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המכללה האקדמית להנדסה ע"ש סמי שמעון

מהנדסים לעולם טוב יותר!

בסביבת PROJECT ORIENTED

WORKOUT PARTNER

WebApp to track workouts by self-monitoring and goal-setting for motivation.

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Project Introduction

Background: Physical fitness and exercise are important aspects of a healthy lifestyle, and many people strive to incorporate regular workouts into their routine. However, keeping track of progress and staying motivated can be challenging. This is where our web app comes in - it provides a platform for users to take notes on their workouts and interact with a community to stay motivated and receive support.

Objectives: The main objective of our web app is to provide a convenient and effective way for users to track their workout progress and engage with a community of like-minded individuals. By providing features such as note-taking, chat/forums, and music streaming, we aim to make the workout experience more enjoyable and motivating.

Scope: Our web app is designed for individuals who are interested in tracking their fitness progress and seeking community support. It allows users to add and delete workouts, track their water intake, access exercise ideas, and stream music from Spotify. In addition, users can interact with other members of the community through the chat/forum feature. However, it is important to note that our web app is not intended to replace professional medical advice or guidance from a certified fitness trainer. Users should consult with a healthcare provider before starting any new exercise regimen. Additionally, we have designed our app to be as user-friendly as possible.

Literature Review

Introduction

Health is a very important aspect of human life, especially now in 2022 with the global pandemic around us, physical health can make a big difference. Although a healthy lifestyle is a popular trend, there is still a large part of the population that does not engage in sufficient physical activity and therefore experience health problems that negatively affect their lives and may even lead to death
The purpose of developing the application is to encourage people to follow the training in order to be consistent and thus improve health, and there is also the option to consult with the community of users of the application which includes exercisers and trainers, and this option gives motivation to continue to persevere and develop together with the community.

A healthy lifestyle is a way of life that ensures that a person is fit physically, mentally and socially as proven in the article [1]. And this is in order to prevent diseases, especially heart diseases and premature death. Physical health means that the body is functioning properly, the risk of disease and injury is low. In order to maintain good physical health, a person needs to eat healthy, engage in regular physical activity and also get enough rest. An unhealthy diet and lack of physical activity can lead to overweight or even obesity, high levels of glucose and fat in the blood as well as high blood pressure. These can be causes of cardiovascular diseases. [2] In order to lower the risk, people should stick to a healthy diet and an active lifestyle, while avoiding smoking and drinking excessive alcohol. Physical health is about preventing disease and making sure the body works properly by balancing a diet and an active lifestyle.

According to a study from an article [3] group exercise participants showed significant improvements in all three quality of life indicators: mental, physical and emotional. They also reported a decrease in

perceived stress levels. For comparison, fitness participants who exercised alone and exercised twice as much on average, saw no changes significant in any measure, except for mental quality of life. Mobile applications provide options for personalized training systems, and the results seem promising. The approach in the article [4] combines theory and evidence-based behavior change techniques with a model-based thinking system, to provide the right support and strategies at the right time to achieve a physically active lifestyle.

Physical activity is important for health and should not be ignored. Everyone needs to learn how to make personal choices and use the [5] Techniques such as self-monitoring, providing feedback on performance, and goal-setting in order to ensure the best health for themselves. Everyone should engage in some form of physical activity regularly, all because it improves health by minimizing the risk of diseases such as diabetes and heart and bone disease. It also contributes to maintaining a healthy weight, while improving the condition of the heart, lungs, muscles, bones and joints. In addition, physical activity also improves flexibility and movement and takes care of our mental health. Physical activity makes us feel better by relieving anxiety and stress, giving us more confidence and self-esteem and improving the quality of our sleep.

Connection between mental health and physical activity.

Physical activity can benefit both physical and mental well-being. Different forms of physical activity (eg, aerobic vs. anaerobic; running vs. walking, swimming or yoga; high-intensity interval training vs. endurance training, etc.) affect physical fitness in different ways. For example, running may have a substantial effect on leg and heart strength, but only moderately on arm strength. We hypothesized that the mental benefits of physical activity may be similarly differentiated. We specifically focused on how different intensities of physical activity might relate to different aspects of memory and mental health.
Engaging in physical activity (physical activity) can improve physical fitness by increasing muscle strength, bone density, cardiovascular performance, lung capacity, and endurance. Exercise can also improve mental health and cognitive performance.
Exercise and stress: start moving to manage stress
Exercise in almost any form can act as a stress reliever. Being active can boost your feel-good endorphins and distract you from everyday worries.
You know exercise is good for your body, but you're too busy and stressed to fit it into your routine. Wait a second - there is good news when it comes to exercise and stress.
Exercise and Stress Relief
Exercise increases your overall health and sense of well-being, putting more amplitude in your step every day. But exercise also has some direct benefits for reducing stress.
It boosts your endorphins: Exercise may help increase the production of your brain's go-to neurotransmitters called endorphins.
It reduces the negative effects of stress: Exercise can provide stress relief to your body by mimicking the effects of stress, such as the flight or fight response, and helps your body and its systems train to work together through these effects. It can also lead to positive effects in your body including your cardiovascular, digestive, and immune systems by helping to protect your body from the harmful effects of stress.
It's meditation in motion: after a fast-paced game of tennis, a long walk or run, or a few laps in the pool, you may often find that you've forgotten the day's stimuli and concentrated only on your body movements.
When you begin to regularly shed your daily stresses through movement and exercise, you may find that this focus on one task, and the resulting energy and optimism, can help you stay calm, clear, and focused in everything you do.

It improves your mood: Regular exercise can boost self-confidence, improve mood, help you relax and reduce symptoms of mild depression and anxiety. Exercise can also improve your sleep, which is often disrupted by stress, depression and anxiety. All of these exercise benefits can ease your stress levels and give you a sense of control over your body and your life.
Put exercise and stress relief to work for you
A successful exercise program starts with a few simple steps.
Consult your doctor: If you haven't exercised in a while or have health concerns, you may want to talk to your doctor before starting a new exercise routine.
Walk before you run: Build your fitness level gradually. Excitement from a new program can lead to overdoing it and possibly even injury.
Do what you love: Almost any form of exercise or movement can increase your fitness level while reducing your stress.
Record and track: In your schedule, you may need to do a morning workout one day and an evening activity the next. But taking some time to move each day helps you make your exercise program an ongoing priority. Aim to include physical activity in your schedule during the week.
Persist:
Starting an exercise program is only the first step. Here are some tips for maintaining a new routine or refreshing a tired workout:
Set goals wisely: Write down goals wisely - goals that are specific, measurable, attainable, relevant and time-bound.
Find a buddy: Knowing someone is waiting for you to show up at the gym or park can be a powerful motivator.
Change your routine: If you've always been a competitive runner, look into other, less competitive options that may help reduce stress, such as Pilates or yoga classes.
Exercise in short bursts: Even short bursts of exercise offer benefits. For example, if you can't fit in one 30-minute walk, try several 10-minute walks instead. Being active throughout the day can add up to provide health benefits. Take a mid-morning or afternoon break to move and stretch, go for a walk, or do some sit-ups or push-ups.

In the context of the above article, the purpose of developing our app is to encourage people to track their workouts in order to be consistent and thus improve mental health.

Relationship between:
healthy food, alcohol, physical activity

While recent lifestyle studies have investigated the role that food, alcohol or activity have on physical activity on health and well-being, few have investigated the interrelationships between these behaviors and the impact this has on healthy lifestyles. Given the long-term health benefits associated with leading a healthier lifestyle, this study seeks to: investigate the interrelationships between food, alcohol and physical activity behaviors of older adults and young people (19-26 years old) in the North East of England. A healthy lifestyle has been shown to be beneficial for many reasons, such as weight regulation, happiness and well-being, and to reduce the personal, social and economic consequences of illness and lifestyle-related diseases. While recent lifestyle studies have begun to investigate the The complex relationship between food, alcohol, and physical activity and how it relates to weight management, health status, and behavioral change, limited attention has been paid to how these three behaviors interact with each other in determining an individual's daily energy balance (energy consumed and energy expended) and how such interactions can affect an individual's overall weight, health status, and lifestyle choices. This exploratory study involved the use of self-reported lifestyle diaries and in-depth interviews to investigate the lifestyle behaviors of young adults.
Young adults seek to compensate for unhealthy behaviors with healthy behaviors. In fact, they change their behaviors, preferring to change their eating and activity behaviors to compensate for less-than-recommended alcohol consumption behaviors. As a result, the main recommendations emerging from this study are that young adults should be encouraged and facilitated to adopt a sense of balance, avoid unhealthy changes, enjoy healthier eating, increase their participation in physical activity, and drink alcohol in very moderate amounts. Emphasizing how to achieve a balanced lifestyle, highlighting how guideline recommendations are applicable and relevant to them, and considering wider environmental changes that can better support healthier behavioral choices are all key areas for action.

In the context of the above article, the purpose of developing our app is to encourage people to track their workouts in order to be consistent and thereby improve their physical activity with regard to food before and after training.

Group exercise improves the quality of life, reduces stress much more than individual training

"The communal benefits of getting together with friends and colleagues, and doing something difficult, while encouraging each other, pays off beyond exercising alone," said Dana Yorks, DO, lead researcher on this study.
Dr. Yorks and her research colleagues at NYU College of Osteopathic Medicine England recruited 69 medical students—a group known for high levels of stress and low self-reported quality of life—and allowed them to self-select a twelve-week training program, either in a group or as individuals. A control group avoided physical activity other than walking or cycling as a means of transportation.
Once every four weeks, the participants completed a survey and were asked to rate their perceived stress levels and quality of life in three categories: mental, physical and emotional.
Those participating in group exercise spent 30 minutes at least once a week in CXWORX, a core-strengthening fitness and functional training program. At the end of the 12 weeks, their average monthly survey scores showed significant improvements in all three quality of life measures: mental (12.6 percent), physical (24.8 percent), and emotional (26 percent).
They also reported a 26.2 percent decrease in perceived stress levels.
In comparison, individual fitness participants were allowed to maintain whatever exercise regimen they preferred, which could include activities such as running and weight lifting, but they had to exercise alone or with no more than two partners. On average, the individual exercisers exerted twice as much, and did not see significant changes in any measure, except for the mental quality of life (an increase of 11 percent). Similarly, the control group saw no significant changes in quality of life or perceived stress.
"Medical schools understand that their programs are demanding and stressful. In light of these data on the positive impact that group fitness can have, schools should consider offering group fitness opportunities," said Dr. Yorks. "Giving students an outlet to help them cope with stress and feel better mentally Mentally and physically can alleviate some of the burnout and anxiety in the profession."

In the context of the above article, for the purpose of developing our application, there is the option to consult with the application's user

community, which includes trainers and coaches, and this option gives motivation to continue to persevere and develop together with the community.

Encouraging physical activity through a personalized mobile system

It is widely believed that mobile technology can help support health in general and promote physical activity specifically, one of the main reasons for this belief is that mobile technology provides a good infrastructure for personalization and adaptation of the intervention. We can track people continuously and give feedback at any moment in time, taking into account the specific context.

Although there is no consensus on the number of behavior change techniques associated with achieving better outcomes, certain techniques (including self-monitoring, performance feedback, and goal setting) are associated with being effective. Because these behavior change techniques can be implemented in health apps and because interventions involving apps show promising results, we expect apps to be an effective way to promote physical activity. However, it remains unclear whether existing apps are successful in achieving long-term behavior change.

Most of the apps (60 percent) allow support from colleagues or other users by providing a community, none of the apps provide support in the form of predictions or personal advice. Only one app (1 percent) suits the user over time. These results show that some features are well represented among current smartphone apps, but other options are underutilized. This provides an opportunity for future research and development of apps to promote physical activity.

User Experience and Expectations

To ensure meaningful discussions, we asked participants (30 participants) to download and use an existing app, so that their experiences could serve as input for discussions. We encouraged them to share their experiences and opinions. The results of these discussions are consistent with the online survey. The participants preferred a personal (virtual) trainer who helps the user set goals, while supporting and motivating the user to achieve the goals they set themselves.

Setting goals and an option for training by a personal trainer in a variety of areas

Existing apps for physical activity differ in the way users can set their goals. Almost all participants who contributed to the focus group discussions preferred a virtual trainer in combination with setting goals.

The participants wanted to choose between different goals or to be able to set A new goal. The app should replace a personal trainer by and remind them to exercise or update them on their progress. Participants came back and mentioned that it is important for the app to set a schedule, set a task, and work towards the goal set by itself.

Choice of training

strategies ensure training strategies are based on techniques based on behavioral change, such as guidance for setting goals, providing information about the consequences, and rejecting identification of barriers.

Implementation of training strategies

An example of training strategies that require quite extensive thinking are interventions in the social network. These interventions are based on a person's social circle - it is believed that this circle plays an important role in the adoption of certain health behaviors

. Strengthen ties with people on the social network who are physically active and weaken ties with people who have a negative attitude toward physically active behavior.

Promoting physical activity is a public health priority in most Western countries, and mobile technology appears to provide useful ingredients for automated personalized training to improve physical activity.

In the context of the above article for the purpose of developing our application there are personalized customization options for the user.

The Use of Self-Monitoring and Technology to Increase Physical Activity: A Review of the Literature

By applying self-monitoring interventions to the field of physical activity, there is a potential for people to meet these recommended requirements.
Self-monitoring, goal-setting, self-recording, and feedback procedures are commonly used interventions in the field of applied behavior analysis (ABA). Self-monitoring is a recording procedure that involves an individual observing and recording his or her target behavior(s) (Cooper, Heron, & Heward, 2007). The benefits of using self-monitoring are that few training sessions are needed, and it can be implemented by individuals without a background in behavior analysis, many of which individuals do daily (e.g., caloric intake, monitoring blood glucose, recording expenses in a checkbook). With advances in technology over the last 20 years, self-monitoring procedures are no longer limited to just pen and paper recordings.
Clinicians and professionals can identify target behaviors and create goals with their clients during one session and later that evening can log onto a website or receive an email showing the data of target behavior.
Van Camp and Berth (2018) examined the validity of automated mechanical devices that measure physical activity and found that Fitbits were a reliable measure when compared to pedometers for counting daily steps. In addition, current technology allows the individual to create weight loss goals, such as how many steps are needed and the daily caloric intake that are required to reach a desired goal in a certain period of time. Furthermore, this type of technology allows clinicians to observe their clients' physical activity data such as daily step count, calories burned, and heart rate, directly from their smartphone.
In the context of the above article for the purpose of developing our application it provides Techniques such as self-monitoring, providing feedback on performance and goal-setting.

Summary

Physical activity can benefit both physical and mental well-being.
It increases general health and the sense of well-being, can increase self-confidence, improve mood, help relax and reduce Symptoms of mild depression and anxiety
The main recommendations that emerge from this role of food and alcohol are that young adults should be encouraged and facilitated to adopt a sense of balance, avoid unhealthy changes, enjoy healthier eating, increase their participation in physical activity and drink alcohol in very moderate amounts.
The community benefits of the meeting With friends and colleagues, and doing something difficult, while encouraging each other, pays off more than exercising alone
People participating in group exercise showed significant improvements in all three quality of life indicators: mental, physical and emotional. They also reported a 26.2 percent decrease in perceived stress levels.
activity specifically in a personalized way that helps the user set goals, while supporting and motivating the user to achieve their self-determined goals.
physicalA is a public health priority in most Western countries, and mobile technology seemingly provides useful ingredients for automated personalized training to improve physical activity.

Market Survey

What does 'Workout Partner' innovating compared to what exists in the market today?

Phones Notes - Every phone has Notes app to write notes or a list (such as exercise list).
Phone Timer - Every phone has a Timer which usualy is inside the Clock app, which can be used to set a timer, or a countdown.
Whatsapp app - The most popular chat app, can be used to chat with your friends and family and etc, and can be used as "notes" if you create an empty group.
Google Fit - The most popular fitness app to collect data about your physical activity, like distance and steps, and more.
MyFitnessPal - a very popular app that tracks diet and exercise, uses gamification elements to encourage adherence to exercise and diet goals.
Workout Partner - Our app, the goal is to combine all the main features of each app above and apply them into our app, but with out own touch - to make it better.

Features	Phone Notes	Phone Timer	Whatsapp Group	Google Fit	MyFitnessPal	Workout partner
Add a detailed Exercise to my list of Exercises	✅	❌	✅	✅	✅	✅
Community Chat/Forum	❌	❌	✅	❌	❌	✅
Track my total workout time with Stopwatch	❌	✅	❌	✅	❌	✅
Set Rest time with a Countdown Timer	❌	✅	❌	❌	❌	✅
Exercises Examples page	❌	❌	❌	❌	✅	✅
Water Consumption tracking	❌	❌	❌	✅	❌	✅
Music playlist page	❌	❌	❌	❌	❌	✅
BMI calculator page	❌	❌	❌	✅	❌	✅

Methodology:

MERN Stack: We used the MERN stack - MongoDB, ExpressJS, ReactJS, and NodeJS - to build our web app. This technology stack provided us with a robust and scalable framework to develop the different components of our web app.

User Stories: Before starting the development process, we created user stories to define the features and functionality of the web app. This helped us to establish a clear vision for the final product and ensured that we were aligned with the needs of our target audience.

Version Control: We used Git as our version control system to manage our codebase and ensure that our team members could work collaboratively on the project. This allowed us to maintain a history of changes and quickly identify and resolve any conflicts that arose.

Continuous Integration and Continuous Deployment (CI/CD): We implemented a CI/CD pipeline using tools such as GitHub Actions and Heroku to automate the build, testing, and deployment processes. This helped us to ensure that our code was continuously integrated and tested throughout the development process, and that our web app was deployed to production efficiently.

Testing: We implemented a range of testing approaches, including unit testing, integration testing, and end-to-end testing, to ensure that our web app was reliable and performed as expected.

Documentation: We created documentation for our web app to ensure that it was easy for other developers to understand and work with our code.

User Acceptance Testing (UAT): We conducted UAT with a group of users to gather feedback and identify any issues or areas for improvement. This helped us to refine the user experience and ensure that our web app was meeting the needs of our target audience.

Overall, our methodology was focused on delivering a high-quality web app that met the needs of our target audience, while also ensuring flexibility, scalability, and maintainability throughout the development process.

Software Requirements Specification

for

WorkOut Partner

Version 1.0 approved

Prepared by:

Benny Shalom, Ruslan Borisevich.

SCE

02/10/22

1. Introduction

1.1 Purpose

The SRS is used to review the product and its cause, preparation for the upcoming writing of the code, general explanation of the system, so everyone who is concerned would understand the purpose and the features.

1.2 Project Environment

The code will be written in React, Javascript, HTML, CSS, NodeJS.
We will use the database mongoDB.
additional feature of chat/forum via Discord.
We will develop on OS windows 10 64bit system.

1.3 Hardware Interfaces

The app supports mobile phones based on Android and iOS.

1.4 Software Interfaces

There is no need to install additional software to use an app.

1.5 Operating Environment

The system runs on web browsers, iOS and Android, and will be available for download on Appstore and Google Play App Store

1.6 Intended Audience and Reading Suggestions

The intended audience of this document are People who want to track their Fitness progress, and want to be part of a fitness community, project owners, developers, marketing staff, QA, Ui, Ux.

1.7 Product Scope

The system provides an option for the user to take notes from every workout, in order to track his progress. In addition the user can use the chat/forum to ask or answer questions and get or give suggestions for workouts. The main goal of the product is to motivate the users by interacting with the community about the workout progress.

2. Overall Description

2.1 Product Perspective

This product is an alternative for manual notebook, which can be more easily and comfortably used. also it allows the user to communicate with other users that are using the product, in order to motivate and improve their sessions and fitness progress.

2.2 Product Functions

2.2.1 Sign-up: Every new user can sign up with mail and password.
2.2.2 Login: Users will be able to login by mail and password.
2.2.3 Log-Out: Users can log out of the system and return to the main menu, to sign up or login with a different user.
2.2.4 Add Workout: Users can Add a new workout, by writing the workout details and pressing 'add workout'
2.2.5 Delete Workout: Users can Delete a workout from the previous workouts list, by pressing the 'trash can' button on a workout
2.2.6 Enter Chat/Forum: Users can enter the Discord chat/forum by pressing the Discord widget icon.

2.3 User Classes and Characteristics

There is one type of user, which can use all the functions on section 2.2.

2.4 Design and Implementation Constraints

An internet connection is a must to run the app.

2.5 User Documentation

The user will be able to self learn the app functions very easily, as they are very intuitive.

2.6 Assumptions and Dependencies

Our Dependency is the database that we will create on MongoDB. The system will need live access to the database, otherwise it would not work. The Users will Sign up and login.

3. External Interface Requirements

3.1 User Interfaces

When entering for the first time, the Login page appears (Figure 1), the user can switch to Sign up (Figure 2).
The User can Add a new workout by writing the details and press the 'Add workout' button (Figure 3), after he pressed it, the workout will be added to his workout list (Figure 4).
The user can press on the Chat (Figure 1/2/3/4), and the main chat page will be opened (Figure 5), The User can then choose which channel to go, for example 'Public Channel' (Figure 6).

Figure 1

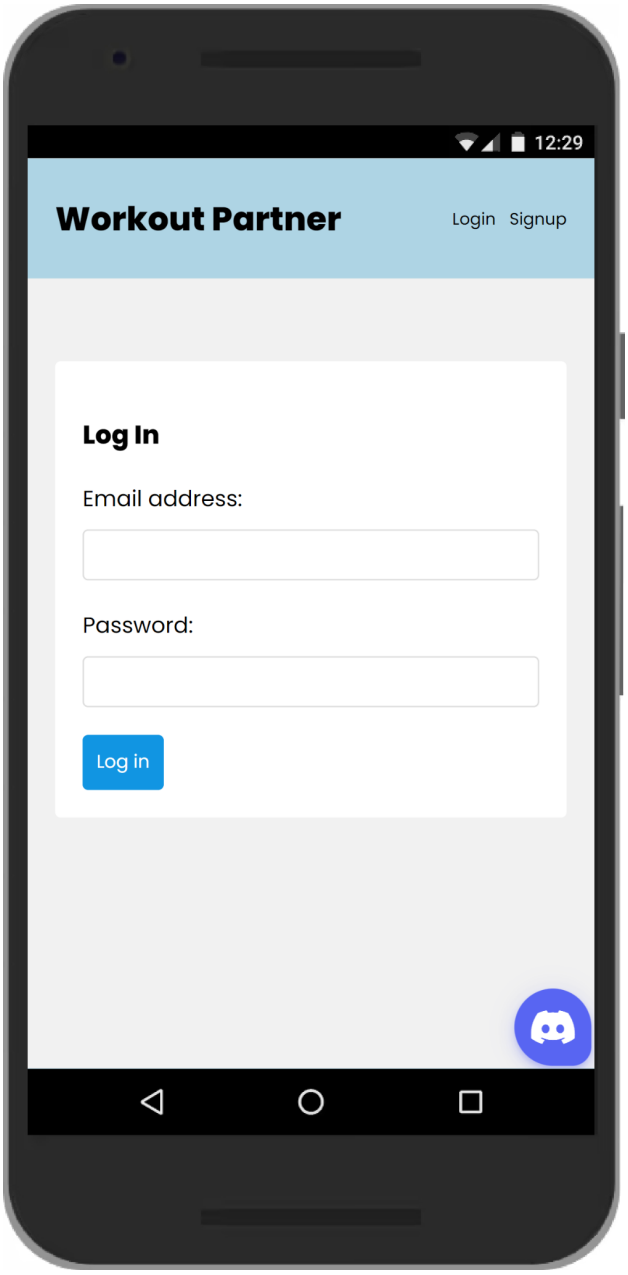


Figure 2

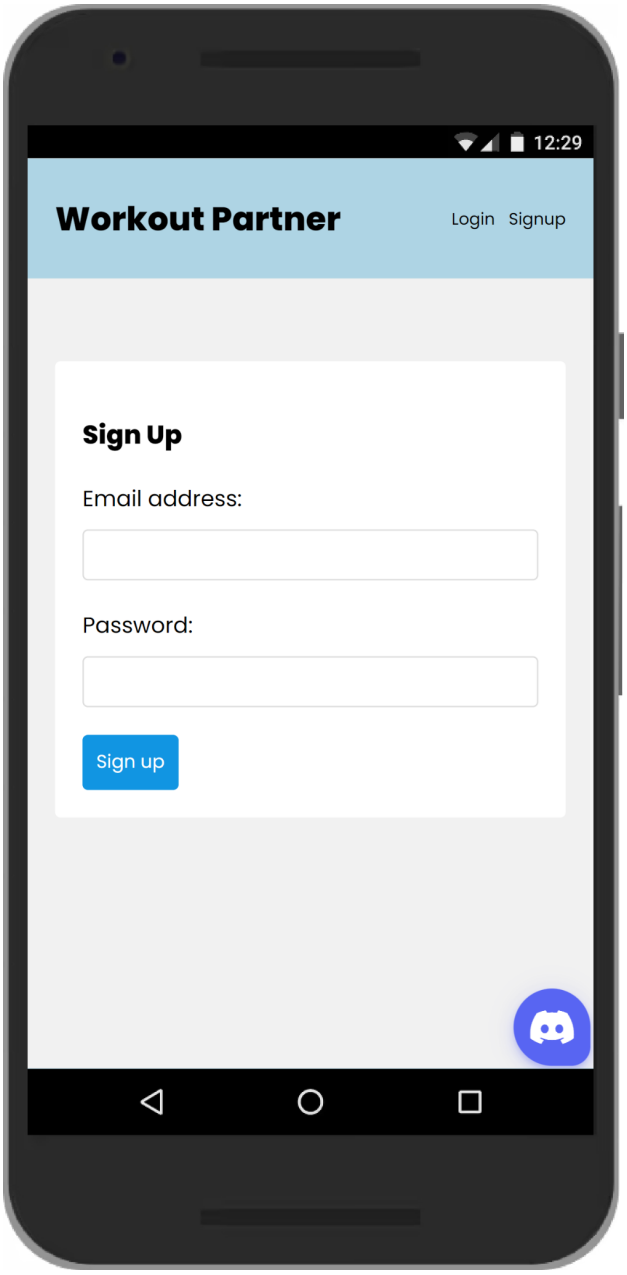


Figure 3

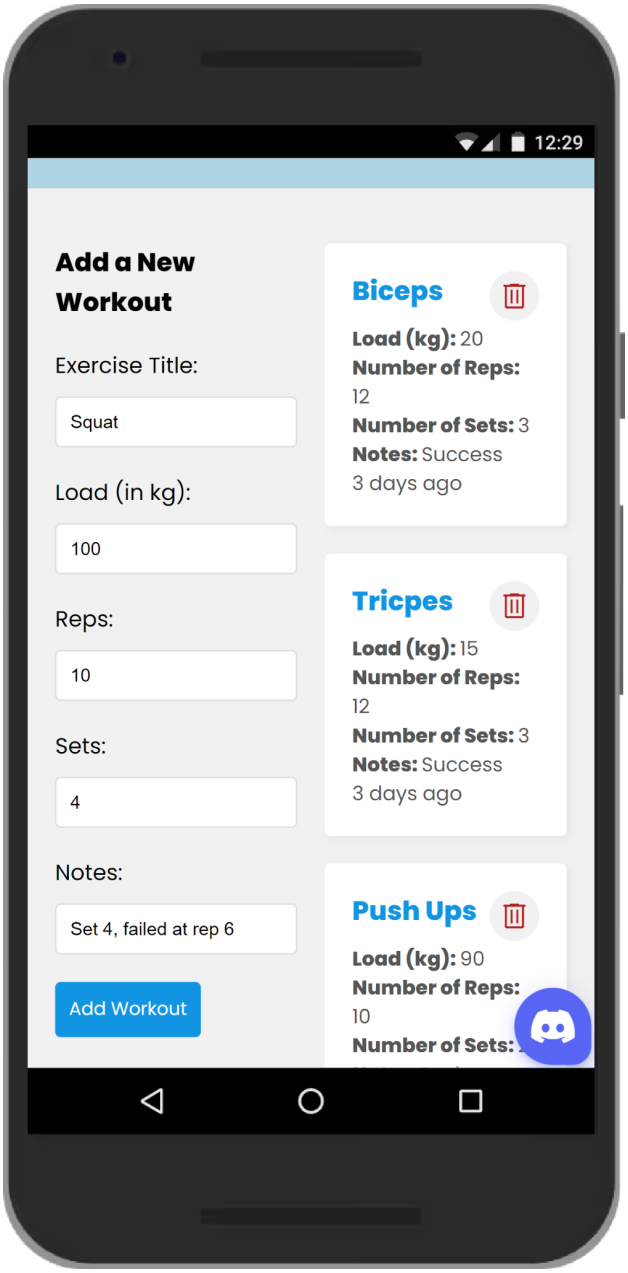


Figure 4

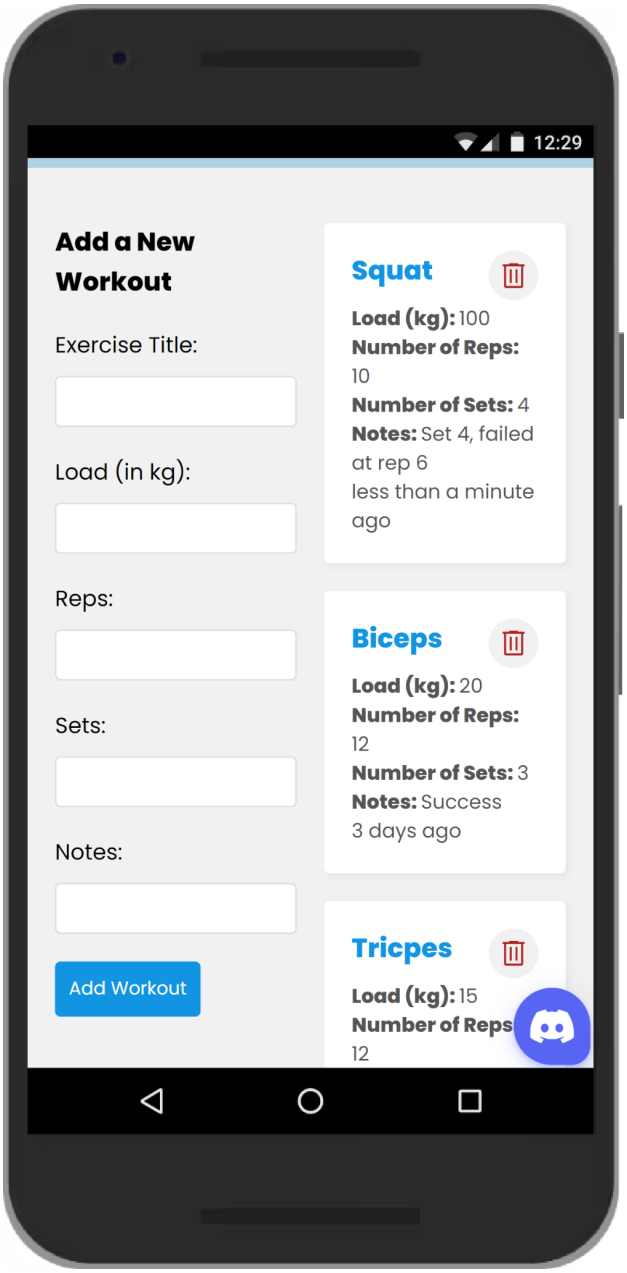


Figure 5

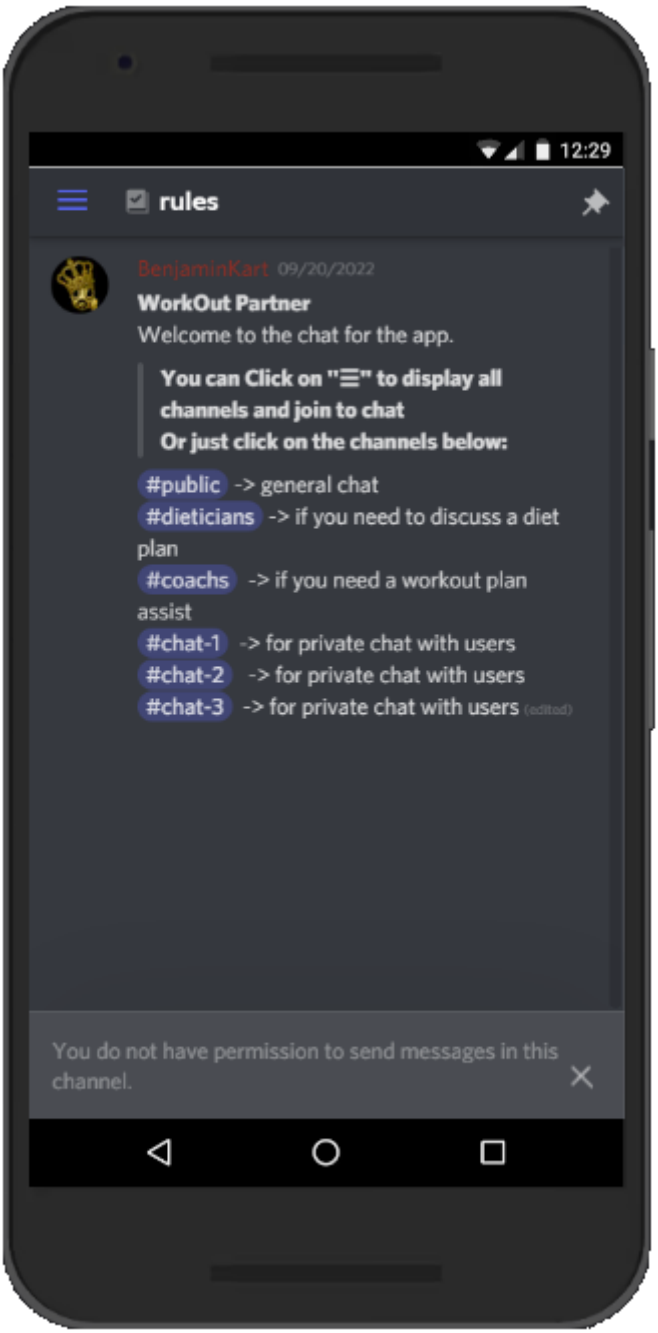
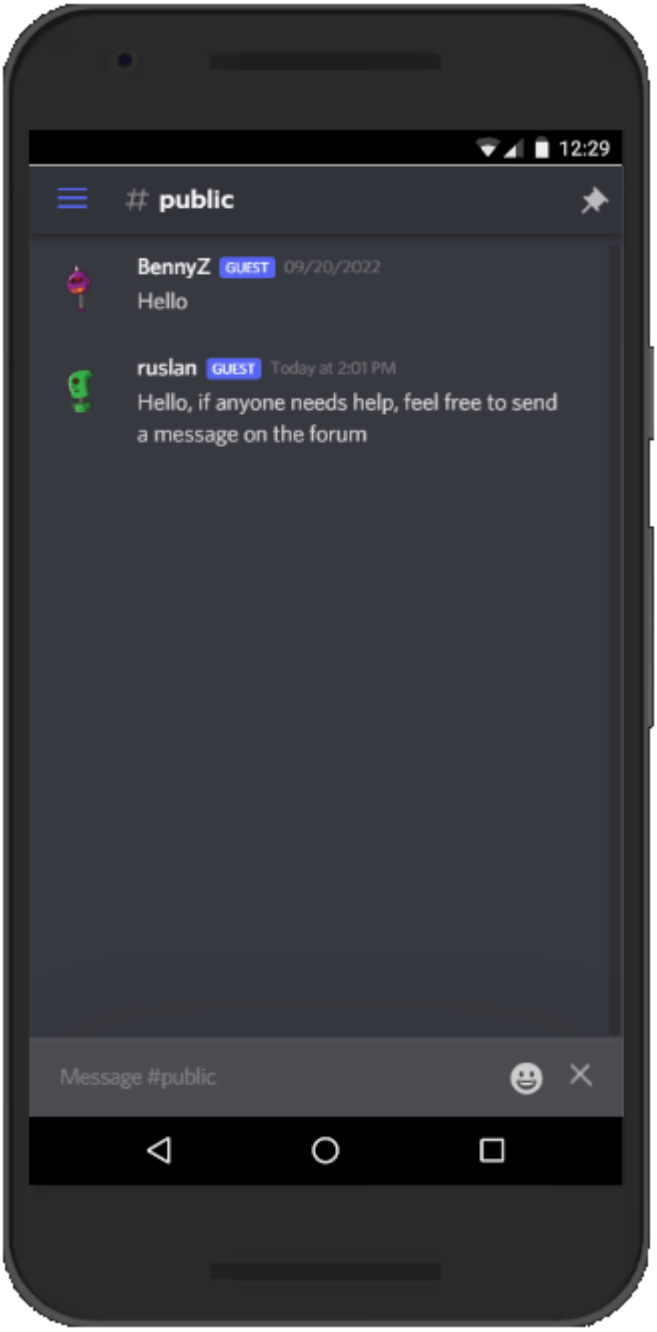


Figure 6



3.2 Communications Interfaces

The application will utilize the networking hardware of the user's device. Network communications capability will be used for authentication, connecting to the remote database (MongoDB).

4. System Features

4.1 Work out Add/Delete feature

4.1.1 Description and priority
This feature allows the users to add and remove workout form to/from the list.

4.1.2 Stimulus/Response Sequences
an ‘Add workout’ button is available on the page, the user fills the details and then the button is pressable, if the details are not filled, the button is not pressable.
and a button of ‘trash can’ is available on every past workout, so the user can click on it to delete it.

4.1.3 Functional Requirements
when the ‘add workout’ button is pressed with all the details filled, the new workout would be added to the workout list.
when the ‘trash can’ button is pressed, the workout is deleted from the list.

4.2 Chat/Forum Feature

4.2.1 Description and priority
the user can use the chat/forum to ask or answer questions and get or give suggestions for workouts.

4.2.2 Stimulus/Response Sequences
a ‘Discord Chat’ button is available on the right bottom of the page, the user can click on that button and the chat will open, then the user can choose to which channel he wants to join to start chatting.

4.2.3 Functional Requirements
the messages are being sent/received saved on the discord channels.

4.3 Login/SignUp Feature

4.3.1 Description and priority
The User must login to be able to view the workout lists and to add or remove them, and to be able to use the Chat/forum feature.
When the User signs up, there is a password validation, that it must be above 8 characters, and include both letters,numbers, and symbols combined, otherwise it will make an error.

4.3.2 Stimulus/Response Sequences
The Login/SignUp is available only at the start of the application. After the registration the system will check the user credentials and redirect him to the Main Page.
And when the user is logged, in the top right corner it shows his name and there is a LogOut button.

4.3.3 Functional Requirements

Each user must have a username and a password.
When those are entered, the system checks if the user and the password are correct, an error is displayed if incorrect, with an option to fix.

4.4 Total Workout Stopwatch Feature

4.4.1 Description and priority
The User must login to be able to view the stopwatch and to and to start / stop / reset / etc it.
to be able to track the total training time with a stopwatch to know how much time has passed since he started training, and to know the total time at the end.

4.4.2 Stimulus/Response Sequences
The stopwatch is available on the right upper of the page, when the user starts the stopwatch, it begins to run from 0, and the option to stop appears, when the user presses stop, the options to resume or reset appear.

4.4.3 Functional Requirements
The stopwatch timer continues to run in the background while the user uses other functions.

4.5 Rest Countdown Feature

4.4.1 Description and priority
The User must login to be able to view the rest countdown and to and to start / stop / reset / etc it.
to be able to do a rest countdown with a timer in order to set the amount of time he wants to rest (after a set for example), for convenience and fast use - we made the seconds steps to be 5 seconds on each step.

4.4.2 Stimulus/Response Sequences
The rest countdown is available on the left upper of the page, the user needs to adjust the seconds or minutes he wants to set as the rest period, and then he can press the start button on the rest countdown, it begins to run from the period set by the user, and the option to stop appears, when the user presses stop, the options to resume or reset appear, when the time hits zero, it alerts the user that the rest period is over.

4.4.3 Functional Requirements
The rest countdown continues to run in the background while the user uses other functions, and when it hits zero, an alert popup appears to the user.

4.6 Water Page Feature

4.4.1 Description and priority
A measure for drinking glasses of water in order to track the amount of water he drank during the workout.

4.4.2 Stimulus/Response Sequences

The rest water feature is available on the navigation bar, on the water page, there's an icon of a glass, options to adjust his water progress, and motivation messages appearing accordingly.

4.4.3 Functional Requirements
the user can press the “+” and “-” to adjust his water track accordingly.
Once he hits certain numbers of glasses, there's a motivation sentence which changes according to his water progress.

4.7 Exercises Page Feature

4.4.1 Description and priority
To get ideas/suggestions for fitness exercises with pictures for the user

4.4.2 Stimulus/Response Sequences
The rest Exercises feature is available on the navigation bar, on the Exercises page, there are alot of types of exercises the user can view.

4.4.3 Functional Requirements
the user can scroll between all the types of exercises available on the page with pictures, starting from one type of body muscles to the next, each type of muscle family has several training options.

4.8 Music Page Feature

4.4.1 Description and priority
To be able to listen to music in order to enjoy the workout more

4.4.2 Stimulus/Response Sequences
The Music feature is available on the navigation bar, on the Music page, there is the app’s music playlist that the user views and chooses what to listen from the list.

4.4.3 Functional Requirements
the user can scroll and choose the songs he prefers to listen to, and stop, pause, resume, etc.

4.9 BMI Page Feature

4.4.1 Description and priority
the possibility to know the BMI to receive some general insight about the users health.

4.4.2 Stimulus/Response Sequences
The BMI feature is available on the navigation bar, on the BMI page, there's a form to fill which gets the result by the Data that the user fills in.

4.4.3 Functional Requirements
the user needs to enter his age, height, weight, and by pressing the ‘calculate’ button he gets the result.
Also, the user learns more about what it means by pressing the directing link to “learn more”.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The product must be on a device with an internet connection available. The product must have a database to store the users login credentials and their workout lists.

5.2 Safety Requirements

Most important requirement is a daily backup to the system.

5.3 Security Requirements

The possible risk of using this product is the leakage of personal information as well as statistics reports. The possible loss to damage that could result from the use of the product by leakage of personal information as well as statistics reports.

5.4 Software Quality Attributes

The application is WebApp and is free to use. The software is compact, user friendly and easy to use. Flexible for future changes. Advanced technology.

Appendix A: Glossary

Gui - Graphical user interface

MERN Stack - MongoDB, ExpressJS, ReactJS

OS – Operating System

QA - Quality assurance

Ui - User interface

Ux - User experience

Who will be using the app: People who want to track their Fitness progress, and want to be part of a fitness community

Conclusion:

In summary, our web app aims to address the need for a platform where users can track their workout progress and interact with a community for motivation and support. The system provides the user with the ability to take notes from every workout, record their sets and reps, and track their progress over time. The chat/forum feature allows users to ask and answer questions and receive suggestions from others in the community. The main achievement of our project is the successful implementation of a functional and user-friendly web app that addresses the needs of fitness enthusiasts. Our app provides an all-in-one platform that allows users to track their workouts, connect with like-minded individuals, and get support from the community. In terms of potential impact, our web app can have a positive influence on the fitness industry and society as a whole. By providing a platform that promotes fitness and healthy living, our app can contribute to a healthier and happier society. Additionally, the community aspect of our app can provide users with the motivation and support they need to achieve their fitness goals.

Overall, our web app has the potential to make a significant impact on the fitness industry and society. By providing a user-friendly and interactive platform for tracking workouts and connecting with a community of fitness enthusiasts, our app can inspire and motivate users to reach their fitness goals. In conclusion, our MERN stack web app represents a successful implementation of an innovative solution to the problem of tracking workout progress and staying motivated. We believe that our app has the potential to become a valuable tool for fitness enthusiasts worldwide and can contribute to a healthier and happier society.

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