PROJECT REPORT ON

‘Health Survey’

SUBMITTED TO THE SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE

SUBMITTED BY

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SAVITRIBAI PHULE PUNE UNIVERSITY

2019 - 2020

CERTIFICATE

This is to certify that the project report entitled

“Health Survey”

Submitted by

Name	Roll No.
Omkar Nagarkar	18U121
Saurabh Bombale	18U108
Amit Jagtap	18U117

is a bonafide work carried out by her/ him under the supervision of **Prof. Ruchira Pathak** and it is approved for the partial fulfillment of the requirement of University of Pune as a part Database Management Lab work syllabus (Third year Computer Engineering).

( )	**(Dr. P. N. Mahalle)**
Department of Computer Engineering	Head, Department of Computer Engineering

ACKNOWLEDGEMENT

We have taken efforts in this project. However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them.

We are highly indebted to Prof. Ruchira Pathak and Prof. Arti Bhise for their guidance and constant supervision as well as for providing necessary information regarding the project & also for their support in completing the project.
We would like to express our gratitude towards our parents for their kind co-operation and encouragement which help us in completion of this project.

We thanks and appreciations also go to our colleague in developing the project and people who have willingly helped us out with their abilities.

Thanking You,
Omkar Nagarkar,
Saurabh Bombale,
Amit Jagtap.

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Abstract

Anthropometry is the single most universally applicable, inexpensive, and non-invasive method available to assess the size, proportion and composition of the human body. Moreover, since growth in children and body dimensions at all ages reflect the overall health and welfare of individuals and populations, anthropometry may also be used to predict performance, health and survival (WHO, 1995).

Shortly after World War II, the relationship between weight and cardiovascular disease became a subject of epidemiological studies. T he best index was the ratio of the weight in kilograms divided by the square of the height in meters, or the Quetelet Index described in 1832 by Adolphe Quetelet (1796–1874). The Quetelet Index was termed the Body Mass Index in 1972 by Ancel Keys (Eknoyan, 2007).

Today, however, as standards of living continue to rise, weight gain and obesity are posing a growing threat to health in countries all over the world. Obesity is a chronic disease, prevalent in both developed and developing countries, and affecting children as well as adults

(WHO, 2000).

Project Definition

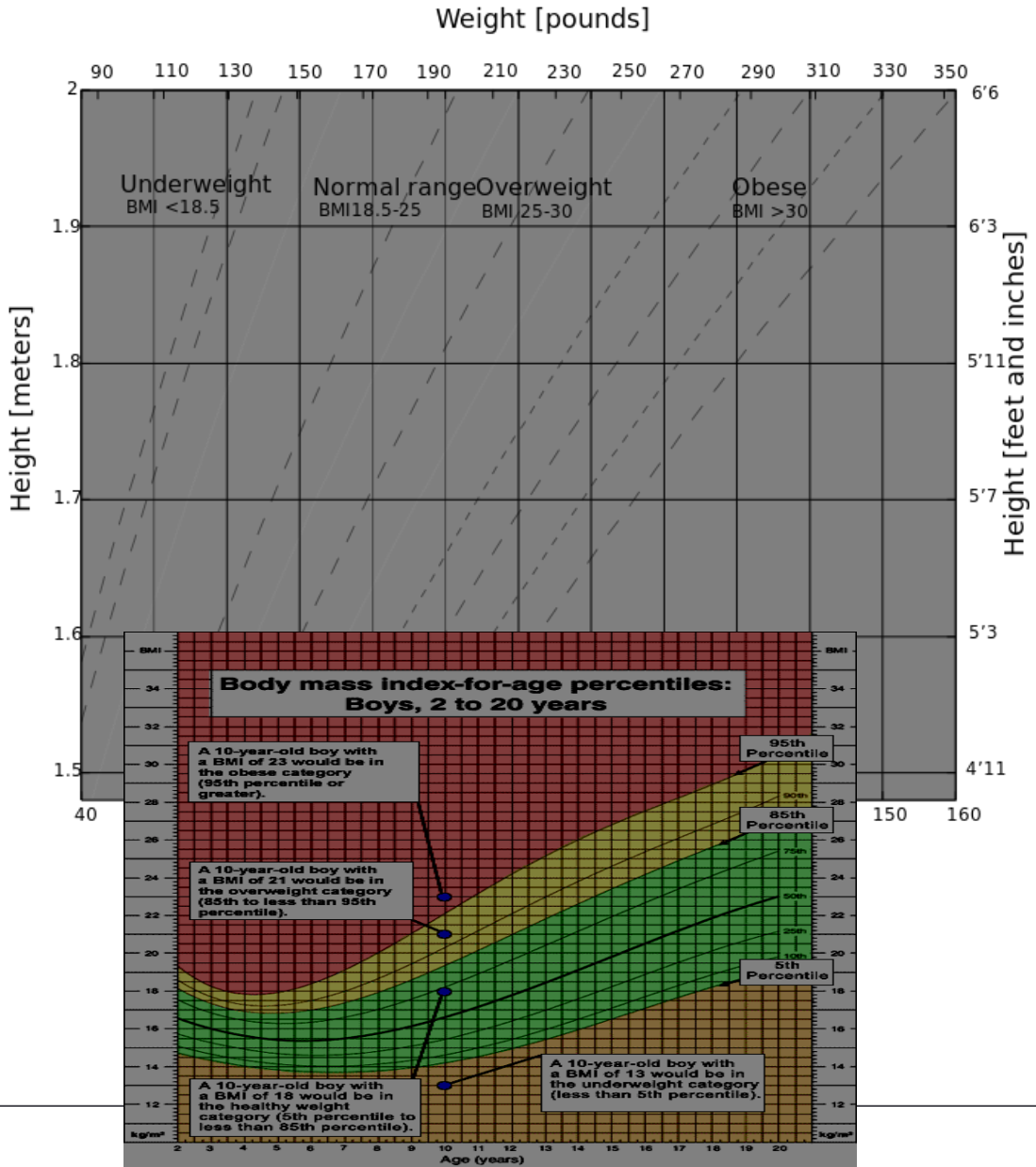
In this project ,we are collecting information from the user such as their email id,height,weight.We are storing this information in the database in the form of relations.We have two relations ,one in which we are storing the data (height,email_id,weight) and in other we are storing calculated BMI(Body Mass Index) with their respective user ID.

We have use id as a Primary key constraint on relation 1 and Foreign key constraint in relation 2.The user will enter the email_id ,height,weight and based on this information we are calculating the BMI.The user will receive an email regarding their BMI,category in which their BMI lies and average height in the class.

Project Architecture

The **BMI** is a measure of relative weight based on an individual's mass and height. When BMI of user is under 18.5 then we classify the student as “Underweight” category. If BMI in range between 18.5 – 25 then student is having the “Healthy weight”. If BMI is in range between 25- 30 then student will be place under in “Overweight” category. Student is considered as “Obese” if it’s having BMI above 30.

Fig. given below illustrates explanation of above -



Entity Relationship Diagram

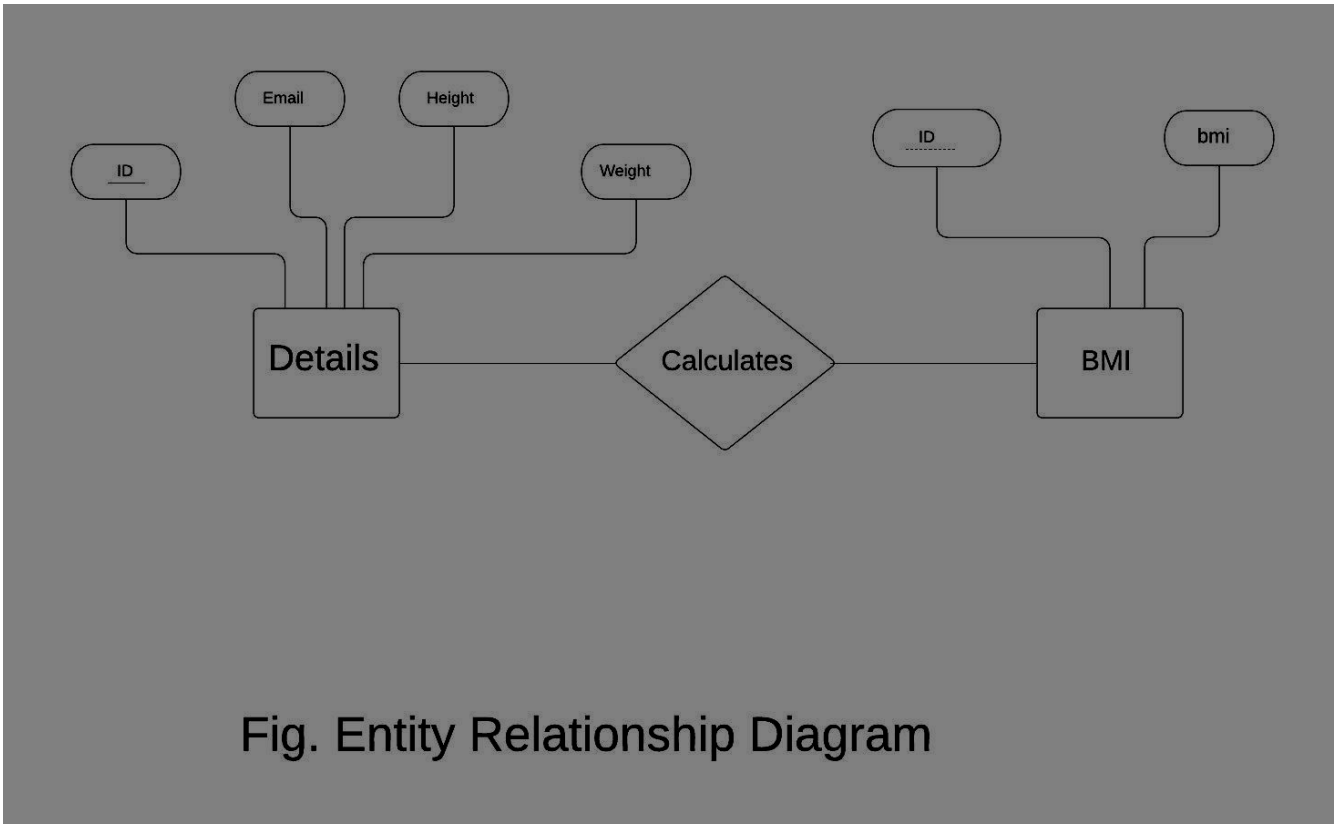


Fig. Entity Relationship Diagram

Schema Diagram

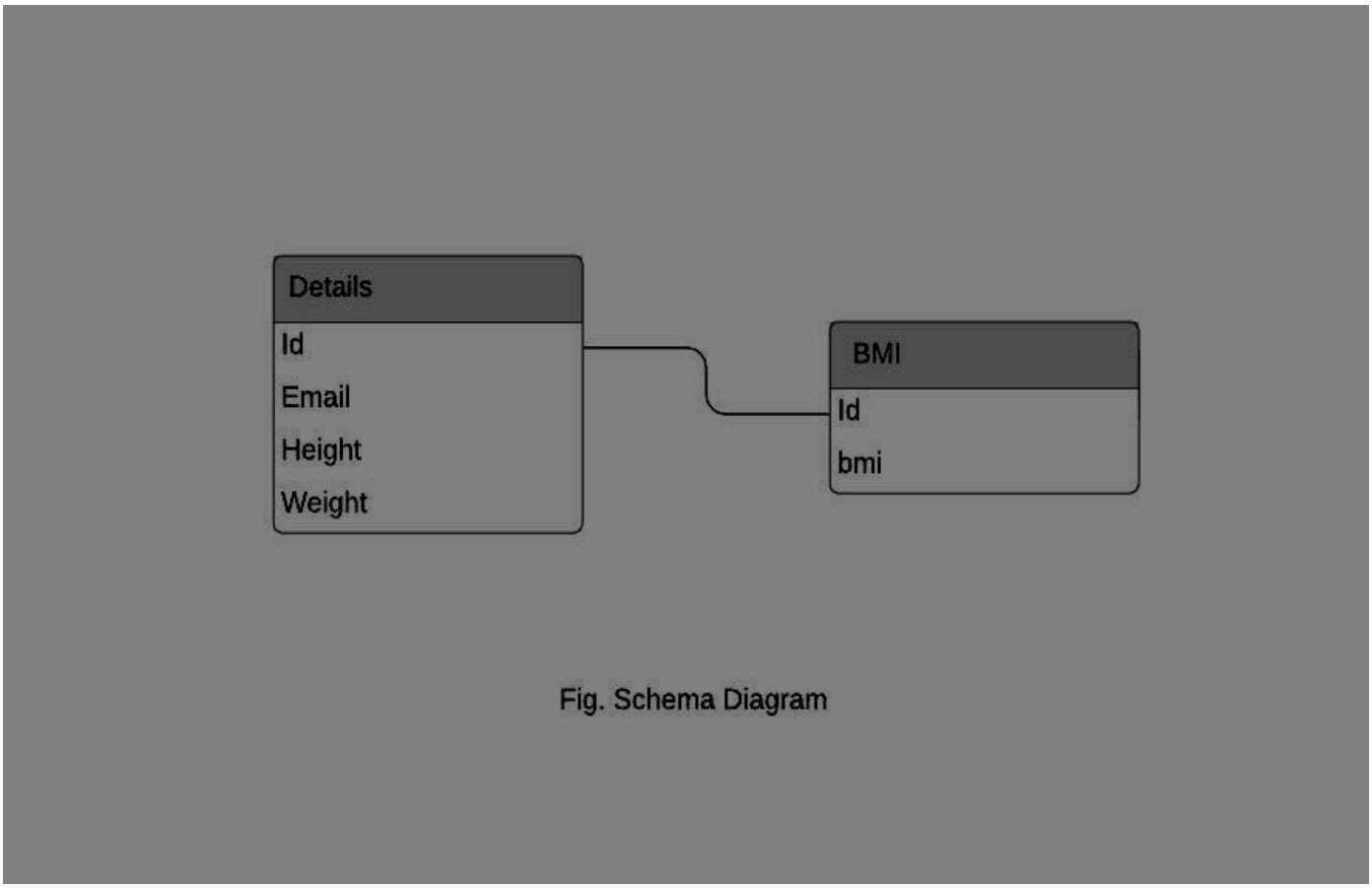


Fig. Schema Diagram

Database Normalization

Database Normalisation is the technique which is used to avoid data redundancy. Data redundancy causes storing of same data multiple times which causes loss of storage space and unnecessarily same data get reflected many times.

In our application we have provided facility so that user cannot enter either wrong email_id, height or weight. We have use unique key constraint on email_id field.

When user enters email_id then provision is made so that it should be unique. Similarly when user enters height and weight then also it should be in specific limit.

Field	Limit
Email_id	must be unique
Height	50 cm – 300 cm
Weight	10 kg – 500 kg

Software and Hardware Requirement

Software requirements

1. Python module Flask is required.

2. Install postgresql.

3. Install pgadmin4.

4. Install pyscopg2 module to connect to postgresql.

Hardware Requirements

1. Computer with atleast 4 GB graphics

2. 8 GB RAM

Procedure to Install Required Software

1. To install Flask Module type this in the terminal

>$pip install Flash

2. To install postgresql run the following command

>$sudo apt-get install postgresql postgresql-contrib

Reference Link-https://tecadmin.net/install-postgresql-server-on -ubuntu/)

3. To install pgadmin4 install following command

>$sudo apt-get install pgadmin4 pgadmin4-apache2

Reference Link-https://tecadmin.net/install-pgadmin4-on-ubuntu/)

4. To install psycopg2 run following command

>$sudo pip install psycopg2

How to run the project -

1. Enter your email and password of the account from where you want to send the email in send email.py file.

2. Create a databases in the postgresql with any name (eg.mydb).

3. Enter your database name, username, password and specify the localhost in pysco.py file.

eg. If your created database name is 'mydb'.Then use

conn=pg.connect("dbname='mydb' user='postgres' password='postgres123' host='localhost'")

In my case data base name is ' pysco '.Change it as you want.

4.Run webapp.py file.

And you are good to go.

Note: The Project is done in Python3.7.

Project Description

BODY MASS INDEX

The **BMI** is a measure of relative weight based on an individual's mass and height. Nowadays the **BMI** is commonly used to classify underweight, overweight and obesity. Moreover, it is adopted by the British government in an effort to promote healthy eating.

It is calculated by dividing individual's weight in kilograms by his height in metres, then dividing the answer by his height again.

BMI (kg/m 2) = Body weight (kg) / Height (m) 2

For instance: BMI = 66kg / (1.69 m 2) = 66 / 2.86 = 23.08

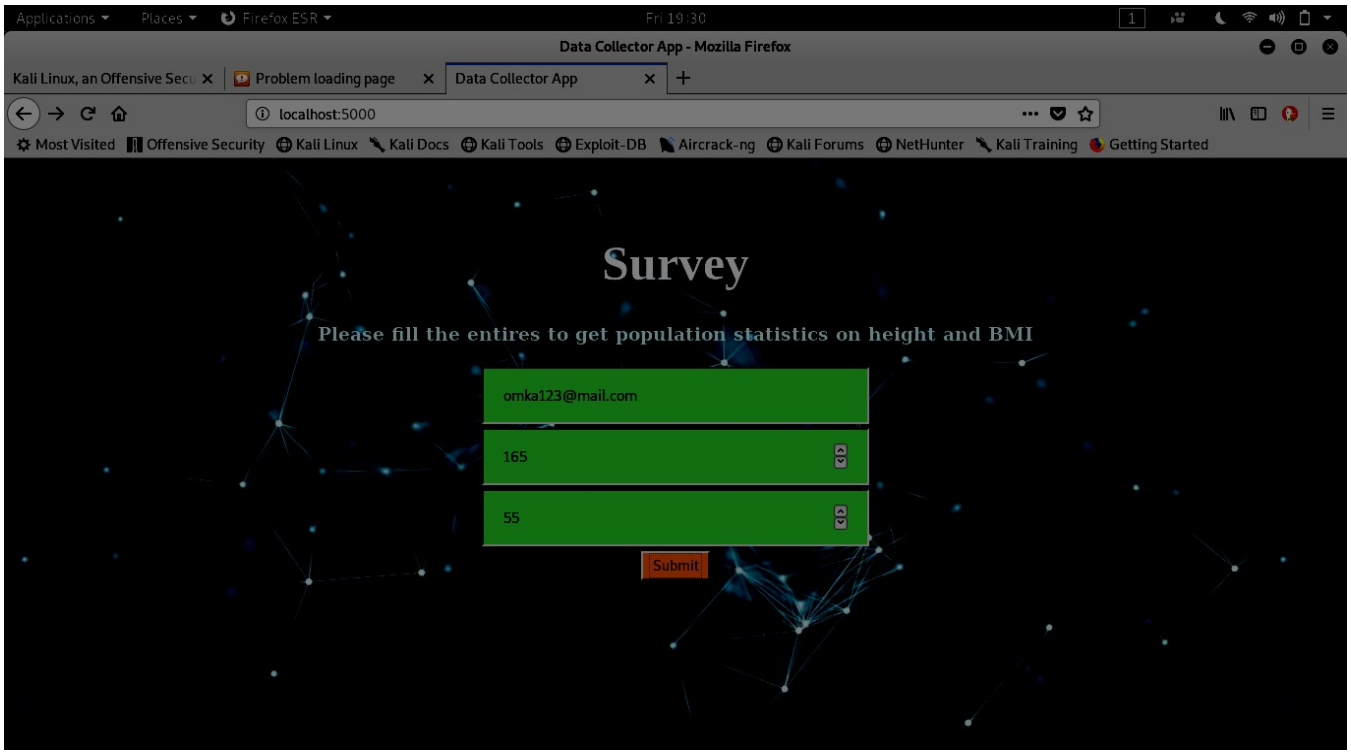
This ratio is then compared to an index chart (Fig.2), to see whether you are underweight (score of under 18.5), normal (18.5-24.9), overweight (25-29.9) or obese (over 30).

IS BMI RELIABLE?

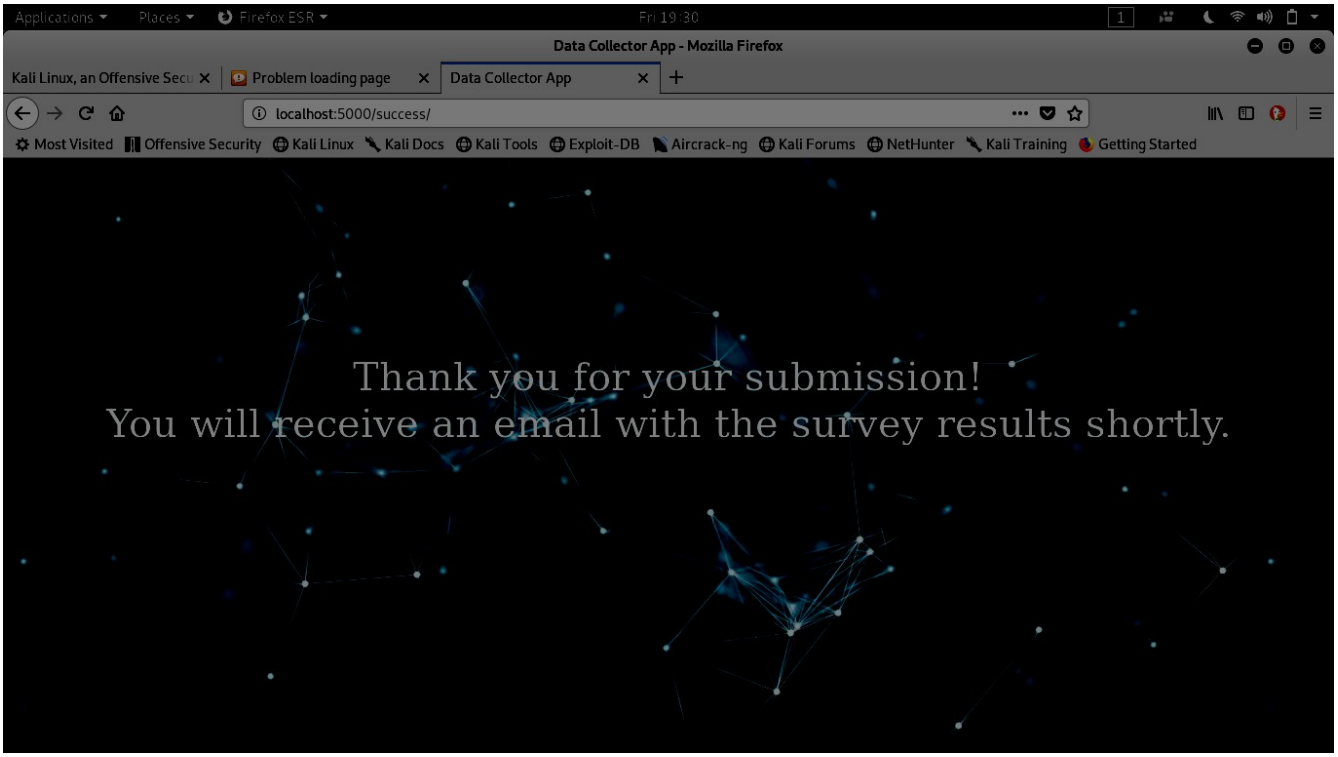
The new term "Body Mass Index" was published for the first time in the July edition of 1972 in the Journal of Chronic Diseases by Ancel Keys, which found the BMI to be the best proxy for body fat percentage among ratios of weight and height (Keys et al., 1972) the interest in measuring body fat being due to obesity becoming a discernible issue in prosperous Western societies.

BMI was explicitly cited by Keys as being appropriate for population studies, and inappropriate for individual diagnosis. Nevertheless, due to its simplicity, it came to be widely used for individual diagnosis. Gymnastics is considered as a sport which makes a great contribution to basic physical fitness, as well as symmetry and harmony of the body.

GUI-1


Applications
Places
Firefox ESR
Fri 19:30
Data Collector App - Mozilla Firefox
Kali Linux, an Offensive Secu
Problem loading page
Data Collector App
localhost:5000
Most Visited
Offensive Security
Kali Linux
Kali Docs
Kali Tools
Exploit-DB
Aircrack-ng
Kali Forums
NetHunter
Kali Training
Getting Started
Survey
Please fill the entires to get population statistics on height and BMI
omka123@mail.com
165
55
Submit

GUI -2


Applications
Places
Firefox ESR
Fri 19:30
Data Collector App - Mozilla Firefox
Kali Linux, an Offensive Secu
Problem loading page
Data Collector App
localhost:5000/success/
Most Visited
Offensive Security
Kali Linux
Kali Docs
Kali Tools
Exploit-DB
Aircrack-ng
Kali Forums
NetHunter
Kali Training
Getting Started
Thank you for your submission!
You will receive an email with the survey results shortly.

Relations

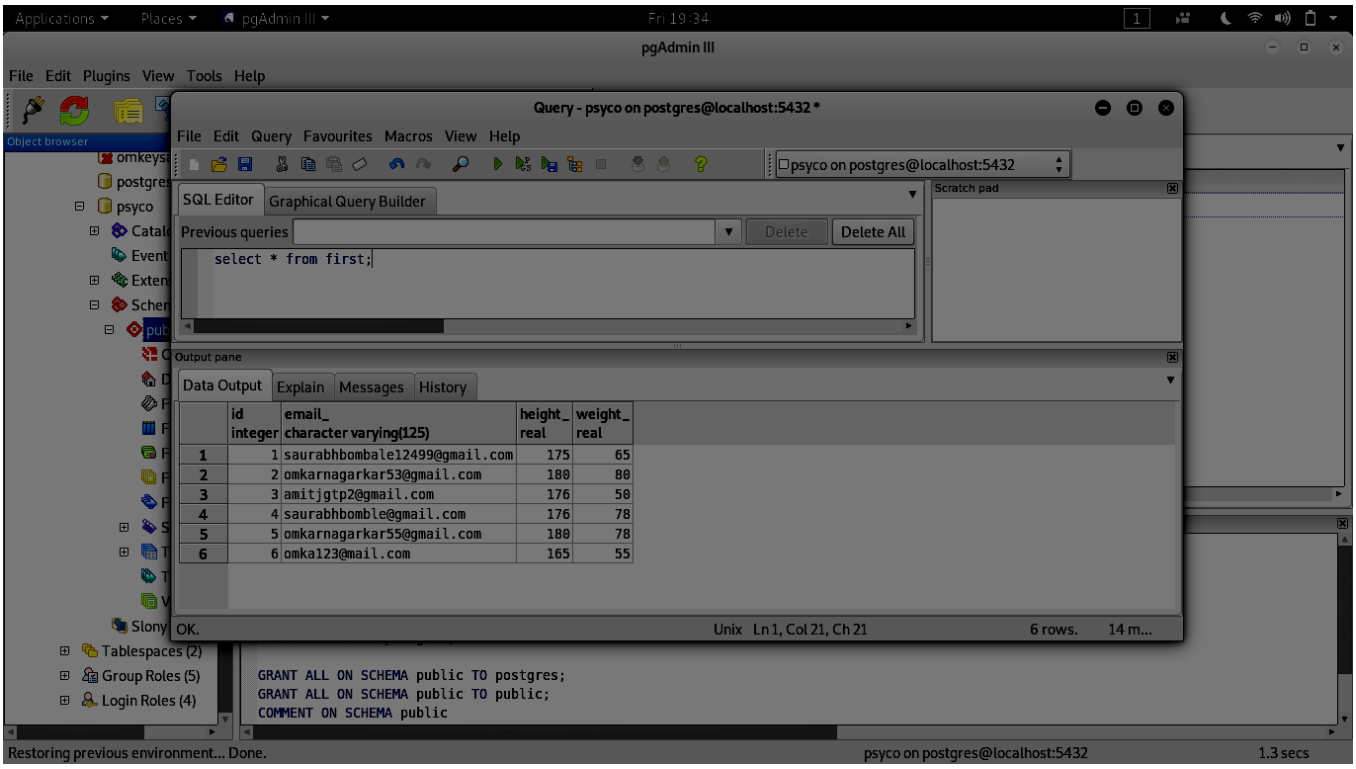
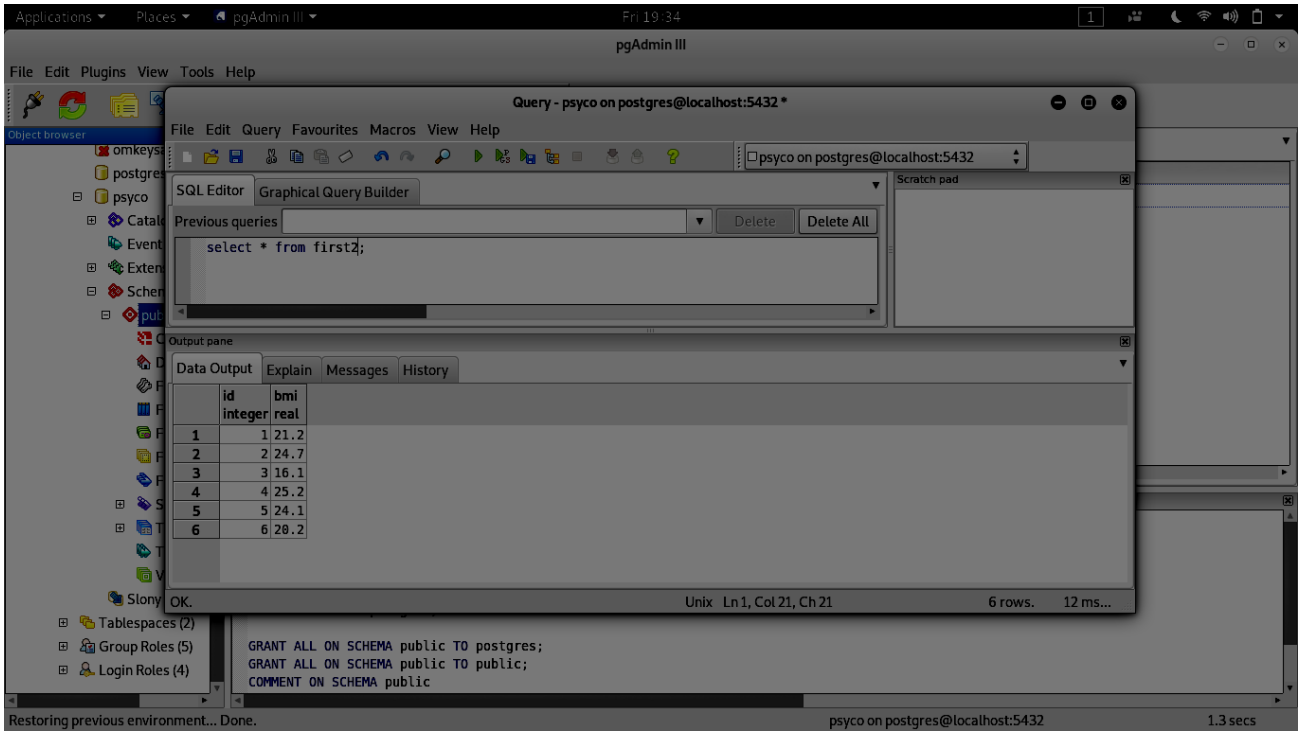
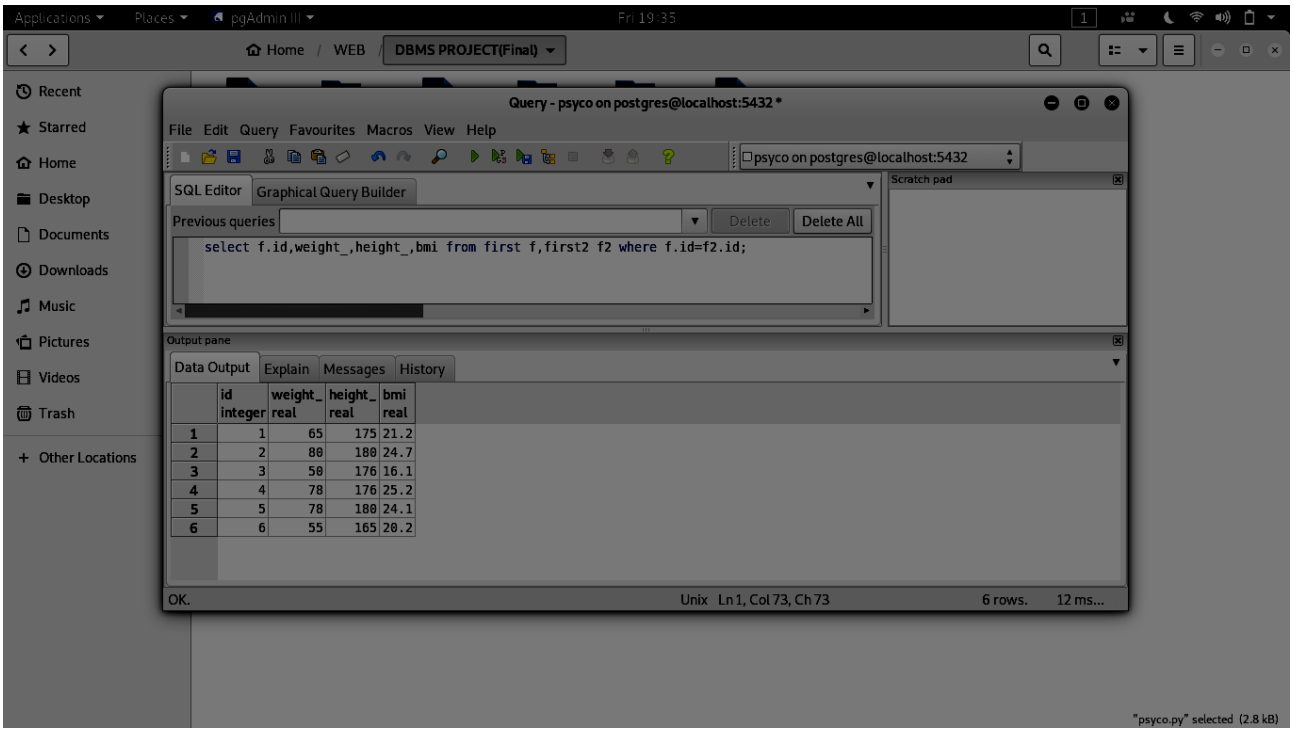


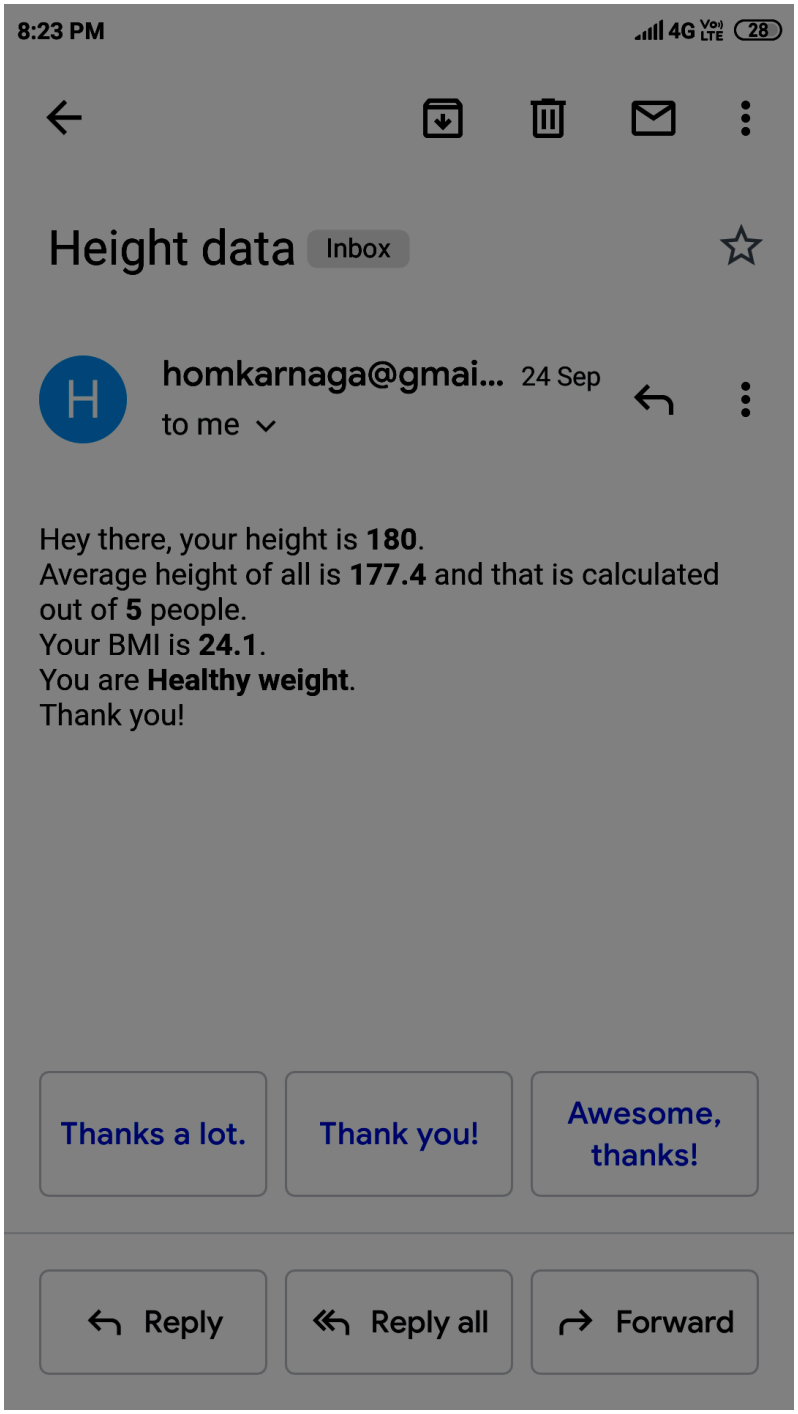
Fig. Table 1

Fig. Table 2


pgAdmin III
Query - psyco on postgres@localhost:5432 *
File Edit Query Favourites Macros View Help
psyco on postgres@localhost:5432
SQL Editor
Graphical Query Builder
Previous queries
Delete
Delete All
select * from first2;
Scratch pad
Output pane
Data Output
Explain
Messages
History
id integer
bmi real
1 1 21.2
2 2 24.7
3 3 16.1
4 4 25.2
5 5 24.1
6 6 20.2
OK.
Unix Ln 1, Col 21, Ch 21
6 rows.
12 ms...
GRANT ALL ON SCHEMA public TO postgres;
GRANT ALL ON SCHEMA public TO public;
COMMENT ON SCHEMA public
Restoring previous environment... Done.
psyco on postgres@localhost:5432
1.3 secs


Query - psyco on postgres@localhost:5432 *
File Edit Query Favourites Macros View Help
psyco on postgres@localhost:5432
SQL Editor
Graphical Query Builder
Previous queries
Delete
Delete All
select f.id,weight_,height_,bmi from first f,first2 f2 where f.id=f2.id;
Scratch pad
Output pane
Data Output
Explain
Messages
History
id integer
weight_ real
height_ real
bmi real
1 1 65 175 21.2
2 2 80 180 24.7
3 3 50 176 16.1
4 4 78 176 25.2
5 5 78 180 24.1
6 6 55 165 20.2
OK.
Unix Ln 1, Col 73, Ch 73
6 rows.
12 ms...
"psyco.py" selected (2.8 kB)

GUI –3 (Email Screenshot)



Conclusion

Obesity is a condition that results from the accumulation of excess fat in the body. In general, a person has obesity when the weight of the person is 20 percent or more above the normal recommended weight based on the person's height, weight, sex, age and build or bone structure. There is what is called the Body Mass Index (BMI), which is a measure of body fat, calculated using a formula that requires the height and the weight of an adult (either man or woman). Persons with a BMI of less than 18.5 are underweight. A person is considered to be of normal weight if his or her BMI is between 18.5 and 24.9; overweight if the BMI is between 25 and 29.9; and obese if it is 30 and above. The accumulation of too much fat in the body, leads to serious health risks, including death in severe cases of obesity, especially morbid obesity. Therefore, irrespective of the causes of obesity, it is essential for obese people to take suitable steps for losing as much weight as is necessary to bring it to the level of normal BMI.