Feasibility Report:

Automated Route Generator

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# Introduction

This feasibility report provides a examination of a proposed web application designed to enhance the running experience by automatically generating varied and engaging running routes. The application utilises a mapping API to plan routes based on user-defined parameters, ensuring that runners consistently find new paths to explore, thus mitigating the monotony of repetitive routes.

# Background

The proposed web application addresses a significant issue for runners, the monotony of repetitive routes. Traditional methods of discovering new running paths have proven insufficient, lacking the automation and customisation modern runners desire. Existing applications have been designed to solve this problem. However, there is an opportunity to build and develop this structure to implement additional intuitive features.

By utilising mapping APIs and incorporating unique features such as hot spots, destinations, and leaderboard functionalities, the application aims to provide personalized and engaging running experiences. Further features that could be implemented are weather updates, customisable training plans and gamification in order to keep the user engaged. This approach not only addresses the immediate need for route variety but also enhances overall user satisfaction and motivation. The project has the potential to attract a wide audience, offering a valuable tool for seasoned runners, cyclists, those seeking new challenges and newcomers looking for motivation and guidance.

# Outline of the Project

## Objectives

The primary objective is to develop an automated route planning system that makes use of a mapping API to generate daily running routes based on user-defined parameters. The intended purpose is to make running more engaging. In addition, the application intends to incorporate features like hot spots, destinations, and leaderboards in order to create a user-friendly environment that is dynamic and interesting. The project will incorporate additional features like social integration, individualised training plans, and gamification to maintain users' constant engagement and motivation over the long term.

## Scope

The scope of the project includes a number of essential components. Firstly, the project will concentrate on developing a user interface that is simple to use and accessible, enabling runners to easily input their preferences and interact with the application.

In addition, a dependable mapping API will be incorporated into the application to facilitate efficient and precise route planning based on user-defined parameters. In order to create interesting and diverse running routes, this integration is essential. The application's core features, such as hot spots, destinations, and leaderboards, will be developed to increase user engagement and functionality.

Social integration and individualised training plans should be incorporated into the project to further enhance the user experience. Individualised training plans will be tailored to each person's fitness goals, and social features will encourage community interaction. Before the application is released, it will undergo extensive testing and quality assurance to guarantee its consistent performance on a variety of devices and scenarios.

## Goals

The project aims to provide runners with new and interesting paths to explore daily, reducing the monotony of repetitive routes. It will offer personalised running experiences tailored to individual user preferences and goals, creating a sense of community and competition among users through social features and challenges. Additionally, the project will integrate health and wellness features to assist runners in achieving their goals.

## Tangible Outcomes

The project intends to deliver a fully operational web application with both core and additional features fully implemented. It will provide an intuitive and visually appealing user interface designed for ease of use. The application will offer reliable route planning that adapts to individual user preferences and environmental conditions. Additionally, it will include features aimed at enhancing user motivation, encouraging users to run more frequently and explore new routes.

## Envisaged Results

The anticipated results of the project is to create a virtual space for runners to track, plan and create new runs through a engaging and intuitive application. The application is expected to generate positive user feedback, with high levels of satisfaction regarding its features and performance. It aims to establish, with new features, its individuality in the running and fitness app market and to attract a diverse user base. Additionally, the project envisions continuous improvement through ongoing enhancements and updates driven by user feedback and advancements in technology.

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# Conclusion

The proposed automated route generator web application presents a promising solution to the common issue of route monotony faced by runners. By utilising mapping APIs, the application is designed to automatically generate engaging and varied running routes based on user-defined parameters. This approach not only addresses the need for route diversity but also aims to enhance user experience through features such as hot spots, destinations, leaderboards, and customisable training plans.

The application’s innovative use of technology to incorporate personalised and dynamic route planning will significantly improve user engagement and satisfaction. By offering tailored running experiences and fostering a sense of community through social features, the project is poised to attract a broad user base. Additionally, the integration of features such as weather updates and gamification will further strengthen user motivation and retention.