



# **The Orchid School, Pune**

A Project Report  
On

## **Fitness Triad Program**

For

**AISSCE 2021 Examination**

[As a part of the Informatics Practices Course (065)]

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Under the Guidance of:  
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## **CERTIFICATE**

This is to certify that the Project entitled **Fitness Triad Program** is a bonafide work done by Rajas Baadkar of class XII session 2020-21 in partial fulfilment of CBSE's Examination 2021 for the subject Informatics Practices (065) and has been carried out under my guidance.

This report or a similar report on the topic has not been submitted for any other examination and does not form a part of any other course undergone by the candidate.

.....  
**Signature of Student**

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.....  
**Signature of Teacher/Guide**

**Name: Mrs. Jayashri Samudra**

.....  
**Signature of Unit Head**

**Name: Ms. Netre Kulkarni**

.....  
**Signature of Acting Principal**

**Name: Ms. Sangeeta Kapoor**

.....  
**Signature of External Examiner**

**Place: The Orchid School, Pune**

**Date: .....**

## **ACKNOWLEDGEMENT**

I undertook this project work, as the part of my std XII Informatics Practices (065) course. I tried to apply my best of knowledge and experience, gained during the study and class work experience. However, developing software system is generally a quite complex and time-consuming process. It requires a systematic study, insight vision and professional approach during the design and development.

Moreover, the developer always feels the need, the help and good wishes of the people near you, who have considerable experience and idea.

I would like to extend my sincere thanks and gratitude to my teacher Ms. Jayashri Samudra for guiding us throughout the life cycle of Software Development.

I would like to take the opportunity to extend my sincere thanks and gratitude to my Unit Head Ms. Netre Kulkarni for giving valuable time and moral support to develop this software.

I am very much thankful to our Principal Ms. Sangeeta Kapoor for being a source of inspiration.

**Class XII A**  
**Rajas Baadkar**

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# 1. Introduction

This program is the culmination of a very long project to help people track and improve their health. Especially in times like these, where our daily routine consists majorly of being glued to a chair in front of a laptop, we felt there's a need to motivate and encourage people to be physically active for the sake of their mental and physical health.

We tried to make the program as user-friendly as we could, using only the command line interface.

We developed a simple yet effective program to:

- Calculate BMR (Basal Metabolic Rate) as per the updated formula
- Compare records with previous users
- Display predefined workouts muscle category wise

Front-End: -

Front-End is the development environment where we write the program code to develop the interface so that the user can communicate with the system. I have used Python to develop the project. Using Spyder (Python 3.7), program was developed and tested.

Back-End: -

Back-End refers to the processes running in the background that the user is unaware of. Data frames are used to store the data and external modules to perform different functions that enhance the user experience.

Both the software used for developing project work are specified by CBSE and freely available as they are open source software.

## 2. Objective & Scope of the Project

The objective of the software project is to develop a computerized program to automate the function of a Fitness Triad. This software project is also aimed to enhance the current record keeping system, which will help managers to retrieve the up-to-date information at right time in right shape.

The proposed software system is expected to do the following functionality:

- ✓ To provide a user friendly, integrated, and centralized environment for Health Tracking Program.
- ✓ The proposed system should maintain all the records and should generate the required reports and information when required.
- ✓ To provide users with professional predefined workouts that they can access as and when they require.

In its current scope, the software enables user to retrieve, calculate and compare the information from centralized data frames designed with Python. This software does not require much training time of the users due to limited functionality and simplicity.

During the development of Fitness Triad Program, Python 3.7, a powerful, open source development environment is used for modular design and future expandability of the system.

Despite the best effort of the developer, the following limitations and functional boundaries are visible, which limits the scope of this application software.

- The user cannot update their previous records.
- The user cannot pause/resume the workouts midway.
- The records of a new user are not permanently saved.

So far as future scope of the project is concerned, firstly it is open to any modular expansion i.e. other modules or functions can be designed and embedded to handle the user need in future. Any part of the software and reports can be modified independently without much effort.

### 3. Problem Definition & Analysis

The hardest part of building a software system is deciding precisely what to build. No other part of the conceptual work is as difficult as establishing the detailed technical requirement. Defining and applying good, complete requirements are hard to work, and success in this endeavour has eluded many of us. Yet, we continue to make progress.

Problem definition describes the *what* of a system, not *how*. The quality of a software product is only as good as the process that creates it. Problem Definition is one of the most crucial steps in this creation process. Without defining a problem, developers do not know what to build, customers do not know what to expect, and there is no way to validate that the built system satisfies the requirement.

Problem Definition and Analysis is the activity that encompasses learning about the problem to be solved, understanding the needs of customer and users, trying to find out who the user really is, and understanding all the constraints on the solution. It includes all activities related to the following:

- Identification and Documentation of customer's or user's needs.
- Creation of a document that describes the external behaviour and the association constraints that will satisfies those needs.
- Analysis and Validation of the requirements documents to ensure consistency, completeness, and feasibility
- Evolution of needs.

After the analysis of the functioning of Health and Wellness industry, the proposed system is expected to do the following: -

- To provide a user friendly, integrated, and centralized environment for a computerized Health and Wellness industry.
- The proposed system should maintain all the records, calculate, and should generate the required reports and information when required.
- To provide graphical and user-friendly interface to interact with a centralized data frame based on client-server architecture.
- To identify the critical operation procedure and possibilities of simplification using modern IT tools and practices.

## **4. System Implementation**

### ***4.1 The Hardware used:***

While developing the system, the hardware used was:

HP Pavilion Ryzen 5 (8GB/1 TB)

### ***4.2 The Software used:***

- Microsoft Windows® 10 as Operating System.
- Python 3.7/Spyder as Front-end Development environment.
- MS-Word for documentation.



## 5. System Design & Development

### 5.1 Data frame Design:

An important aspect of system design is the design of data storage structure. To begin with a logical model of data structure is developed first. A data frame is a container object which contains columns and rows. A logical data often represented as a record are kept in different tables after reducing anomalies and redundancies. The goodness of data frame design lies in the table structure and its relationship.

This software project maintains a data frames named **data** and **data1**.

#### Data frame Design:

The data frame of the Fitness Triad Program contains a table. The table is designed to store master records. The table and its structure are given below.

**Table: data**

<i>Column Name</i>	<i>Type</i>	<i>Size</i>
Name	Char	20
Weight	Int	30
Height	Int	20
Age	Int	20
BMR	Float	20

**Table: data1**

<i>Column Name</i>	<i>Type</i>	<i>Size</i>
Name	Char	20
Weight	Int	30
Height	Int	20
Age	Int	20
BMR	Float	20

## Coding

## Modules Used

```
# Importing required modules
import time
import pandas as pd
import matplotlib.pyplot as pl
from tqdm import trange
from colorama import Fore
import sys
from playsound import playsound
```

# Pip install the module package if required.

import time

import pandas as pd

import matplotlib.pyplot as pl

from tqdm import trange

from colorama import Fore

import sys

from playsound import playsound

## Functions Defined

```
def countdown():
    for i in trange(int(2),bar_format="{l_bar}%s{bar}%s{r_bar}" % (Fore.GREEN,Fore.RESET),ascii=False, ncols=75):
        time.sleep(1)
    print("3 seconds rest")
    time.sleep(3)
```

def countdown():

for i in trange(int(2),bar\_format="{l\_bar}%s{bar}%s{r\_bar}" % (Fore.GREEN,Fore.RESET),ascii=False,ncols=75):

time.sleep(1)

print("3 seconds rest")

time.sleep(3)

```
def timer(t):
    print('')
    print('Workout starts in...')
    print('')
    while t:
        mins,secs=divmod(t,60)
        timer='{:02d}:{:02d}'.format(mins,secs)
        print(timer,end="\n")
        time.sleep(1)
        t-=1
    print("\nLets go!!!")
t=5
```

```

def timer(t):

    print("")

    print('Workout starts in...')

    print("")

    while t:

        mins,secs=divmod(t,60)

        timer='{:02d}:{:02d}'.format(mins,secs)

        print(timer,end="\n")

        time.sleep(1)

        t-=1

    print("\nLets go!!!")

t=5

```

```

def cooldown():
    print('')
    print("\nThat was a great workout... your workout is done")
    print("NOW LET'S COOLDOWN")
    print("\n\nFirst Excercise- Stretch arms and Legs")
    countdown()
    print("\n\nSecond Excercise- Sit down and breathe deeply")
    countdown()
    print("\n\nThird Excercise- Knee to chest pose")
    countdown()

```

```

def cooldown():

    print("")

    print("\nThat was a great workout... your workout is done")

    print("NOW LET'S COOLDOWN")

    print("\n\nFirst Excercise- Stretch arms and legs")

    countdown()

    print("\n\nSecond Excercise- Sit down and breathe deeply")

    countdown()

    print("\n\nThird Excercise- Knee to chest pose")

    countdown()

```

```
def warm_up():  
    print('')  
    print("\nLET'S WARM UP QUICKLY ")  
    print("\n\nFirst Exercise- Stretch arms and Legs")  
    countdown()  
    print("\n\nSecond Exercise- 10 jumping jacks")  
    countdown()  
    print("\n\nThird Exercise- 5 burpees")  
    countdown()
```

def warm\_up():

print("")

print("\nLET'S WARM UP QUICKLY ")

print("\n\nFirst Exercise- Stretch arms and legs")

countdown()

print("\n\nSecond Exercise- 10 jumping jacks")

countdown()

print("\n\nThird Exercise- 5 burpees")

countdown()

```

def workout():
    print('')
    print('Choose a muscle category for workout')
    print('\n [1] Arms \n [2] Legs \n [3] Chest and Back \n [4] Core ')
    workout=int(input("Enter your choice:" ))
    while True:
        if workout in [1,2,3,4]:
            break
        else:
            playsound(r'C:\Users\visha\Documents\Orchid Rajas\Error Short.mp3')
            workout=int(input("Enter valid input:" ))
    if workout==1:
        warm_up()
        timer(t)
        print("\n\nFirst Excercise- Bicep Curls")
        countdown()
        print("\n\nSecond Excercise- Hammer Curls")
        countdown()
        print("\n\nThird Excercise- Lateral Curls")
        countdown()
        print("\n\nFourth Excercise- Bent Over Tricep Extention")
        countdown()
        print("\n\nFifth Excercise- Pull Up")
        countdown()
        cooldown()
    elif workout==2:
        warm_up()
        timer(t)
        print("\n\nFirst Excercise- Weighted Squats")
        countdown()
        print("\n\nSecond Excercise- Lunges")
        countdown()
        print("\n\nThird Excercise- Mountain Climbers")
        countdown()
        print("\n\nFourth Excercise- High Knees")
        countdown()
        print("\n\nFifth Excercise- Leg Raises")
        countdown()
        cooldown()
    elif workout==3:
        warm_up()
        timer(t)
        print("\n\nFirst Excercise- Lat Pulldown")
        countdown()
        print("\n\nSecond Excercise- Diamond Push Ups")
        countdown()
        print("\n\nThird Excercise- Rowing")
        countdown()
        print("\n\nFourth Excercise- Declined Push Ups")
        countdown()
        print("\n\nFifth Excercise- Dumbbell Press")
        countdown()
        cooldown()
    elif workout==4:
        warm_up()
        timer(t)
        print("\n\nFirst Excercise- Crunches")
        countdown()
        print("\n\nSecond Excercise- Reverse Crunches")
        countdown()
        print("\n\nThird Excercise- Toe Touch")
        countdown()
        print("\n\nFourth Excercise- Russian Twist")
        countdown()
        print("\n\nFifth Excercise- Plank")
        countdown()
        cooldown()

```

```

def workout():

    print('')

    print('Choose a muscle category for workout')

    print('\n [1] Arms \n [2] Legs \n [3] Chest and Back \n [4] Core ')

    workout=int(input("Enter your choice:" ))

    while True:

        if workout in [1,2,3,4]:

            break

```

```

else:

    playsound(r'C:\Users\visha\Documents\Orchid Rajas\Error Short.mp3')

    workout=int(input("Enter valid input:"))

if workout==1:

    warm_up()

    timer(t)

    print("\n\nFirst Excercise- Bicep Curls")

    countdown()

    print("\n\nSecond Excercise- Hammer Curls")

    countdown()

    print("\n\nThird Excercise- Lateral Curls")

    countdown()

    print("\n\nFourth Excercise- Bent Over Tricep Extention")

    countdown()

    print("\n\nFifth Excercise- Pull Up")

    countdown()

    cooldown()

elif workout==2:

    warm_up()

    timer(t)

    print("\n\nFirst Excercise- Weighted Squats")

    countdown()

    print("\n\nSecond Excercise- Lunges")

    countdown()

    print("\n\nThird Excercise- Mountain Climbers")

    countdown()

    print("\n\nFourth Excercise- High Knees")

    countdown()

    print("\n\nFifth Excercise- Leg Raises")

    countdown()

    cooldown()

elif workout==3:

    warm_up()

```

```
timer(t)

print("\n\nFirst Excercise- Lat Pulldown")

countdown()

print("\n\nSecond Excercise- Diamond Push Ups")

countdown()

print("\n\nThird Excercise- Rowing")

countdown()

print("\n\nFourth Excercise- Declined Push Ups")

countdown()

print("\n\nFifth Excercise- Dumbbell Press")

countdown()

cooldown()

elif workout==4:

    warm_up()

    timer(t)

    print("\n\nFirst Excercise- Crunches")

    countdown()

    print("\n\nSecond Excercise- Reverse Crunches")

    countdown()

    print("\n\nThird Excercise- Toe Touch")

    countdown()

    print("\n\nFourth Excercise- Russian Twist")

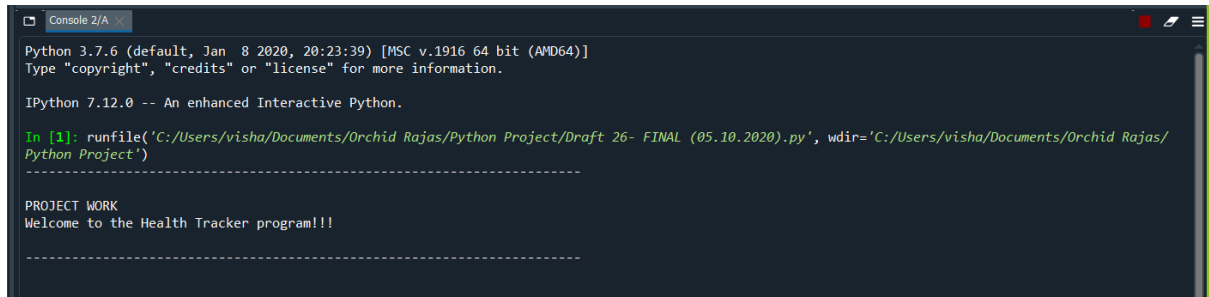
    countdown()

    print("\n\nFifth Excercise- Plank")

    countdown()

    cooldown()
```

# Welcome Page



```
Python 3.7.6 (default, Jan 8 2020, 20:23:39) [MSC v.1916 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.12.0 -- An enhanced Interactive Python.

In [1]: runfile('C:/Users/visha/Documents/Orchid Rajas/Python Project/Draft 26- FINAL (05.10.2020).py', wdir='C:/Users/visha/Documents/Orchid Rajas/Python Project')

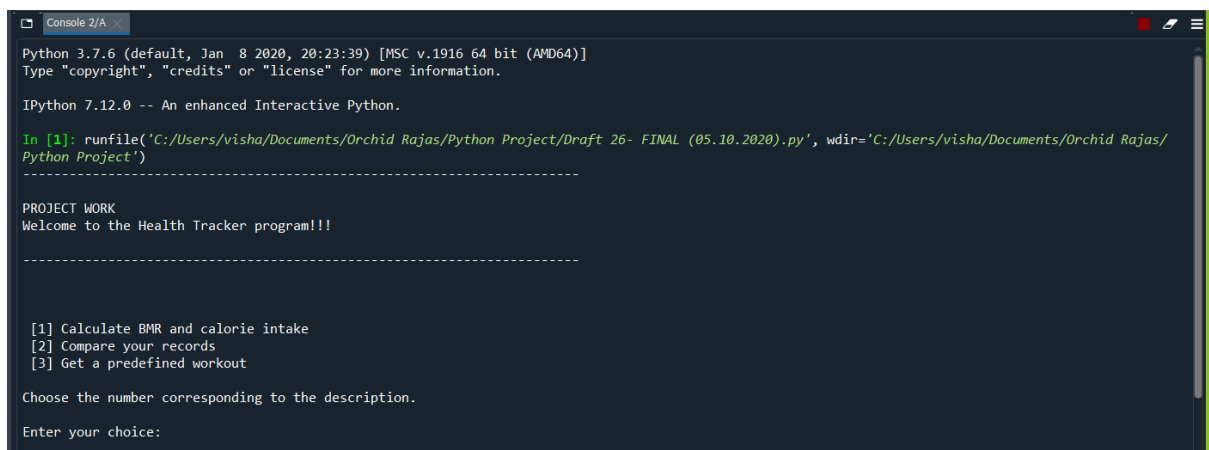
-----

PROJECT WORK
Welcome to the Health Tracker program!!!

-----
```

```
print('-----')
print("")
print('PROJECT WORK')
print('Welcome to the Fitness Triad program!!!')
print("")
print('-----')
print("")
playsound(r'C:\Users\visha\Documents\Orchid Rajas\Startup.mp3')
print("")
```

# View of the menu page



```
Python 3.7.6 (default, Jan 8 2020, 20:23:39) [MSC v.1916 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.12.0 -- An enhanced Interactive Python.

In [1]: runfile('C:/Users/visha/Documents/Orchid Rajas/Python Project/Draft 26- FINAL (05.10.2020).py', wdir='C:/Users/visha/Documents/Orchid Rajas/Python Project')

-----

PROJECT WORK
Welcome to the Health Tracker program!!!

-----

[1] Calculate BMR and calorie intake
[2] Compare your records
[3] Get a predefined workout

Choose the number corresponding to the description.

Enter your choice:
```

```
print("\n [1] Calculate BMR and calorie intake \n [2] Compare your records \n [3] Get a predefined workout')
print("")
print('Choose the number corresponding to the description.')
```



```

start=int(input("Enter your choice:" ))
while True:
    if start in [1,2,3]:
        break
    else:
        playsound(r'C:\Users\visha\Documents\Orchid Rajas\Error Short.mp3')
        start=int(input("Enter a valid choice:" ))

```

## Calculating BMR and Calorie Intake

```

[1] Calculate BMR and calorie intake
[2] Compare your records
[3] Get a predefined workout

Choose the number corresponding to the description.
Enter your choice:1

Enter your name: Jacob
Enter your weight(in kg):93
Enter your height(in cm):187
Enter your age (in years): 19
Enter your gender(m/f):m
Jacob ,your BMR is: 2123.18

```

```

# Create account part
if start==1:
    print("")
    name=str(input("Enter your name: "))
    weight=float(input('Enter your weight(in kg):'))
    height=float(input('Enter your height(in cm):'))
    age=int(input('Enter your age (in years): '))

    while age<18:
        playsound(r'C:\Users\visha\Documents\Orchid Rajas\Error Short.mp3')

```

```

print('You are underage!!!')

age=int(input('Enter your age (in years 18 or above): '))

gender=str(input('Enter your gender(m/f):' ))

while gender not in ('m','f','M','F'):

    print('Enter M or F')

    gender=str(input('Enter your gender(m/f):' ))

if gender=='m' or gender=='M':

    BMR = round((13.39*weight)+( 4.799*height) -( 5.677*age) + (88.362),2)

elif gender=="f" or gender=="F":

    BMR = round((9.247*weight) + (3.098*height) - (4.330*age) + (447.593),2)

print(name,',your BMR is: ',BMR)

```

```

Level of activity:
[1] for little/no excercise
[2] for moderate excercise(3-4 days/week)
[3] for very active excercise (6-7 days/week)

Enter your choice: 2

Calorie intake per day:

To maintain weight:  3290.93

For mild weight loss[0.25kg/week]:  3040.93

For weight loss[0.5kg/week]:  2790.93

For extreme weight loss[1kg/week]:  2290.93

For mild weight gain[0.25kg/week]:  3540.93

For weight gain[0.5kg/week]:  3790.93

For fast weight gain[1kg/week]:  4290.93


[1] To start your workout
[2] To end the session

Enter your choice: 2
Jacob , are you sure you want to exit?

[1] Workout
[2] Confirm exit
Enter:  2
Thanks for your time, Jacob !

```

```

print('Level of activity: ')

print('[1] for little/no exercise ')
print('[2] for moderate exercise(3-4 days/week) ')
print('[3] for very active exercise (6-7 days/week) ')
x=int(input('Enter your choice: '))

while x not in (1,2,3):

    playsound(r'C:\Users\visha\Documents\Orchid Rajas\Error Short.mp3')

    print('Invalid entry!!')

    x=int(input('Enter your choice: '))

if x==1:

    cal=round(BMR*1.2,2)

elif x==2:

    cal=round(BMR*1.55,2)

elif x==3:

    cal=round(BMR*1.725,2)


print("")


print('Calorie intake per day: ')

print("")

print('To maintain weight: ', cal)

print("")

print('For mild weight loss[0.25kg/week]: ', cal-250)

print("")

print('For weight loss[0.5kg/week]: ', round(cal-500,2))

print("")

print('For extreme weight loss[1kg/week]: ', round(cal-1000,2))

print("")

print('For mild weight gain[0.25kg/week]: ', cal+250)

print("")

print('For weight gain[0.5kg/week]: ', cal+500)

print("")

print('For fast weight gain[1kg/week]: ', cal+1000)

```

```
print("")
```

```
print("")
```

```
print('\n [1] To start your workout \n [2] To end the session')
```

```
start_1=int(input('Enter your choice: '))
```

```
while True:
```

```
    if start_1 in [1,2]:
```

```
        if start_1==1:
```

```
            workout()
```

```
            while True:
```

```
                repeatworkout=int(input("[1] Workout \n[2] Confirm exit \nEnter: "))
```

```
                if repeatworkout in [1,2]:
```

```
                    if repeatworkout==1:
```

```
                        workout()
```

```
                    elif repeatworkout==2:
```

```
                        playsound(r'C:\Users\visha\Documents\Orchid Rajas\Shutdown Short.mp3')
```

```
                        print("Thanks for your time,", name,"!")
```

```
                        print('Have a great day!')
```

```
                        sys.exit()
```

```
                    else:
```

```
                        playsound(r'C:\Users\visha\Documents\Orchid Rajas>Error Short.mp3')
```

```
                        repeatworkout=int(input("Enter a valid choice: "))
```

```
            elif start_1==2:
```

```
                print(name,', are you sure you want to exit?')
```

```
                repeatworkout=int(input("[1] Workout \n[2] Confirm exit \nEnter: "))
```

```
                while True:
```

```
                    if repeatworkout in [1,2]:
```

```
                        if repeatworkout==1:
```

```
                            workout()
```

```
                            repeatworkout=int(input("[1] Workout \n[2] Confirm exit \nEnter: "))
```

```
                            while True:
```

```

if repeatworkout in [1,2]:
    if repeatworkout==1:
        workout()

        repeatworkout=int(input("[1] Workout \n[2] Confirm exit \nEnter: "))
    elif repeatworkout==2:
        print("Thanks for your time," , name,"!")
        playsound(r'C:\Users\visha\Documents\Orchid Rajas\Shutdown Short.mp3')
        print('Have a great day!')
        sys.exit()
    else:
        playsound(r'C:\Users\visha\Documents\Orchid Rajas>Error Short.mp3')
        repeatworkout=int(input("Enter a valid choice: "))

elif repeatworkout==2:
    print( "Thanks for your time," , name,"!")
    playsound(r'C:\Users\visha\Documents\Orchid Rajas\Shutdown Short.mp3')
    print('Have a great day!')
    sys.exit()
else:
    playsound(r'C:\Users\visha\Documents\Orchid Rajas>Error Short.mp3')
    repeatworkout=int(input("Enter a valid choice: "))

else:
    playsound(r'C:\Users\visha\Documents\Orchid Rajas>Error Short.mp3')
    start_1=int(input('Enter a valid choice: '))

```

## Comparing with Others' Records

```

Enter your choice:2
Before we compare your records we would like to know a couple of details about you.

Enter your name: Freddie Mercury

Enter your weight(in kg): 75

Enter your height(in cm): 178

Enter your current age: 34

Enter your gender(m/f):M

Your updated BMR is 1753.8160000000003

[1] Workout
[2] Compare with other records
[3] Confirm exit
Enter your choice: 2

```

# Compare records part

elif start==2:

```

dic={'Name':['Rajas','Shreyash','Johnny','Naidu','Aadish'],
     'Weight':[62,96,92,94,96],
     'Height':[181,179,184,183,186],
     'Age':[18,19,19,23,30],
     'BMR':[1684.97,2130.637,2074.29,2081.87,2164.23]}

```

```
data=pd.DataFrame(dic)
```

```
print('Before we compare your records we would like to know a couple of details about you.')
```

```
n_n=input('Enter your name: ')
```

```
n_w=int(input('Enter your weight(in kg): '))
```

```
n_h=int(input('Enter your height(in cm): '))
```

```
n_a=int(input('Enter your current age: '))
```

```
g=str(input('Enter your gender(m/f): '))
```

```
while g not in ('m','f','M','F'):
```

```
    print('Enter M or F')
```

```
    g=str(input('Enter your gender(m/f): '))
```

```
if g=='m' or g=='M':
```

```
    n_BMR = (13.39*n_w)+( 4.799*n_h) -( 5.677*n_a) + (88.362)
```

```
elif g=="f" or g=='F':
```

```
    n_BMR = (9.247*n_w) + (3.098*n_h) - (4.330*n_a) + (447.593)
```

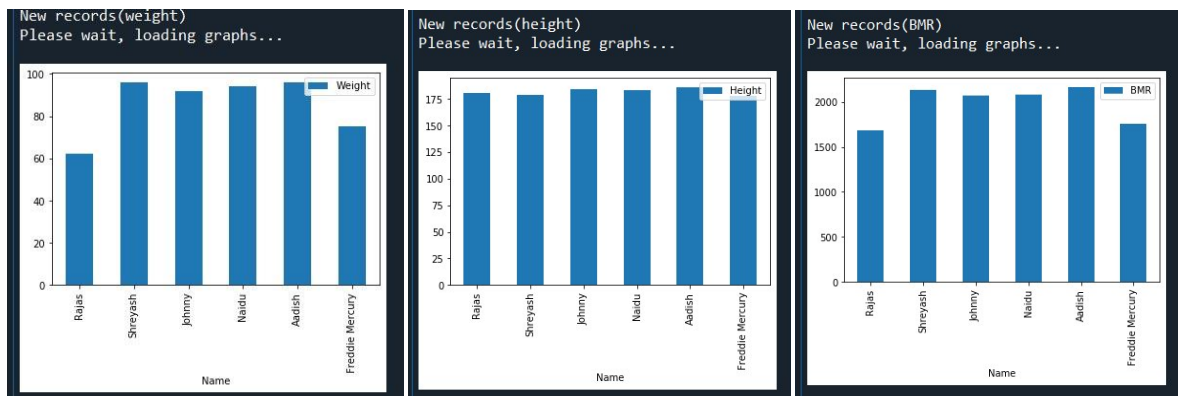
```
print("")
```

```
print('Your updated BMR is',n_BMR)
```

```
print("")
```

```
newrow= {'Name': n_n,'Weight':n_w,'Height':n_h,'Age':n_a,'BMR':n_BMR}
```

```
data1=data.append([newrow],ignore_index =True)
```



```
Would you like to see your graphs again?
```

```
[1] Workout  
[2] Compare with other records  
[3] Confirm exit  
Enter your choice: 3  
Thanks for your time!  
Have a great day!
```

```
while True:
```

```
    repeatworkout=int(input("[1] Workout \n[2] Compare with other records \n[3] Confirm exit \nEnter your  
choice: "))
```

```
    if repeatworkout in [1,2,3]:
```

```
        if repeatworkout==1:
```

```
            workout()
```

```
        elif repeatworkout==2:
```

```
            print("")
```

```
            print('New records(weight)')
```

```
            data1.plot(x ='Name', y='Weight', kind = 'bar')
```

```
            print('Please wait, loading graphs...')
```

```
            time.sleep(3)
```

```
            pl.show()
```

```
            print("")
```

```
            print('New records(height)')
```

```
            data1.plot(x ='Name', y='Height', kind = 'bar')
```

```
print('Please wait, loading graphs...')  
  
time.sleep(3)  
  
pl.show()  
  
print("")  
  
print('New records(BMR)')  
  
data1.plot(x='Name', y='BMR', kind='bar')  
  
print('Please wait, loading graphs...')  
  
time.sleep(3)  
  
pl.show()  
  
print("")  
  
print('Would you like to see your graphs again?')
```

```
elif repeatworkout==3:
```

```
    print("Thanks for your time!")  
  
    playsound(r'C:\Users\visha\Documents\Orchid Rajas\Shutdown Short.mp3')  
  
    print('Have a great day!')  
  
    sys.exit()
```

```
else:
```

```
    playsound(r'C:\Users\visha\Documents\Orchid Rajas>Error Short.mp3')  
  
    print('Invalid input!!!')  
  
    repeatworkout=int(input("Enter a valid choice:"))
```

## **Professional Pre-Defined Workout**



```

Enter your choice:3
Choose a muscle category for workout
[1] Arms
[2] Legs
[3] Chest and Back
[4] Core

Enter your choice:2
0%| | 0/2 [00:00<?, ?it/s]

LET'S WARM UP QUICKLY

First Exercise- Stretch arms and legs
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest
0%| | 0/2 [00:00<?, ?it/s]

Second Exercise- 10 jumping jacks
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest
0%| | 0/2 [00:00<?, ?it/s]

Third Exercise- 5 burpees
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest

Workout starts in...
00:05
00:04
00:03
00:02
00:01
0%| | 0/2 [00:00<?, ?it/s]
Lets go!!!

First Exercise- Weighted Squats
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest
0%| | 0/2 [00:00<?, ?it/s]

Second Exercise- Lunges
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest
0%| | 0/2 [00:00<?, ?it/s]

Third Exercise- Mountain Climbers
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest
0%| | 0/2 [00:00<?, ?it/s]

Fourth Exercise- High Knees
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest
0%| | 0/2 [00:00<?, ?it/s]

Fifth Exercise- Leg Raises
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest

That was a great workout... your workout is done
NOW LET'S COOLDOWN

First Exercise- Stretch arms and legs
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest
0%| | 0/2 [00:00<?, ?it/s]

Second Exercise- Sit down and breathe deeply
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest
0%| | 0/2 [00:00<?, ?it/s]

Third Exercise- Knee to chest pose
100%| | 2/2 [00:02<00:00, 1.00s/it]
3 seconds rest

[1] To repeat workout
[2] To end the session

Enter your choice: 2
Thank you for your time!
Have a great day!

```

# Predefined workout part

elif start==3:

workout()

print("\n [1] To repeat workout \n [2] To end the session')

start\_1=int(input('Enter your choice: '))

while True:

if start\_1 in [1,2]:

break

else:

playsound(r'C:\Users\visha\Documents\Orchid Rajas\Error Short.mp3')

```

start_1=int(input('Enter valid choice: '))
if start_1==1:
    workout()
    while True:
        repeatworkout=int(input("[1] Workout \n[2] Confirm exit \nEnter your choice: "))
        if repeatworkout in [1,2]:
            if repeatworkout==1:
                workout()
            elif repeatworkout==2:
                print("Thanks for your time!")
                playsound(r'C:\Users\visha\Documents\Orchid Rajas\Shutdown Short.mp3')
                print('Have a great day!')
                sys.exit()
            else:
                playsound(r'C:\Users\visha\Documents\Orchid Rajas>Error Short.mp3')
                print('Invalid input!!!')
                repeatworkout=int(input("Enter a valid choice:"))

elif start_1==2:
    print('Thank you for your time!')
    playsound(r'C:\Users\visha\Documents\Orchid Rajas\Shutdown Short.mp3')
    print('Have a great day!')

```

## 6. User Manual

### 6.1 How to install Software:

#### Hardware Requirement-

- ◆ Intel/Ryzen processor-based PC/Laptop at Client/Server end.

- ◆ 1 GB RAM and 4GB HDD space (for Data frame) is desirable.
- ◆ Standard I/O devices like Keyboard and Mouse etc.

#### Software Requirement-

- ◆ Windows 2000/XP OS is desirable or newer.
- ◆ Python Ver 3.7 or higher should be installed with Pandas and Matplotlib Library.
- ◆ Earlier mentioned external modules should be pip-installed.

## 7. References

In order to work on this project titled –***Fitness Triad Program***, I have referred to the following books and literature during the various phases of development of the project.

- (1) Informatics Practices for class XII (NCERT)
- (2) [www.stackoverflow.com](http://www.stackoverflow.com)
- (3) [www.geeksforgeeks.org](http://www.geeksforgeeks.org)

Other than the above-mentioned books and websites, the suggestions and supervision of my teacher and my class experience also helped me to develop this software project.