A PROJECT REPORT ON

“Fitness Application”

SUBMITTED TOWARDS THE
PARTIAL FULFILLMENT OF THE REQUIREMENTS OF

BACHELOR OF ENGINEERING (BE Computer Engineering)

BY

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Under The Guidance of
Prof. Umakant Tupe sir

“Towards Ubiquitous Computing Technology”
DEPARTMENT OF COMPUTER ENGINEERING
Marathwada Mitra Mandal’s
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Lohgaon, Pune- 411 047
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CERTIFICATE

This is to certify that the Project Entitled
“Fitness Application”

Submitted by

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is a bonafide work carried out by students under the supervision of Prof. Umakant Tupe and it is submitted towards the partial fulfilment of the requirement of Bachelor of Engineering (BE Computer Engineering) Mini Project.

Prof. Umakant Tupe Sir
Internal Guide

Prof. Subhash G. Rathod
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Abstract

This research focuses on developing an Android-based mobile phone prototype to calculate and determine the duration of physical exercise, time to exercise and the types of exercise needed daily by the user. The factors that will be used in the calculation of the algorithm are BMI (Body Mass Index) of the user, user's body condition and working hours.

Rule-based algorithm was used in this application to suggest their exercise schedule. Further and long term study is necessary to see the effectiveness, perceived usefulness and usability of this system.

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LIST OF FIGURES

INTRODUCTION

This project introduces to the readers, developers, reviewers and all who involved in software development the idea, the motivation, the objectives and the scope and limitations of developing a collaborative enterprise project management application for software projects. People are always seeking to have a healthy body fitness and they are need to motivate them to it. So we believe that our application to solve this problem in android device users, through help users to manage the health life system in health fitness and nutrition. The project displays videos for exercise, and the preparation of healthy eating, determine the nearest sports clubs and health restaurants through Google Map, and calculates calories either acquired or burned also shows scale for the shape of user body. This project is developed using Android studio and is programmed in java. Project used Android system to spread it dramatically in the world thus access to a large number of people. Through the provision of a hundred people of questionnaire application met the acceptance of the majority.

Over recent years the world has seen a spike in the download and usage of fitness and health apps. In 2014 fitness app usage grew at a substantial rate, being up there as the most used category of application for that year. Since then it has maintained its user base and continues to grow, with the inclusion of wearables like google fit, Fitbit and Healthkit. This is the dawn of a new era, an era where people look more to their mobiles or their fitness watches to check on their health, rather than the traditional method of going and seeing a doctor. These apps provide a great avenue for those who are interested on tracking their fitness levels runners, cyclists, and gym goers alike. Everything can be tracked nowadays, even the standard iPhone comes with a health app built in, with a range of features.

Body Mass Calculator The BMI class allows users to simply enter both their height in cm’s and their weight in kg’s and be given their body mass index value. There is also a comment along with that value to let the user know what it means. The calculation is done as follows, bmi = weightValue / (heightValue * heightValue). The displayBMI method will display a message depending on what value is calculated, so for example between 18.5 and 25 the user can be said to have a normal BMI.

Objective

Main Objective:

The main objective of this project is to achieve physical fitness and improve the level of health of the users by helping and motivate them to doing sports exercise and eating healthy food.

Specific Objective :

This project will provide the following services as specific objectives:

- To develop the attention in the health fitness and nutrition.
- To motivate the interest of health and physical fitness and nutrition.
- To manage the health life system in health fitness and nutrition.
- To facilitate the connection between nutrition and health, fitness and fashion in one application to not distract the user more than one

PROBLEM STATEMENT

In the modern era there has been an increasing amount of interest in physical fitness and health with the most people, there are people who have a full desire for that, but it may force them time or place conditions on the sometimes unsteadiness on a specific date for the exercise. Based on that project provided a mobile application for the exercise of fitness in every place and at any time, thus facilitated a lot trouble discipline on a specific place or a specific time in the day and helped them to calculate calories that are burned through sport exercise and eat healthy food. There are lot of applications that are interested in health, fitness and nutrition, but the user needs one application combines between them to facilitate the deal and the user does not distract from more than one application and give its own total exact results.

SYSTEM ARCHITECTURE

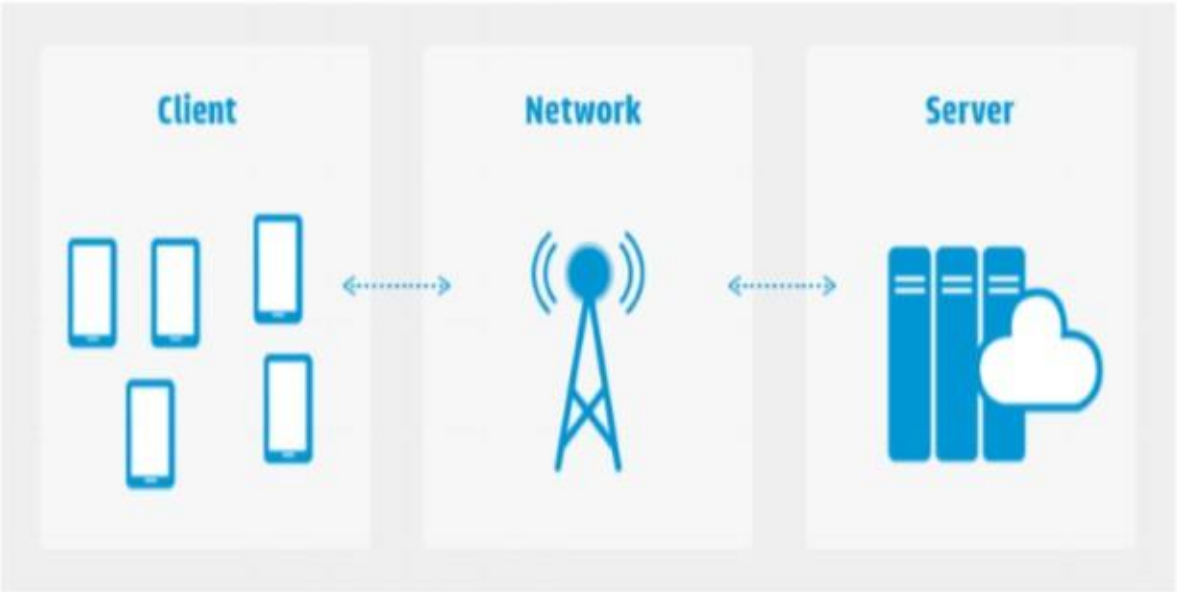


Figure 0- 15: Three tire Architecture


Daily activity
Food consumption
Fitness activity
Sleep pattern
User
Wearable
Smart phone
Cloud

LITERATURE SURVEY

Sr. No	Paper Title	Publication Year and Author Name	Conclusion
1	Users perspective about Mobile Fitness application	Sakitha Anna Joseph, Reshma Raj K., Sony Vijayan, 2020	The study addresses on the users outlook towards the smartphone fitness apps and its influence in promoting health
2	Fitkit Android Application	Aashita Chhabra, Chitrank Tyagi, 2019	FitKit application is designed to cater all the demands related to fitness like workout routines, diet allotment and tracking fitness activities like steps counter
3	Wearable Activity Tracker Literature Review	Shawn E. Soutiere, Brennan D. Cox, 2016	The current review was conducted to examine the scientific evidence on WAT validity and reliability, with particular attention to the military readiness context

REQUIREMENT SPECIFICATION

HARDWARE:

1. Microsoft® Windows® 7/8/10 (64-bit)
2. 4 GB RAM minimum, 8 GB RAM recommended.
3. 2 GB of available disk space minimum, 4 GB Recommended (500 MB for IDE
4. + 1.5 GB for Android SDK and emulator system image)
5. 1280 x 800 minimum screen resolution.
6. Java Development Kit 8 or above

Software Requirement and specification: In this Section, the functional and non-functional requirements are introduced using the Android Studio which is a software used to specify, program , construct and document the artefacts of an object-oriented software-intensive system under development. Android studio offers a standard way to write a system's program, including conceptual components

SOFTWARE:

- **Android Studio**:(Minimum API level 24)

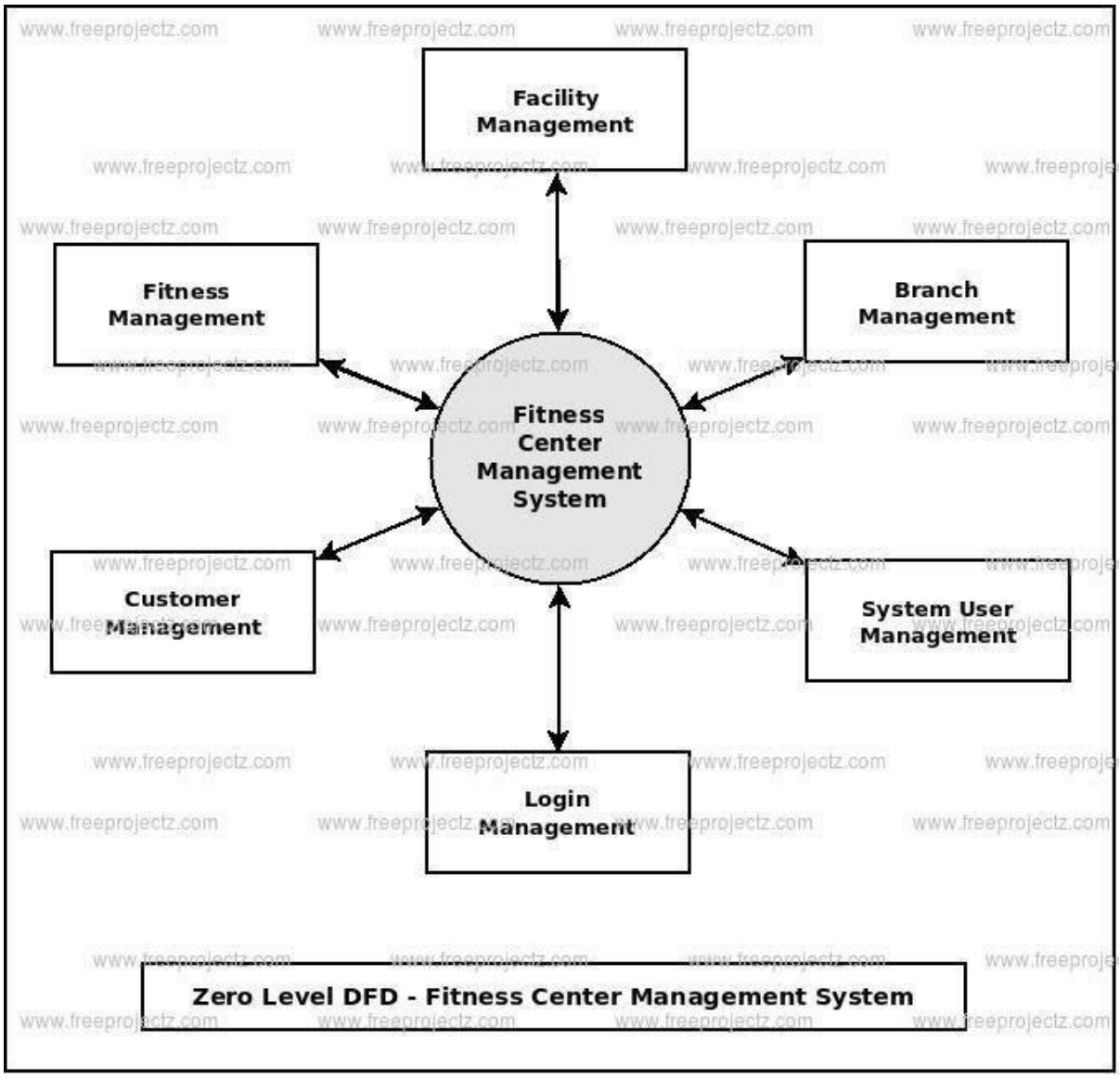
Provides an unified environment where you can build apps
for Android phones, tablets, Android Wear, Android TV, and Android Auto.
Structured code modules allow you to divide your project into units of functionality that you can independently build, test, and debug.

- **Front-End Languag**e:

XML: Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable. Here we used XML for designing apps.

JAVA: Java is the technology of choice for building applications using managed code that can execute on mobile devices. The Android platform allows developers to write managed code using Java to manage and control the Android device. Here we used JAVA for connecting activities .

DATA FLOW DIAGRAM



9. SOFTWARE TESTING

Testing:-

1. Software testing is really required to point out the defects and errors that were made during the development phases.

2. It's essential since it makes sure of the Customer's reliability and their satisfaction in the application.

3. It is very important to ensure the quality of the product. A quality product delivered to customers helps in gaining their confidence.

4. Testing is necessary in order to provide facilities to the customers such as the delivery of high-quality products or software applications, which requires lower maintenance costs and hence results in more accurate, consistent and reliable results.

- Testing is a process of executing a program with the intend of finding an error.

The objectives behind testing are

1. The first form displays all the system connected to a network correctly.

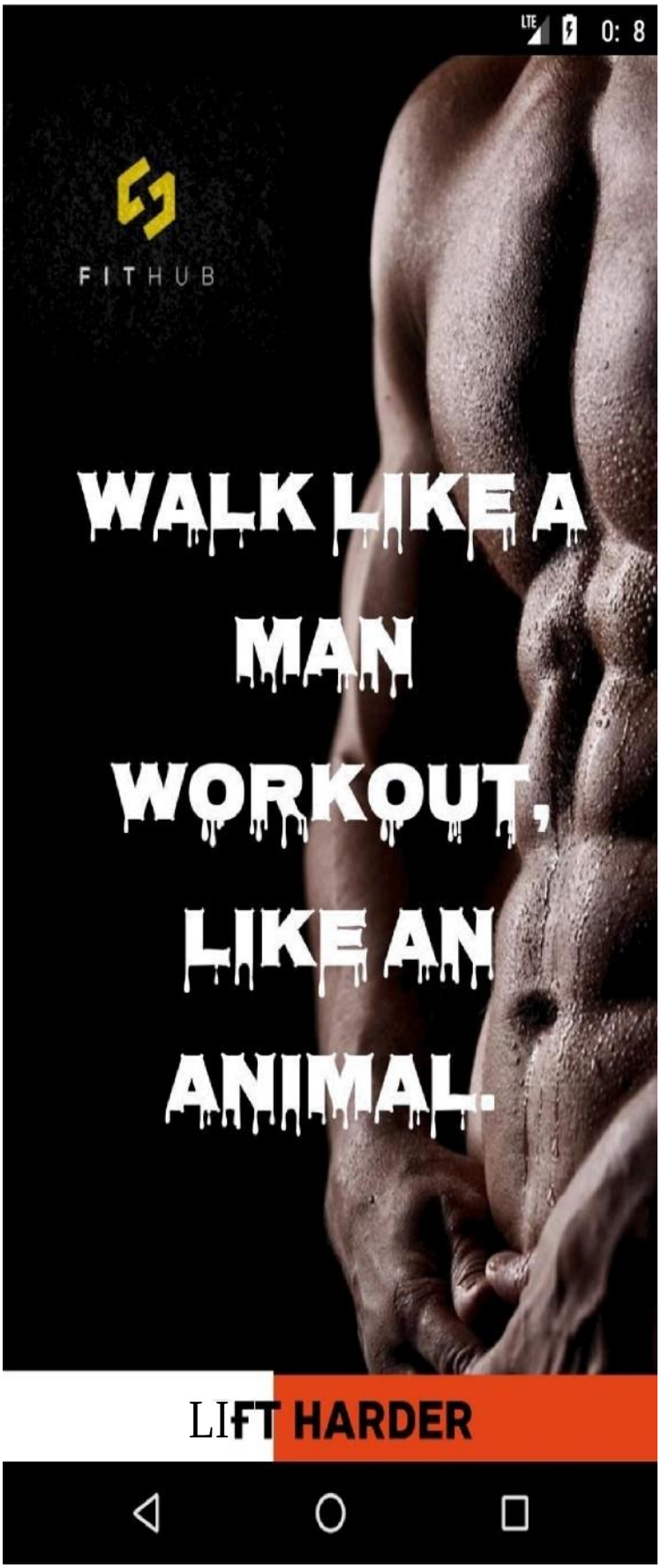
2. A successful connection is created and communication is possible via text synchronously.

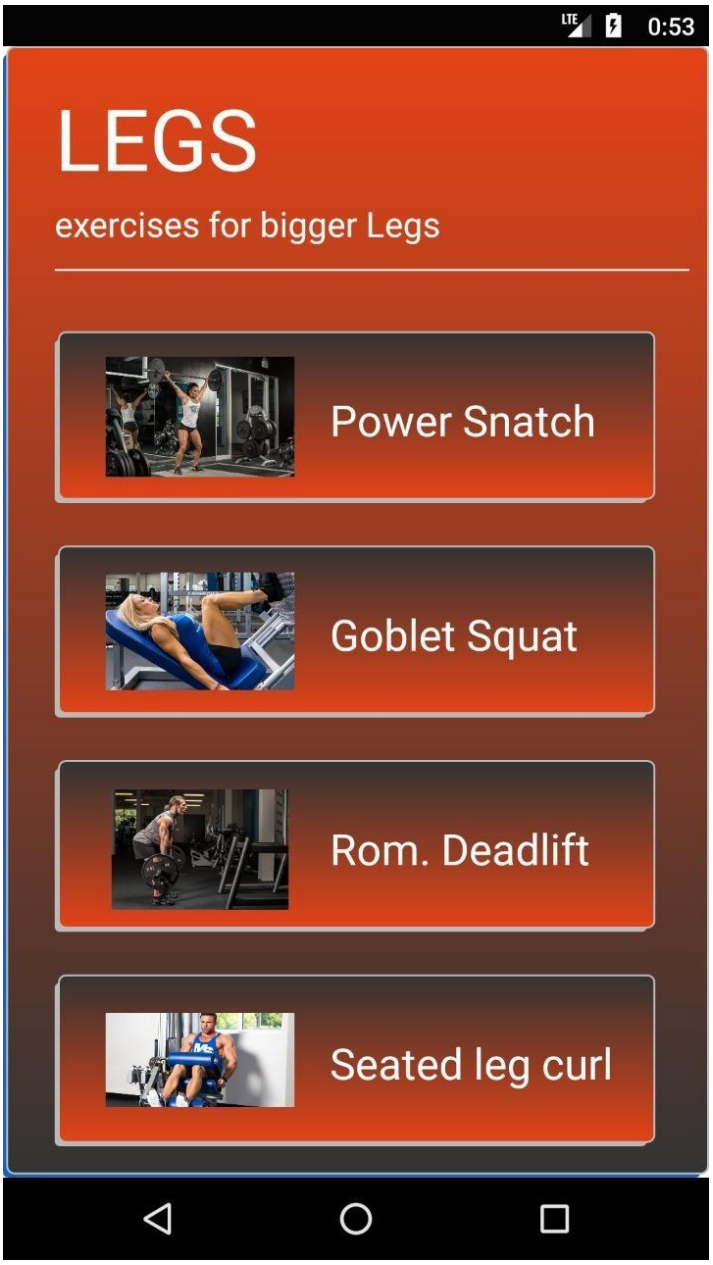
Testing Objectives:-

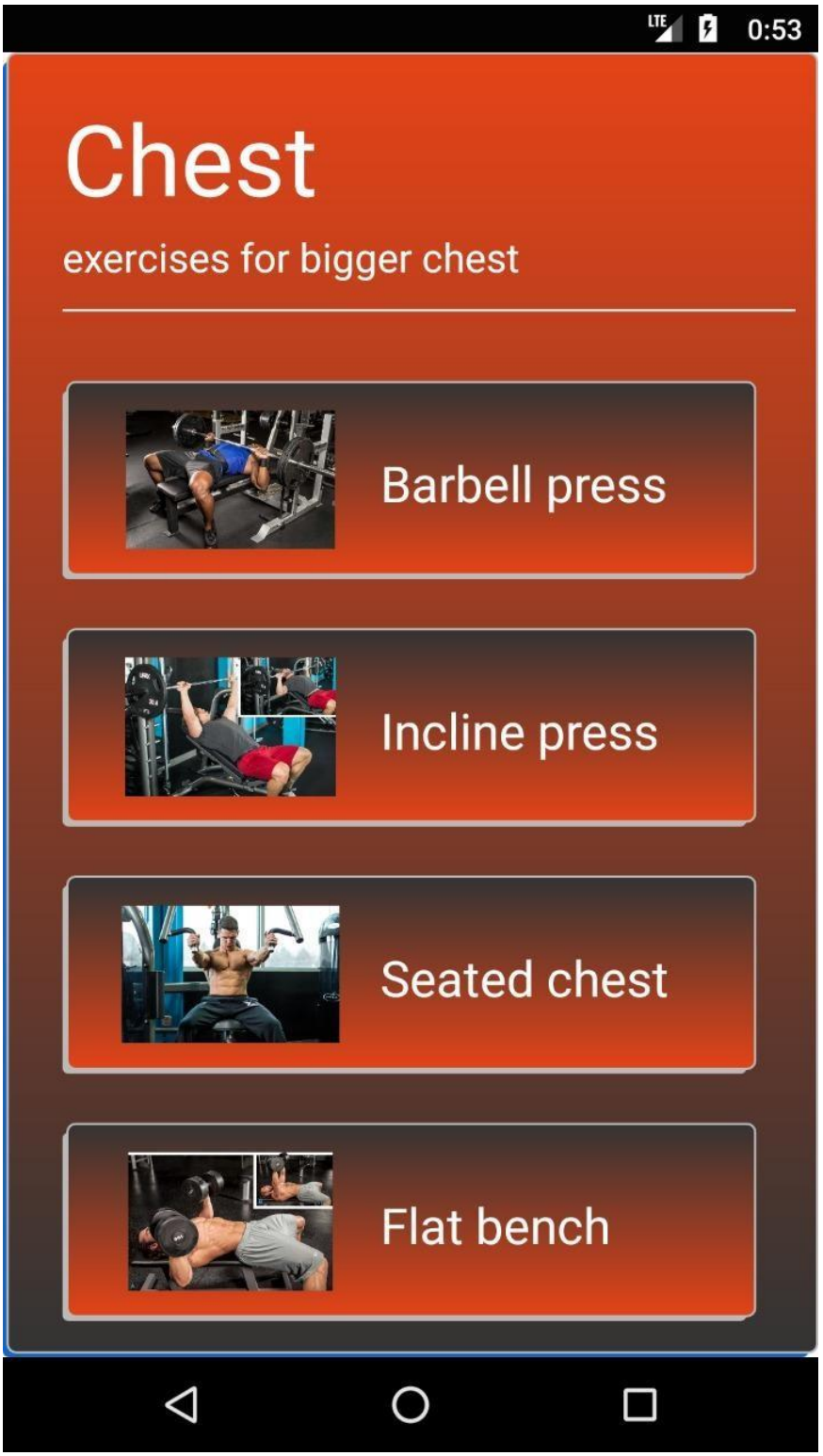
Unit testing is a testing of individual components (units) of the software. Unit testing is conducted as a part of a combined code and unit test phase of software lifecycle.

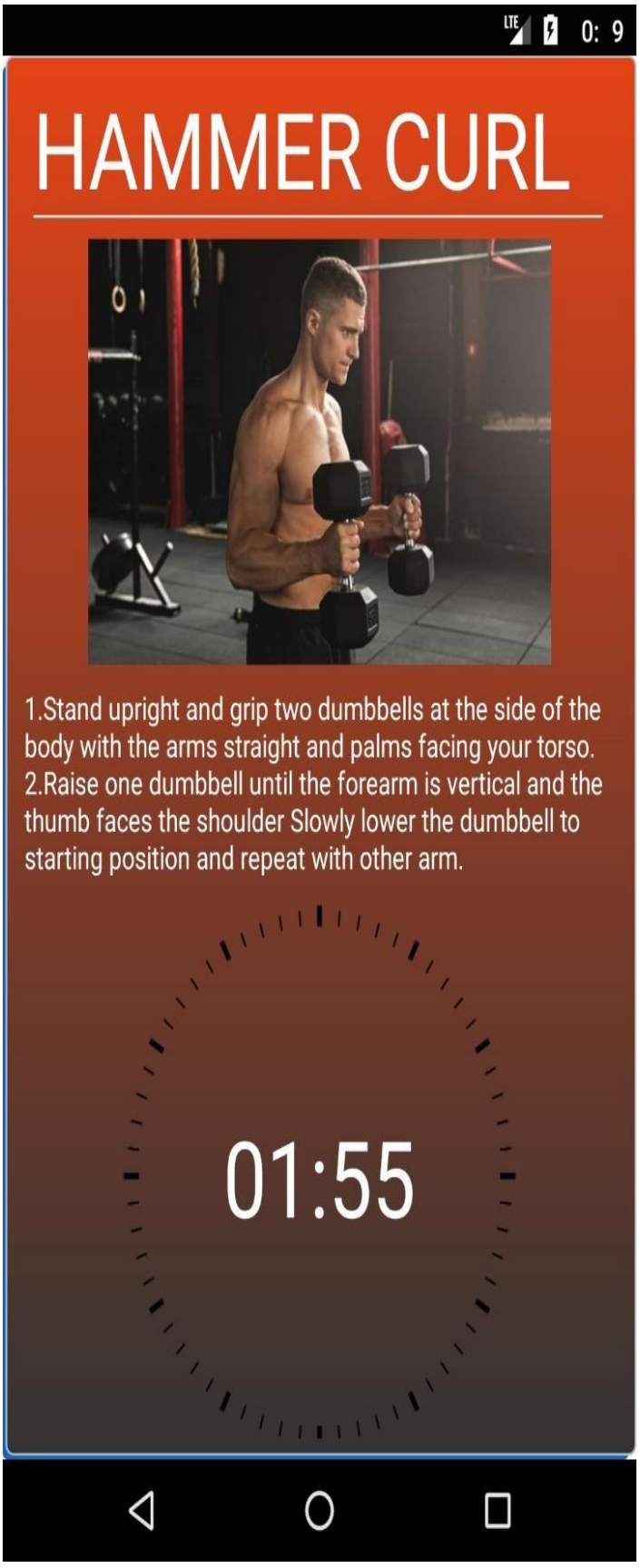
When developing a strategy for unit testing there are three basic organisational approaches that can be taken. These are top-down , bottom-up and isolation.

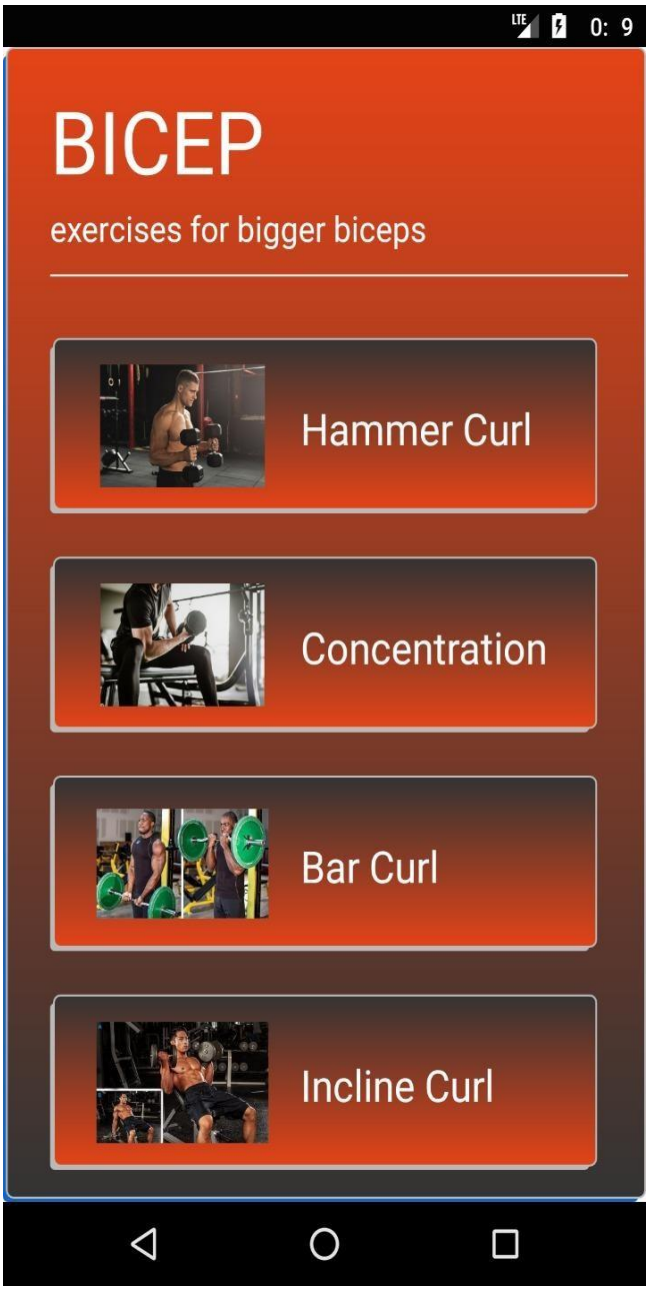
SNAPSHOTS OF PROJECT

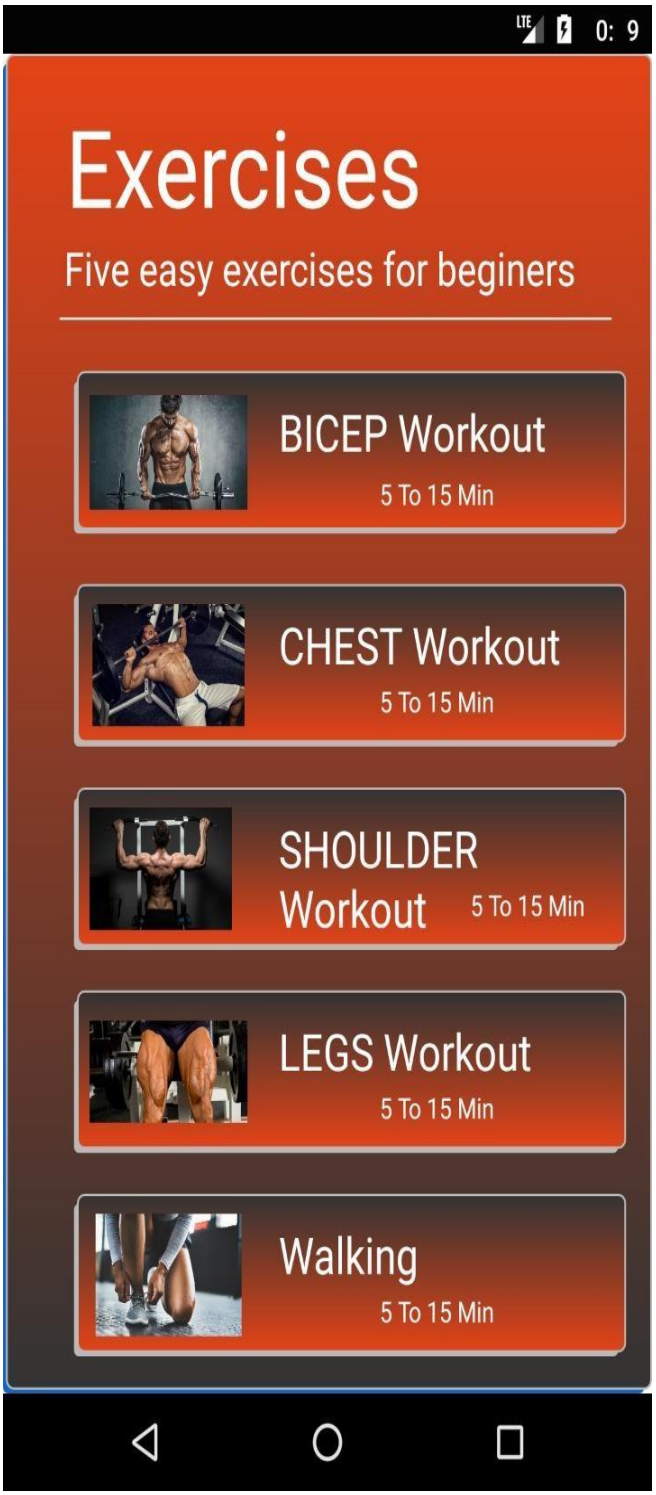

0: 8
FITHUB
WALK LIKE A MAN
WORKOUT,
LIKE AN
ANIMAL.
LIFT HARDER


0:53
LEGS
exercises for bigger Legs
Power Snatch
Goblet Squat
Rom. Deadlift
Seated leg curl


0:53
Chest
exercises for bigger chest
Barbell press
Incline press
Seated chest
Flat bench


0: 9
HAMMER CURL
1.Stand upright and grip two dumbbells at the side of the body with the arms straight and palms facing your torso.
2.Raise one dumbbell until the forearm is vertical and the thumb faces the shoulder Slowly lower the dumbbell to starting position and repeat with other arm.
01:55


0: 9
BICEP
exercises for bigger biceps
Hammer Curl
Concentration
Bar Curl
Incline Curl


0: 9
Exercises
Five easy exercises for beginers
BICEP Workout
5 To 15 Min
CHEST Workout
5 To 15 Min
SHOULDER
Workout
5 To 15 Min
LEGS Workout
5 To 15 Min
Walking
5 To 15 Min

RESULT

The project report entitled “ Fitness Application” has given great result. The new application has been developed with so much care and atthe same time efficient and less time consuming. System is robust. Also provision is provided for future developments in the application.

FUTURE SCOPE

FA application provide a lot of facilitate to share experience, but it required online connection with Wi-Fi network to save, get and view data. For further work, we recommend to make update to make data which loaded in online state to be viewable in offline state. Also we recommend to design website connect to the application. FA system works on Android and to increase the usability in future we recommend to make IOS application because IOS devices have the second most number of being used. Providing a social network for users to be able to communicate with each other. Show motivational messages that appear from time to time motivate the user.

Conclusion

The final project “Fitness Application” has come

to its conclusion. The new application has been developed with so much care and at the same time efficient and less time consuming. It gives users a way to lead the life with an approach of being fit and healthy .

This fitness application will help many users to change their way of life to a better way and keep them fit. The application has a beautiful user interface .

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