

MINI-PROJECT

(2020-2021)

Interval Timer App

(App Development)

SYNOPSIS

Department of Computer Engineering and Applications

Institute of Engineering and Technology



TEAM MEMBERS

AYURISH CHANDNA

(181500166)

AMAN KUMAR

(181500072)

SUPERVISED BY

Dr. MANOJ VARSHNEY

(Asst. Professor)

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1. The Problem Statement

In our daily life we see that we are so busy in our daily activities that we have forgotten about our health which is the most important priority. During Covid we saw how people were suffering and so many people died also. This time made us think about the importance of health. How important it is to stay fit ? So keeping this in mind we came up with an idea to develop Fitness Interval Timer App.

2. Reason for selecting the Topic

The reason is that we are nowadays seeing people are suffering from diseases and we see immense crowd in hospitals. People are spending all the savings in the hospital for their treatments just to save life. So if we take out just 10-20 minutes for yoga or meditation we can maintain our health at great level. The idea came to develop app that will help you stay fit. Fitness Interval Timer App is an easy to use special app for high intensity interval Training. It has the ability to display the number and duration of rounds and cycles.

3. Objectives of the project

The main objective of this app is for people who want to become consistent in their workout but they can't do due to lack of planning and laziness. People who are very conscious for their health we decided to make an app which will help them in maintaining their daily routine workout by setting a list of exercises and set a duration for each instructions. For example you have woken up early in the morning and decided to do some workout. You have planned a list of exercise that will be done on a particular day. This app will help you to follow those instructions by setting a timer for each exercises and tell you about ending of particular timer. It is important to have Interval training because it trains your heart to pump more blood to the muscles and it trains your muscles to extract that oxygen more efficiently, making all your other workouts easier to handle.

4. Future Scope

Interval training enables you to complete an effective workout in less time than a standard cardiovascular workout. For example, you might complete a workout in about 15 to 20 minutes or less instead of 40 minutes. You'll improve your aerobic capacity.

So the future scope of fitness apps is very vast and it has an infinite number of benefits, especially for young people. So here are some of the benefits that fitness app provides -

- It can help you burn more calories. ...
- It may help you lose weight. ...
- It builds many muscle groups. ...
- It improves oxygen and blood flow. ...
- It can help lower blood pressure and blood sugar.

5. Hardware & Software to be used

Hardware requirements –

1. System Software

- Operating System (Windows 10, Linux)
- Core i3 Processor (minimum)
- Minimum 8 GB Ram

Software Requirements

1. Application Software

- Android Studio/ VS code

2. Programming Language

- Dart

3. SDK used

- Flutter

6. Testing technologies to be used

To test this app we will use android emulator or our own smartphone as a physical device.

7. What contribution would the project make and where?

This project will give a very crucial contribution to the field of health care. It will help people improve their health which will help them maintain strong immunity. It will boost the quality of life and will become confident and energetic. It will maximize cardiovascular benefits, so it can quickly increase stroke volume, making your heart stronger and more efficient. It also maximizes the other benefits of cardiovascular exercise, including decreasing your risk of both heart disease and high blood pressure

8. Literature Survey

This interval training method combines short, high intensity bursts of speed with slow recovery periods of mild activity or rest and helps to improve your performance incredibly. By varying the intensity of your workout, you'll reap the benefits of both aerobic and anaerobic training. Overtime, HIIT can help improve your speed, strength, and endurance.

Interval training (IT) has been used for many decades with the purpose of increasing performance and promoting health benefits while demanding a relatively small amount of time. IT can be defined as intermittent periods of intense exercise separated by periods of recovery and has been divided into high-intensity interval training (HIIT), sprint interval training (SIT), and repeated sprint training (RST). There is an disadvantage as well -

Interval training is tough on your body. If performed too often they increase the risk of overtraining.

9. Methodology

We will develop a fully-functional Fitness Interval Timer app that targets mobile platforms (Android/IOS) using Flutter. Here are some modules that we are going to develop in this Flutter App –

- a. Timer display
- b. Organizing files
- c. Adding features

This Fitness Interval Timer app can be a highly effective way for people to improve health. It will maximize cardiovascular benefits, so it can quickly increase stroke volume, making your heart stronger and more efficient. It also maximizes the other benefits of cardiovascular exercise, including decreasing your risk of both heart disease and high blood pressure.

10. Conclusion

High-intensity interval training is currently among top fitness trends in the world. It is a training technique that requires high effort through intense burst of exercise followed by short rest period. According to recent researches, supervised HIIT can lead to beneficial impact on athletic performance and fat loss but should not be used by an inexperienced individual as well as elder population.

It is important to have Interval training because it trains your heart to pump more blood to the muscles and it trains your muscles to extract that oxygen more efficiently, making all your other workouts easier to handle.

If we add exercise meditation or yoga in our daily routine it can do wonders. Adopting a healthier lifestyle is a long-term investment but it benefits a lot when during your old age.