka, Asics etc.)
- Sponsoring social media influencers running in events (e.g. London Marathon)
- Working with fitness influencers, to tap into their fitness-enthusiastic audience
- Target small events, such as Park Runs and run clubs to target all market areas.

Funding Initiatives

- Premium subscriptions, likely in the range of £5-£10 per month
- Brand partnerships
- Government/University grants and funding schemes
- Reward-based Crowdfunding, on platforms such as Kickstarter and Indiegogo, targeting running communities
- Accelerators [11]

4. Task 3: Project Reflection

Skill development

The skills that will be developed through this project are:

- Programming languages, such as JavaScript, HTML, CSS and PHP
- User interface design and User experience design through developing an effective GUI and an efficient, useful application
- Data management through using databases, API's, cloud services and encryption to store, retrieve, update and secure all data
- Testing & debugging during the entire 'Development' stage of the project timeline
- Communication and collaboration through project management tasks, such as developing a Gantt chart and project timeline, managing project constraints and deciding on a project development method [12]

Societal impact

The factors of this running app that will positively impact society are:

- Physical and mental health of the users will improve, as users will be more physically active and should feel healthier and happier
- A larger, more enthusiastic fitness community will provide extra social support and motivation to users, allowing them to lead healthier and more sociable lives
- Increased digital accessibility to running tools, such as GPS tracking and training plans will make the whole experience of running and fitness feel more convenient and reduce friction between going for a run [13], [14]

Risks & challenges

Risks/challenges that the project could face, and how they can be reduced/removed, are:

- Scope Creep
 - Solved by implementing a robust project management framework
- Communication problems
 - Solved through frequent check-ins, such as the feedback loops and code reviews which are mentioned previously
- Data Security issues
 - Solved via secure authentication, strict GDPR compliance and robust physical & digital security
- Tech complexity
 - Solved through thorough research of available tech options, avoiding over-engineering to keep simplicity, and using standardisations & patterns to simplify designs [15]

- Market competition and developments
 - Solved by developing a unique user experience, constantly innovating to stay ahead of the market curve, and working with API connected services to improve overall experience [16]

5. Conclusion

In conclusion, the core problem being faced was the overload of different running related apps, with the average user using several different platforms to manage their fragmented running experience. This is where the proposed application for this project, an all-in-one, centralised running application, TheRunHub, was born.

Throughout the course of this project life cycle, several areas such as a detailed project management plan, project design work and enterprise analysis have all been developed and refined into a viable solution to fill this identified gap in the fitness app market. This included defining a development methodology, a project timeline, multiple different visual design articles and performing market analysis on competitors to allow the application to be fine tuned and tailored to provide to most innovative, robust and satisfactory solution that it could be.

The proposed application combines all core running functionalities, such as GPS tracking, activity recording, performance analytics, statistics, planning, nutrition, music and social sharing into one seamless interface, providing secondary advantages, such as improved physical and mental well-being and a thriving online fitness community. This unified, innovative platform, which demonstrates creativity, critical thinking and practical application, provides the market with the credible, impactful solution that it needs.

References

- [1] “What is an API?,” Postman, [Online]. Available: <https://www.postman.com/what-is-an-api/>. [Accessed 12 08 2025].
- [2] I. Khan, “What Are The Required Tools, Technologies and Resources to Build a Scalable Software Product?,” Linkedin, 16 02 2023. [Online]. Available: <https://www.linkedin.com/pulse/what-required-tools-technologies-resources-build-scalable-khan>. [Accessed 05 08 2025].
- [3] A. Petrov, “How long does it take to develop an app: timeline breakdown, examples & tips,” itransition, 22 05 2025. [Online]. Available:

<https://www.itransition.com/services/application/development/timeline>.
[Accessed 05 08 2025].

- [4] T. Asana, “6 project constraints and how to manage them for project success,” asana, 04 03 2025. [Online]. Available: <https://asana.com/resources/project-constraints>. [Accessed 08 12 2025].
- [5] A. Nikolaieva, “10 Best Software Development Methodologies,” uptech, 11 08 2025. [Online]. Available: <https://www.uptech.team/blog/software-development-methodologies#:~:text=The%20Agile%20software%20development%20methodology,ll%20want%20to%20use%20Agile..> [Accessed 12 08 2025].
- [6] “UML Activity Diagram Tutorial,” Lucidchart, [Online]. Available: <https://www.lucidchart.com/pages/uml-activity-diagram>. [Accessed 15 08 2025].
- [7] “STRAVA PESTEL ANALYSIS,” CANVAS, [Online]. Available: https://canvasbusinessmodel.com/products/strava-pestle-analysis?srsltid=AfmBOop0pUkWEecrjhbiY5mEHweOdqQ2ntyivCCiIT-QRbP_7y7ncO65. [Accessed 12 08 2025].
- [8] “STRAVA SWOT ANALYSIS,” CANVAS, [Online]. Available: <https://canvasbusinessmodel.com/products/strava-swot-analysis?srsltid=AfmBOoqvruZcsxPhetnePg87CVyPbcfG0KGDUPTS4FyRC8WDL8rW3FSK>. [Accessed 12 08 2025].
- [9] A. Solo, “Choosing a UK Business Structure: Types, Pros, Cons & Key Tips,” sprintlaw, 28 04 2025. [Online]. Available: [https://sprintlaw.co.uk/articles/choosing-a-uk-business-structure-types-pros-cons-key-tips/#:~:text=Private%20Limited%20Company%20\(Ltd\),company%20number%20and%20statutory%20registers\)..](https://sprintlaw.co.uk/articles/choosing-a-uk-business-structure-types-pros-cons-key-tips/#:~:text=Private%20Limited%20Company%20(Ltd),company%20number%20and%20statutory%20registers)..) [Accessed 12 08 2025].
- [10] S. Lennox, “How to build a profitable freemium business,” Startups., 30 06 2023. [Online]. Available: <https://startups.co.uk/strategy/freemium-business-model/>. [Accessed 12 08 2025].
- [11] GrantUp, “How UK Startups Can Secure Funding Without Giving Away Equity,” GrantUp, 29 05 2025. [Online]. Available: <https://www.grantup.co.uk/resources/blog/how-uk-startups-can-secure-funding-without-giving-away-equity#:~:text=Crowdfunding&text=Reward%2DBased%20Crowdfunding%3A%2>

0Platforms%20like,to%20provide%20loans%20with%20interest.. [Accessed 12 08 2025].

- [12] P. Korat and A. Rehman, "You're tasked with designing a mobile app. What are the most important skills you need?," Linkedin, [Online]. Available: <https://www.linkedin.com/advice/1/youre-tasked-designing-mobile-app-what-most-kg9lf>. [Accessed 08 15 2025].
- [13] J. Cai and G. Li, "Exercise or lie down? The impact of fitness app use on users' wellbeing," *Front Public Health*, 2024.
- [14] J. Hu, W. He and J. Zhang, "Examining the impacts of fitness app features on user well-being," *Information & Management*, vol. 60, no. 5, 2023.
- [15] "Reducing Complexity in Application Development: Strategies for Simplifying Your Architecture," Architech, [Online]. Available: <https://www.architech.ca/articles/reducing-complexity-in-application-development-strategies-for-simplifying-your-architecture#:~:text=Decoupling%20and%20modularity%20involve%20breaking,scale%20and%20maintain%20the%20application..> [Accessed 15 08 2025].
- [16] "Modern App Development Risks to Watch Out For," Kiuwan, 04 04 2024. [Online]. Available: <https://www.kiuwan.com/blog/modern-application-development-risks/>. [Accessed 15 08 2025].