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Virtual Fit Partner

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VIRTUAL FIT PARTNER

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Abstract - Nowadays, people often seek ways to monitor and improve their health and fitness as well. Some insurance companies use application data as incentives to improve health premiums and reduce them. This study focuses on the creation of an Android-based application to track and determine the health and fitness of the individual. Simple and accurate, the app does not force any programs and leaves you all freedom to build your own workout. The user can add the exercises and set the timer for each exercise. Customize your workout according to your wishes and track your progress after the session. It displays the progress graph of the user and the record of the individual can also be shared. There is also an integrated audio player in the proposed application. This can be used just like your personal trainer with virtual interaction. This will focus on each individual separately and consider their health personally by collecting the user information about their Body weight, height etc. In this manner the Virtual Fit Partner will be user's virtual partner to make their lifestyle healthier.

Keyword : Android studio, Body evaluation, Gradle, BMI, Music player.

I.INTRODUCTION

Exercise is any physical activity that keeps body fit, improves human health and maintains overall wellness. Including exercise in our daily life can contribute in maintaining a healthy life and also can prevent diseases. Physical exercise plays a vital role in strengthening the immune system.

Incessant sicknesses are significant executioners in the cutting edge time. Physical inertia is an essential driver of most incessant maladies. Physical movement/practice is analyzed as essential counteraction against 35 ceaseless conditions such as obesity, insulin resistance, diabetes, non-alcoholic fatty liver disease, coronary heart disease, slipped disc etc. [1]

Oxygen consuming activity improves course, which brings about brought down pulse and pulse [Stewart says]. Likewise, it expands your general high-impact wellness, as estimated by a treadmill test, for instance, and it helps your cardiovascular yield (how well your heart siphons). Oxygen consuming activity likewise lessens the danger of type 2 diabetes and, in the event that you effectively live with diabetes, causes you control your blood glucose. This method helped out more than 50% of the patient to recover heart diseases. [2]

A slipped circle can squeeze the nerves and muscles around the spinal segment as it is a complex zone of nerves and veins. Doing delicate exercises and activities will reinforce the muscles that help the spine and lessen pressure on the spinal segment. They will likewise advance adaptability in the spine and may help diminish the danger of a herniated plate from repeating. A specialist proposed firing little and working up the degree of movement gradually. They talk about explicit activities that an individual ought to and ought not to perform during the recuperation time frame. Be that as it may, in the event that on the off chance that somebody as of now has an extreme back issue, he/she can get operated and return to their ordinary life in some time, tells Dr Manu Bora.[3] A nation mother developed 58 years, who had been a widow as far back as 29 years at the hour of plan, acquainted with the chest community with grumblings of shortness of breath while doing normal ordinary activities. Pointless sluggishness was seen during the day hours as she dosed off performing run of the mill step by step errands. She began doing physical activities as proposed by her coach. She was approached to walk 150 stages inside. She had the option to do just 75 stages on the main day, yet slowly she improved and by the centre of second week, she had the option to walk outside. This movement was embraced alongside hand cycling and breathing activities. The patient gave a load of 150.6 kg initially but in a time span of 2 months she diminished 20 kg by doing physical activities. [4]

In 2005, British scientists assessed 13 randomized clinical preliminaries that analyzed strolling, muscle- reinforcing works out, and traditional treatment without practice in patients with osteoarthritis of the knee. Both strolling and muscle-fortifying were protected and powerful, diminishing agony and incapacity. Furthermore, in 2006 and 2007, researchers in the Netherlands and the U.K. detailed that evaluated practice programs are protected and powerful for patients with joint inflammation of the hip or knee. Extending works out, great shoes, and great strategy will likewise decrease your danger of musculoskeletal wounds. With these straightforward safeguards

and a portion of sound judgment, exercise will be ok for your joints. [5]

Various examinations and studies has analyzed that exercise is effective in reducing depression and stress and the lot of these assessments have portrayed a positive response related with training consideration. For example, 30 organization remaining bearably debilitated individuals were discretionarily selected to a movement intervention assembling, a social consideration

gathering, or a hold up list control group. The action mediation contained walking 20 to 40 minutes multiple times every week for about a month and a half. The creators detailed that the activity program eliminated all the symptoms of depression among the individuals. [6]

Different sorts of activity have been assessed for their viability in neck pain, including general exercise and movement, neck explicit fortifying or control works out, and sensorimotor activities. Efficient audits for the most part incorporate all activity types together. An ongoing extensive Cochrane methodical survey found no excellent proof, demonstrating that there is still vulnerability about the viability of activity for neck pain. Also, the creators utilized an activity characterization framework dependent on a clinical method of reasoning for choosing concentrates with comparable mediations to help with translation and incorporation inside the meta-investigations. [7]

Exercise appears to improve the physical and passionate prosperity of patients who as of now have Alzheimer's malady. The patients practiced tolerably for as meager as an hour every week. Specialists noted patients who practiced were less discouraged, meandered away less, endured less falls, contrasted with patients who didn't work out.[8] Audit by HarutoshiSakakima proposes that physical exercise goes about as prototypical preconditioning boosts that offer mind insurance impacts and are sheltered and serviceable therapy choices for furnishing endogenous neuro protection in patients with intense and constant stroke.[9]

People are becoming more conscious about their health and fitness these days. Keeping all this in mind, we have designed an android app for making people fit and fine. This app allows user to add their own exercises in the app and follow their routine. The app can record progress of the user so that user can see the changes.

II.LITERATURE REVIEW

[10] The effect of a virtual wellness lab in physical movement support: A Second Life's project

By Susana Juniu, Montclair State University, United States ;Adit Ganot, Miri Shonfeld, Kibbutzim College of Education, Israel

The purpose of these circles is twofold: (1) to test the application of the teaching laboratory training in Second Life by building a fitness lab; and (2) support the public in information about fitness and health and encourage physical activity. The focus of this project is that through visual imitation, students in Physical Science programs will learn

strength concepts and gain fitness testing skills to apply in real-world situations. The physical exercise physical laboratory in the second life will support classroom instruction through visual simulation of various tests without bringing fatigue during testing and research without the need for expensive equipment operated by a trained professional.
Link - https://www.learntechlib.org/p/39968/

[11] Programmable virtual exercise teacher for giving virtual directions of altered exercises scheduled for the practice of clients

byJoseph William Klingler

A structured fitness trainer prepares a word processing document containing the letters of the corresponding activity instructions to convey instructions to the person performing the task. Work can be a process of physical activity through physical activity. Text combinations include words that show time details that correspond to text fragments. The fitness trainer converts text clips into speech and extracts timeline from text clips. The fitness trainer is heard speaking each text at a time to the extent consistent with the time information that accompanies the text so that the instructions for the activity are spoken aloud to the person in order to guide that person to the task. The fitness trainer can visually display pieces of text so that the activity instructions can be displayed to that person as well.
Link - https://patents.google.com/patent/US7761300B2/en

[12] Putting mobile guides and fitness activities together: a solution based on an embodied virtual trainer

by Fabio Buttussi, Luca Chittaro, Daniele Nadalutti
This investigates the use of mobile guides in exercise activities, proposed by the Mobile Personal Trainer (MOPET) program. MOPET uses a GPS device to monitor the position of the user during his or her work in the external fitness body. Provides navigation assistance by using the strength tracking map and providing speech directions. In addition, MOPET provides support and motivation support through an integrated virtual trainer, called Evita. Evita demonstrates how to best perform on-the-go tests with 3D graphics and motivate the user. To the best of our knowledge, our project is the first to use a mobile guide for eligibility activities. MOPET's effects on promotion, as well as its maritime support and training, were evaluated by 12 users. The test results encourage the use of mobile guides and visual trainers in outdoor exercise programs.

Link - https://dl.acm.org/doi/abs/10.1145/1152215.1152222

[13] Virtual personal training device

by Ralph J. Del Giorno
Visual trainer fitness program that includes at least one exercise tool including video user interface, audio input, audio output, and portable data reception port, server connection to device equipment, database connection server, database includes one or more profiles user interface, software that uses an exercise tool to retrieve user data from portable storage, software that runs on a user profile to access user profile that is compatible with user data, and to

create software on the server to create an interactive user profile based on user profile and provide interactive user training

Link - https://patents.google.com/patent/US20070225118A1/en

[14] Cardio-fitness station with virtual-reality capability

by John FisherKeith ThompsonLuca Nicoli

In this case, a stationary exercise station is provided. The stationary exercise station includes a computer that can use a computer program. The computer program mimics the movement of the first visible bicycle and the second visible bicycle. The first visible bike and the second visible bike ride in a pre-determined location. The computer program mimics the moving images seen by the first visible bike rider while riding in a pre-determined location. The stationary exercise station also includes a video monitor on a computer connection. The video display shows moving images seen by the first visible bike rider while riding a pre-set location. The stationary exercise station includes flexible handles, rotating pedals, shift-resistant power, and a shifting gear shift member. The movement of the visible bicycle is determined by the movement of the moving brackets, the rotation of the rotating pedals, and the movement of the shifting limb to change gears. The force of the pedal rotation is equal to the slope encountered by a visible bicycle traveling in a predetermined area.

Link - https://patents.google.com/patent/US20100035726A1/en

[15] Avatar embodiment realism and virtual fitness training

by Jean-Luc Lugrin ; Maximilian Landeck ; Marc Erich Latoschik

In this they present the first study of the real impact of avatar on body illusion (IVBO), when using a full body mirror for physical training. We have explored three main types of user representation: real and virtual avatars and avatar altogether. Our results have shown that the real avatar of the same sex has increased the level of cheating and performance. However the qualitative analysis of open-ended questions revealed that the sense of power was high with avatar looking weak.

Link - https://ieeexplore.ieee.org/abstract/document/7223377/

[16] FitAssist: virtual fitness assistant based on wifi

by :Yan Zhu ,Dong Wang, Run Zhao, Qian Zhang, Anna Huang

IN this they recommend FitAssist , a house assistant who is a fitness partner who is able to make a good workout detection and assess the quality of exercise based on commercial WiFi devices. Unlike wearable devices, this program is free and free of devices. In addition, compared to previous Wi-Fi exercise monitoring systems, their performance is significantly reduced when users come from First Fresnel Zone (FFZ), FitAssist does not require users to stand or near the sight mode (LoS). To achieve this, FitAssist took features from standard WiFi status information and enables both diagnostic recognition and user identification with in-depth learning strategies. In addition, FitAssist can provide exercise tests designed for you to help users get effective exercise and prevent injuries. Extensive test results in real settings show that FitAssist gains an average of 97% and 98% recognition of

exercise and user identification respectively, as well as providing accurate and useful feedback in a variety of situations, proving its effectiveness and durability.
Link -https://dl.acm.org/doi/abs/10.1145/3360774.3360817

[17] Virtual Personal Trainer via the Kinect Sensor

by Xin Jin ; Yuan Yao ; Qiliang Jiang ; Xingying Huang ; Jianyi Zhang ; Xiaokun Zhang ; Kejun Zhang
In this regard they suggest that the Virtual Personal Trainer provide real-time action guide guidance and action testing during user interaction with Microsoft Kinect Sensor. User actions are taken by Kinect and compared to standard actions to provide strength points that show how well users perform the action in real time. Users can see the bones of his action as well as the normal action on screen and videos. An action correction guide will be displayed to guide the user to correct his actions. Users adjust his actions to match the standard action in our exercise action library that has already been collected. Our program therefore provides a flexible response to how people can improve their action. The whole program offers a new definition of future family exercise with the power of a machine operator.
Link - https://ieeexplore.ieee.org/abstract/document/7399879/authors#authors

[18] FitCoach: Virtual wellness coach empowered by wearable mobile devices

by Xiaonan Guo ; Jian Liu ; Yingying Chen
FitCoach aims to help the user achieve effective exercise and prevent injury by strongly displaying a short and long-term image of the user's exercise depending on the various sensors on the portable mobile devices. In particular, FitCoach identifies a variety of exercises and translates the details of good fitness (e.g., movement strength and speed) into an easy-to-understand exercise review concept, providing a comprehensive performance evaluation and recommendation. FitCoach has the ability to streamline sensor readings from wearable devices to the human connection system, ensuring system accuracy and durability. A detailed study of more than 5000 repetitions of 12 types of exercise included 12 participants performing anaerobic and aerobic exercises internally and externally. Our results show that FitCoach can provide meaningful reviews and recommendations to users by accurately measuring their workout performance and achieving 93% accuracy in exercise analysis.
Link - https://ieeexplore.ieee.org/abstract/document/8057208

[19]A Collaborative Aesthetic-Driven Virtual Fitness Game

by Lizhen HanMingmin ZhangFeng TianZhigeng Pan
By introducing a sport that is associated with beauty-driven beauty, they offer a solution that can show and encourage people living a sedentary lifestyle to do regular physical activity with enough energy, time and length. This approach combines physical contact with a stationary bike with visual changes in the visual environment, and integrates it with a multiplayer game. During the game-play test, each participant’s effort to meet their exact location to the heartbeat contributes to the team’s effort to immerse themselves in the perfect beauty.
Link - https://link.springer.com/chapter/10.1007/978-3-319-65849-0_4

[20] The Virtual Gym Instructor

by Dane Brown∗, Mixo Ndleve

The Virtual Gym Instructor boasts a stable algorithm that tends to the shortfalls of thePoze system. Virtual Gym Instructor monitors a user's form continuously and gives real-time feedback during workouts. Perfect real-time object detection and tracking was achieved up to four metres away from the camera, whereas 60% of the motions were successful at eight metresaway. The detection and tracking algorithm is thus an important contribution that can also be used in other systems, such as for the rehabilitation of injuries or gait recognition. The reports from Keep Up can motivate users to break their prior records and keep track of their total points and last workout. The system as a whole is promising, and in future, can be extended for greater functionality subsequent to more testing.

Link -

https://www.researchgate.net/profile/Dane_Brown2/publication/335378603_Virtual_Gym_Instructor/links/5d6118a892851c619d7268c1/Virtual-Gym-Instructor.pdf

[21]DYVINE: Fitness-Based Dynamic Virtual Network Embedding in Cloud Computing

by Chinmaya Kumar Dehury; Prasan Kumar Sahoo

Virtual network embedding (VNE) is the process of embedding a set of virtual machines connected to a set of connected physical servers (PSs) in a computer environment. The level of VNE problem complexity escalates when a large number of virtual machines with a set of resource requirements need to be installed on a network of thousands of PS. A key challenge for VNEs is the optimisation of the map for virtual networks (VNs), which may have the needs of dynamic resources. Existing solutions place a strong emphasis on static VN embedding that results in improper use of resources and a very low acceptance rate. To address that complex level in VNE, a dynamic network-based algorithm (DYVINE) algorithm is proposed with the aim of increasing resource utilisation by increasing the acceptance rate. Domestic and global robust values for virtual machines and VN, respectively, are used to utilise the highest number of resources. The proposed VNE algorithm allows the VN to be robust, indicating that the structure and need for resources can be changed over time. In addition, to reduce embedding time per session, a set of PSs is selected to host VN instead of looking at thousands of PSs, which can significantly increase embedding time. The proposed embedding method is tested by extensive simulation and compared with the same algorithms available, superior to others.

Link - https://ieeexplore.ieee.org/abstract/document/8672596/

[22]Investing Consumer Loyalty through Service Experience and Service Convenience: Differences between Instructor Fitness Classes and Virtual Fitness Classes

by Manuel Jes ús Baena-Arroyo [1], Jerónimo Garc ía-Fernández [1], Pablo Gá lvez-Ruiz [2] and Moisés Grimaldi-Puyana [1,*]

This aims to delve deeper into the knowledge of the Spanish intellectual property sector (low-cost, middle-income and retail centres), by exploring poorly analysed environments, intensive teaching classes (IFC: Grouped and led by professors, for example remedial classes, such as CORE, Boot Camp , group training; Urban street, funk, hip-hop, such as strength training, and dance activities such as Urban street, funk and hip-hop) [18] or in the gym (VFC: can be sports similar to IFC, but developed to include technological devices, such as cameras, recorders, or videoconferencing) [19], and that users of gymnasiums. And finally, another purpose of the current work is to expand on a few studies that compare this type of reinforcement activities where the inclusion factor is the inclusion or non-inclusion of sports professionals during the work, focusing on stamina activities as an important factor in the provision of fitness services.

Link - https://www.mdpi.com/2071-1050/12/3/828/htm

[23]Virtual Wellness: Selecting A Program That Is Right for You

by Grace T. DeSimone, B.A., ACSM-CPT, ACSM-GEI

VirtualWellness allows participants to exercise with the help of an exercise regime delivered online or through a personal electronic device app. Options range from pre-recorded or live, free or paid subscriptions and are available by schedule or on demand. There is no shortage of tangible exercise options, and choosing the right program for you can be exciting and daunting. Virtual fitness is ready to stay and will quickly improve to meet the growing demand for our changing environments. Take your time exploring options. Ask ACSM for health advice for advice on a program that suits your needs. Most importantly, keep moving and reap the benefits of exercise wherever you are.

Linkhttps://static.t-cdn.net/5e01043334bf6507310e3702/posts/5f2616d0d6cd8e4074f990da/60324_SHAREABLE_RESOURCE__Virtual_Fitness_Choosing_A.3.pdf

[24]Virtual Fitness Community: Online Behaviour on a Croatian Fitness Forum

By Kristina Feldvari ,Anita Dremel ,Snježana Stanarević Katavić

The purpose of this is to analyse the information needs raised by users of the Croatian Strengthening Forum and to look at the topics represented on it. Also, the aim is to gain an understanding based on the effects of the arts on the use of information communication technology to create and maintain a sense of belonging and support in this visible society. To this end, we conducted a qualitative study and analysis of the most active post content on the Fitness.com.hr forum in 2019 (sub-section How to Lose Weight) and interviewed the forum administrators and the most active forum members. Our results show that the information needs of gymnastics users fall into six broad categories, all related to weight loss: nutrition, exercise, mental and health issues, personal fitness, reporting results and more. The analysis also showed that empathy and emotional support in some way can be seen in this visible community of resilience.

Link -https://link.springer.com/chapter/10.1007/978-3-030-49570-1_32

[25]Framework and strategy for giving the web wellness guidance

ByNancy Baccarella-Garcia

A member-accessible online site acts as a hub for gyms from different locations to host their gym classes that sit in one or two ways. A member-accessible online site offers live one-way, two-way options, catering to many live exercise classes conducted at various remote fitness centres . In one way or another, the participating member would see a fitness trainer and optionally all or part of a local fitness group, but he or she would not be visible to them. In a two-way demonstration, online participants will also appear at the instructor's screenshot, which will enable the trainer to critique and correct the participants' exercise routine online. Other features of this initiative include, but are not limited to, online communication such as instant messaging between members, online groups based on interest and age, individual training, health and fitness articles, information about teachers and classes, class schedules, discussion boards to measure

classes different, as well as the initial evaluation survey to determine the appropriate type and level of exercise program for each participant.

[26]Incorporation, Exclusion, and Belonging among Group Fitness Instructors in Austria: For a Fitter Planet?

By Vogl, U. University of Ghent

Andersson, K. University of Vienna

This multidisciplinary paper covers the analysis of Critical Discourse Analysis, Cultural Study, and Intersectionality. The study has two purposes. First, Les Mill's declaration of purpose or life "philosophy" is explored with a careful analysis of the discourse that will reveal how the "one nation" was formed, and the renewal of the clergy 'identity is encouraged by Les Mills. Second, we examine how Les Mills Austrian educators relate to Les Mill's ideas of "one nation" at a low level in their daily lives, at the mesos level at their gyms, and at a higher level in Les Mills's global community. Case study is a mixed process with less structured discussions and a list of questions.

This view proposes that the inclusion and integration of this resilient society depends on a variety of social factors such as socioeconomic status, race, gender, age, and language expertise. Moreover, inclusion within the “nation” stems from the willingness of teachers to “discipline” their training, their bodies and their minds.

[27]Customisation of domesticcondition and physical preparing upheld by augmented reality and semantic innovations: : A use-case

by Davide Baldassini ; Vera Colombo ; Daniele Spoladore ; Marco Sacco ; Sara Arlati

This paper describes a home environment in which an older user can practice a fitness-based exercise program based on a reality-based program, called Smart Home Simulator. Customising the services offered to certain targeted users is achieved through the use of ontologies, which reflect the health status of users, home locations, metrics and various luxury devices. With the realisation of the real foresight of a 72-year-old weak woman who has to train with a cycle-ergometer, the first example of a program - called Bicycle4CaRe - has been developed. It is made up of various interactive trading devices for the purpose of providing the end user with customised interventions and collecting data about environmental conditions and physical parameters. This information is

tested in real time to ensure safe training conditions and, at the end of the exercise, is stored in reporting files and made available to caregivers and physicians.

[28]The impact of a virtual fitness trainer app in motivating students for fitness activity by applying motor learning theory

by Nur Azlina Mohamed Mokmin&NurullizamJamiat

This describes the development and development and evaluation of an improved application. The method can be divided into two parts, first the design and development work, and then the experimental activities. The design and development process was guided by automotive learning theory and focused on the use of visual and informal learning techniques in physical education teaching. The app consists of five fitness trainers that show different movements that identify different levels of strength. The performance of the app according to student motivation is measured using the Situational Motivational Scale (SIMS) and assessed by a group of 54 students from a local tertiary institution. Their involvement in activities is measured by formal discussion. The results showed that students were encouraged to engage in physical activity after a period of exercise with health coaches. Respondents found that these activities were fun, enjoyable, and made them feel good. They were also motivated to pursue careers because they agreed that they should do it and work was important to them. Most respondents agreed that activities have a positive effect on their level of fitness and are easier to follow through with their physical activities. The interview revealed that the movements shown by the visible trainers are very helpful in engaging in physical activity. There are additional recommendations and
additional functions that must be implemented before the app can be fully implemented in a large market.
Link - https://link.springer.com/article/10.1007/s10639-020-10337-7

[29]]Virtual Fitness Trail: A Complete Program for Elderlies to Practice Physical Activity at Home

by Marta Modellini ,Marco SaccoLuca Greci

This introduces a Virtual Reality (VR) exergame, Virtual Fitness Trail (VFT), designed to encourage older people to exercise regularly and effectively in a home-based manner. VFT offers the most immersive immersion experience from a first-person perspective and has been developed to work on the Oculus Quest high-end display. The exergame suggests four activities involving the major muscles of the legs and arms, as well as stabilizing balance and thinking: monkey monkey, side height, basketball rifle and slalom between the beams. Each task has four levels of difficulty and is designed to reduce the perception of movement to reduce cyber illness. User work is stored in an .json file and can be shared, via email, with the caregiver at the end of the exergame session. The application is exemplary and needs to be evaluated and approved before proposing to work independently at home.
Link - https://link.springer.com/chapter/10.1007/978-3-030-58465-8_12

III.PROPOSED METHOD

Life is full of science and knowledge produced by human minds, God has given
these concepts of motivation, science and law, where science is the light of life, and you know the rights of the creator, and how to communicate with social users in the fields of engineering, medicine, modern technology and so on.

Nowadays the mobile phone is becoming an important tool, not only limited as a communication service, but beyond its capacity to provide modern technology and many services. Mobile technology is growing exponentially over the years; there has been a lot of new research and development in this space. Statista.com reported that more than 46 million people worldwide used health and fitness applications in 2014. As a modern approach to health and fitness, health and fitness offer many benefits.

- The App is implemented in a way to keep the track of your exercises.
- This application will keep track on user's workout and also user can add exercises in this application according to their choice.
- Customize your workout according to your wishes and track your progress after the session. It displays the progress graph of the user and the record of the individual can also be shared.
- The Android-based app enhances its accessibility with smartphones given the wide acceptance of Android-based mobile devices. In addition, there are cost savings for the consumer, as there will no longer be a need to buy bands.
- Easy access at the same time to the general public who can afford a health accessories or additional hardware, can help improve the quality of life and reduce the risk of health problems and death from physical inactivity.

IV. Problem statement

- In recent times there has been a growing number of interest in fitness as well as health by most people, there are people who have a full desire for that, but it can force them time or put them in a state of instability sometimes on a certain day of exercise.
- Based on that project a mobile application was provided for exercise everywhere at any time, thus facilitating strenuous training somewhere or at a certain time of day and helped them calculate calories burned by exercise and eat a healthy diet.
- There are many operating systems that are interested in health, fitness and nutrition, but the user needs a single integration program between them to facilitate transactions and the user does not interfere with more than one use and provide its complete results.
- The included details for customizing the virtual fit partner app are mostly manually entered by the user. This allows for incorrect data entry, which may compromise its reliability.
- Encouraging long-term data recording can be a challenge without the involvement of health professionals.

V. METHODOLOGY

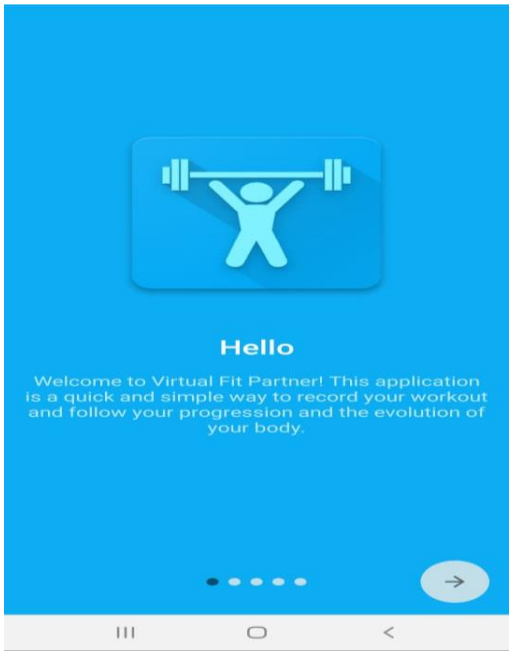
This App is implemented in a way to solve the above problems. This application will keep track on user's

workout and also user can add exercises in this application according to their choice.

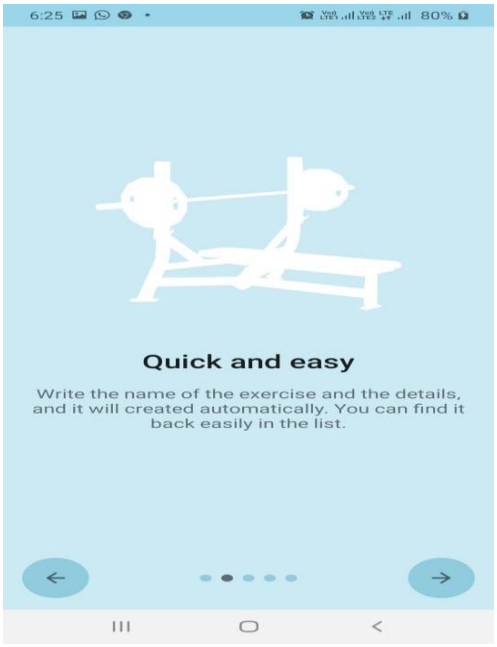
In this application we have used Android Stdio to make this application, JAVA and xml to write code and design the Layouts of the app.

Firstly, some information page will appear with few information about this app.

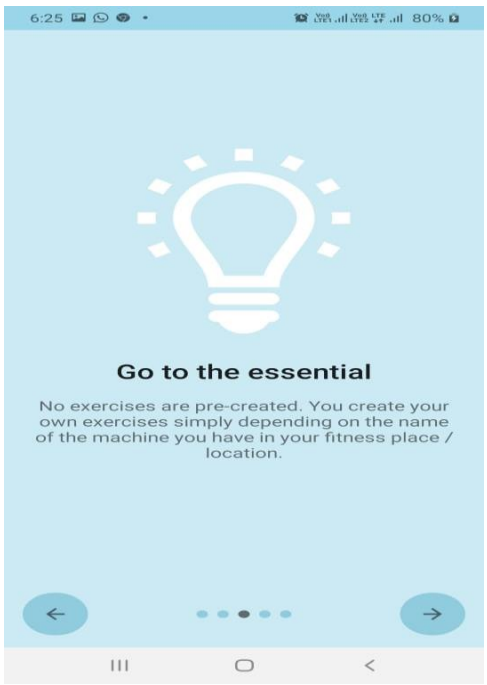
After that Log In page will appear in which User have to fill their detail like Name, Gender ,DOB, Size in cm and then user will able to create their profile after which they can use the application.



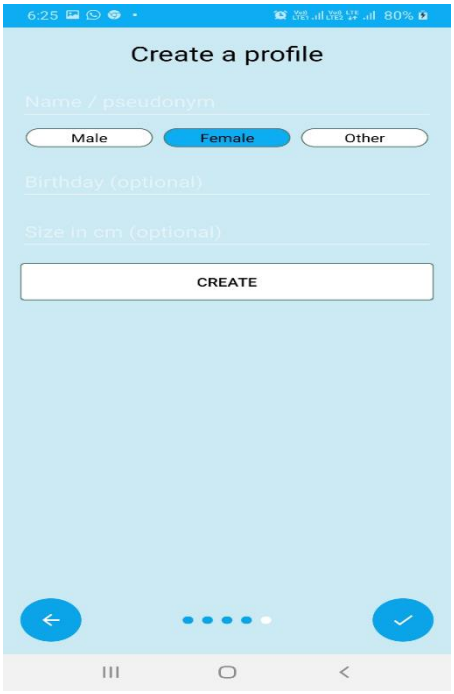
Welcome Page



Information page



Information page



Log In page

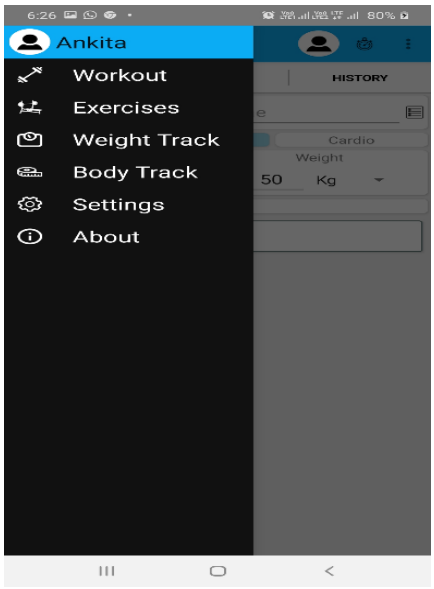
Then the User can track their workout and they will get a graph and history for their workout.

User can also add exercises by their own and keep body track by parts. They can also keep their weight track like Weight in Kg, Fat% , Muscles% , Water intake%, BMI. Also user can reset their profile and export and import their records. It also keep time count. User can also add music in this application, a music player is integrated into the application.

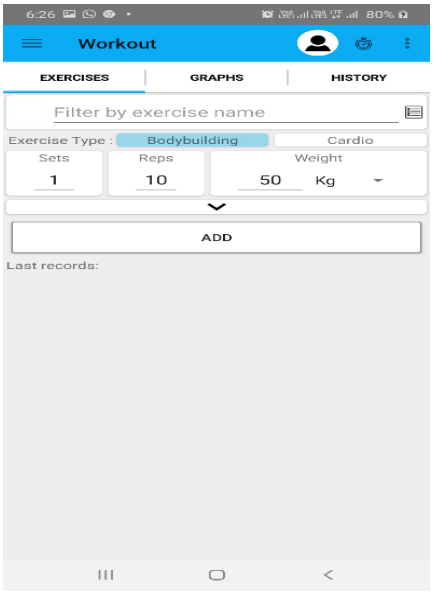
Graphics will show their progress and body evaluation.

Here are some screenshot of this module :

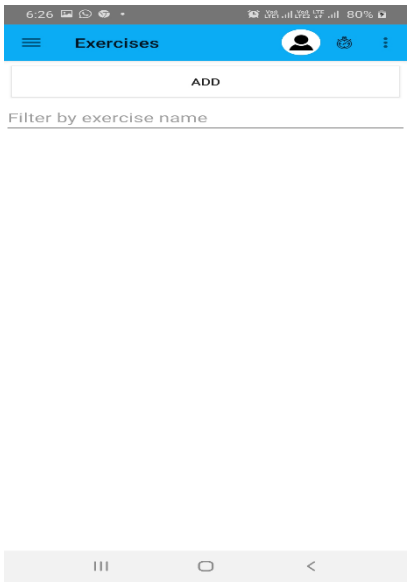
The below screenshot is from the anonymous user's phone who had installed the "Virtual Fit Partner" app.



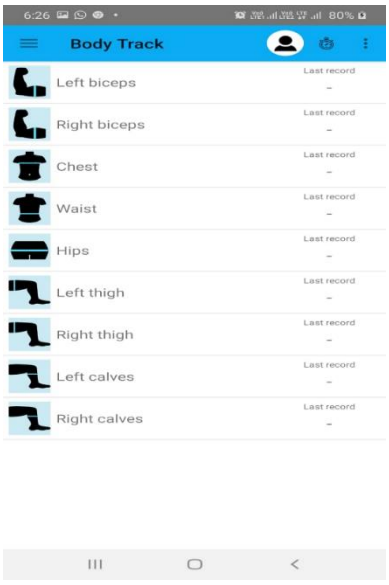
Profile Page



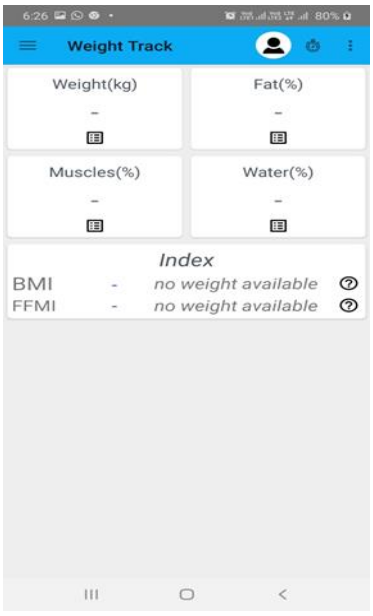
Workout Track Page



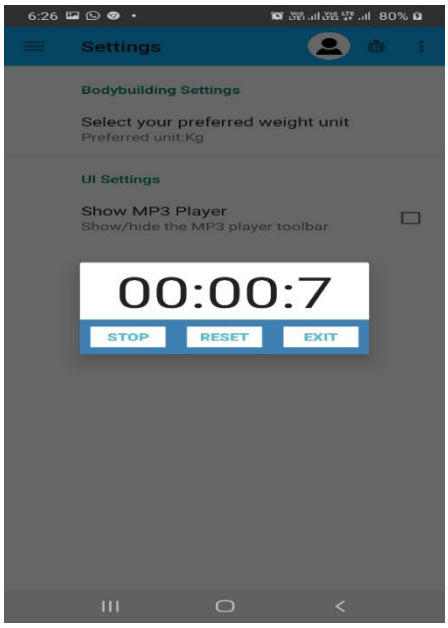
Exercise Addition Page



Body Track Page



Weight Track Page



Settings & Time Track Page

BLOCK DIAGRAM FOR VIRTUAL FIT PARTNER

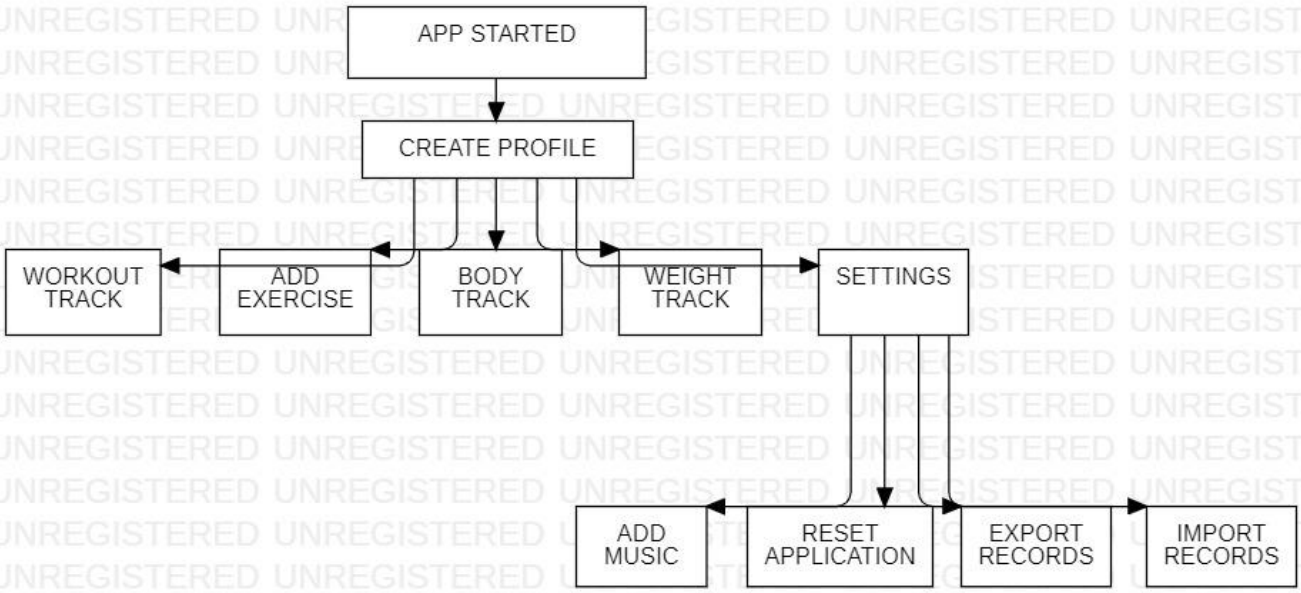


Fig. 12 Block Diagram

VI. FUTURE SCOPE

In the case of sports, future virtual fit partner app may allow coaches to incorporate this standard into their standard practice, overcoming the limitations of the traditional methods outlined above. For example, a desirable good app can have two different features, one for the athlete to track the ratings and one for the trainers to manage the collected data for each person or group as a whole. In this case, trainers may receive athletic data from a distance, making it easier for them to make adjustments in daily pro-gram training. In the same line, these friendly apps will include a training indicator, based on the daily rate and other severe pressures, predicting athletes 'training on current physical condition. The power of applications to collect and maintain app measurement methods impossibly can make the translation of robust and durable training loads possible. While app is a well-known indicator of athletic performance for recreational and special athletes, the future capabilities of applications for collecting other physical and non-physical components can enrich the interpretation of app ratings in this process.

VII. CONCLUSION

Virtual Fit Partner is an Android-based app that helps the user to track their fitness records. The project has been successfully completed with great satisfaction. The plan is structured as determined in the design phase. The project provides a great idea for building an easy-to-use system that satisfies the user. From our perspective, Virtual Fit Partner with android is dramatically changing businesses. Virtual Fit Partner can reach out to a large audience on messaging apps and be more effective than humans. It can be developed into an information gathering tool in the near future. This helps you to make some changes in your life and daily routine, if necessary. Also, this app keeps you motivated and focused on reaching the desired level of resilience.

VIII. REFERENCE

[1] Frank W. Booth, Christian K. Roberts and Matthew J. Laye (2012), Lack of exercise is a majorcause of chronic diseases**,** 2(2): 1143–1211. doi: 10.1002/cphy.c110025

[2] Kerry J. Stewart, Ed.D. , Kinds of Exercise That Boost Heart Health.

[3] **Cologne, Germany: Institute for Quality and Efficiency in Health Care (IQWiG); 2006**, Slipped disc: Non-surgical treatment options.

[4] **Carla E., Diabetes Spectr. 2017 Aug; 30(3): 157–160. doi: 10.2337/ds17-0013,** Role of Physical Activity for Weight Loss and Weight Maintenance.

[5] Harvard Health publishing (2009), Exercise and your joints.

[6] Lynette L. Craft, (2008), **The Benefits of Exercise for the Clinically Depressed,** Prim CareCompanion J Clin Psychiatry. 2004; 6(3): 104–111.doi: 10.4088/pcc.v06n0301

[7] Michele Sterling, Rutger M. J. de Zoete, Iris Coppieters, and Scott F. Farrell (2019), **Best Evidence Rehabilitation for Chronic Pain Part 4: Neck Pain,** J Clin Med. 2019 Aug; 8(8):1219.doi: 10.3390/jcm8081219

[8] Rubinstein SM, de Zoete A, van Middelkoop M, Assendelft WJ, de Boer MR, van Tulder MW. Benefits and harms of spinal manipulative therapy for the treatment of chronic low back pain:systematic review and meta-analysis of randomised controlled trials. BMJ 2019; 364: l689.

[9] Care, S. R., & Brown, J. (2008). CONCISE GUIDANCE TO GOOD PRACTICE A series of evidence-based guidelines for clinical management Long-term neurological conditions : management at the interface between neurology, rehabilitation and palliative care

[10] **The effect of a virtual wellness lab in physical movement support: A Second Life's project** by Susana Juniu, Montclair State University, United States ;Adit Ganot, Miri Shonfeld, Kibbutzim College of Education, Israel

[11] Programmable virtual exercise teacher for giving virtual directions of altered exercisesscheduled for the practice of clients

byJoseph William Klingler

[12] Putting mobile guides and fitness activities together: a solution based on an embodiedvirtual trainer

by Fabio Buttussi, Luca Chittaro, Daniele Nadalutti

[13] Virtual personal training device

by Ralph J. Del Giorno

[14] Cardio-fitness station with virtual-reality capability

by John FisherKeith ThompsonLuca Nicoli

[15] Avatar embodiment realism and virtual fitness trainingby Jean-Luc Lugrin ; Maximilian Landeck ; Marc Erich Latoschik **[16]FitAssist: virtual fitness assistant based on wifi**

by :Yan Zhu ,Dong Wang, Run Zhao, Qian Zhang, Anna Huang

[16] Putting mobile guides and fitness activities together: a solution based on an embodiedvirtual trainer

by Fabio Buttussi, Luca Chittaro, Daniele Nadalutti

[17] Virtual Personal Trainer via the Kinect Sensor

by Xin Jin ; Yuan Yao ; Qiliang Jiang ; Xingying Huang ; Jianyi Zhang ; Xiaokun Zhang ; Kejun Zhang

[18] FitCoach: Virtual wellness coach empowered by wearable mobile devices

by Xiaonan Guo ; Jian Liu ; Yingying Chen

[19]A Collaborative Aesthetic-Driven Virtual Fitness Game

by Lizhen HanMingmin ZhangFeng TianZhigeng Pan

[20] The Virtual Gym Instructor

by Dane Brown∗, Mixo Ndleve

[21]DYVINE: Fitness-Based Dynamic Virtual Network Embedding in CloudComputing

by Chinmaya Kumar Dehury; Prasan Kumar Sahoo

[22]Investing Consumer Loyalty through Service Experience and Service Convenience: Differences between Instructor Fitness Classes and Virtual Fitness Classes

by Manuel Jes ús Baena-Arroyo [1], Jerónimo Garc ía-Fernández [1], Pablo Gá lvez-Ruiz [2] and MoisésGrimaldi-Puyana [1,*]

[23]Virtual Wellness: Selecting A Program That Is Right for You

by Grace T. DeSimone, B.A., ACSM-CPT, ACSM-GEI

[24]Virtual Fitness Community: Online Behaviour on a Croatian Fitness Forum

By Kristina Feldvari ,Anita Dremel ,Snježana Stanarević Katavić

[25]Framework and strategy for giving the web wellness guidance ByNancy Baccarella-Garcia

[26] Incorporation, Exclusion, and Belonging among Group Fitness Instructors inAustria: For a Fitter Planet?

By Vogl, U. University of Ghent

Andersson, K. University of Vienna

[27] Customisation of domesticcondition and physical preparing upheld by augment