

FITNESS CALCULATOR

*Mini Project Report submitted in partial fulfilment of the requirements for
the Degree of*

**BACHELOR OF TECHNOLOGY
in
COMPUTER SCIENCE AND ENGINEERING**

**By
MUKESH KUMAR SAH [11719859]
MANAS PANDEY [11701826]
AKULA SRUJAN RAJ [11701804]
Section: K17CS**

Under the guidance of
RANJIT KAUR



School of Computer Science and Engineering

Lovely Professional University

Phagwara, Punjab (India)

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ACKNOWLEDGMENT

NAMES

Place: Lovely Professional University

MUKESH KUMAR SAH

Date: 11/12/2018

MANAS PANDEY

AKULA SRUJAN RAJ

REGISTRATION NUMBER

11719859

11701826

11701804

DECLARATION

STUDENT DECLARATION

This is to declare that this report has been written by us. No part of the report is copied from other sources. All information included from other sources have been duly acknowledged. We aver that if any part of the report is found to be copied, we are shall take full responsibility for it.

Signature

.....

NAME: MUKESH KUMAR SAH

REGISTRATION NUMBER: 11719859

Signature

.....

NAME: MANAS PANDEY

REGISTRATION NUMBER: 11701826

Signature

.....

NAME: AKULA SRUJAN RAJ

REGISTRATION NUMBER: 11701804

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CHAPTER 1

INTRODUCTION

1.1 TITLE

To design a Graphical User Interface (GUI) for Fitness Calculator of a person using Python.

1.2 OBJECTIVE OF THE PROJECT

The main objective of the project is to calculate the fitness of a person by calculating his/her fitness in terms of body weight, height, blood pressure is low or high, pulse rate, RBC count, WBC count, Platelets, HB, uric acid, cholesterol etc.

1.2.1 MODULES AND INTERFACE OF THE PROJECT

In this project, there are several modules for GUI and Database which is being performed by the project group members. Main GUI window interface for the input of the person details like body weight, height, cholesterol etc. Another GUI window which generates the fitness report of the person. Also, there is a separate module for the database, which permanently stores the fitness report of the person for future references.

CHAPTER 2

METHODOLOGY

The methodologies that are used in the projects are:

- ✓ GUI FRAME
- ✓ LABEL
- ✓ ENTRY
- ✓ RADIOBUTTONS
- ✓ FILE HANDLING
- ✓ DATABASE

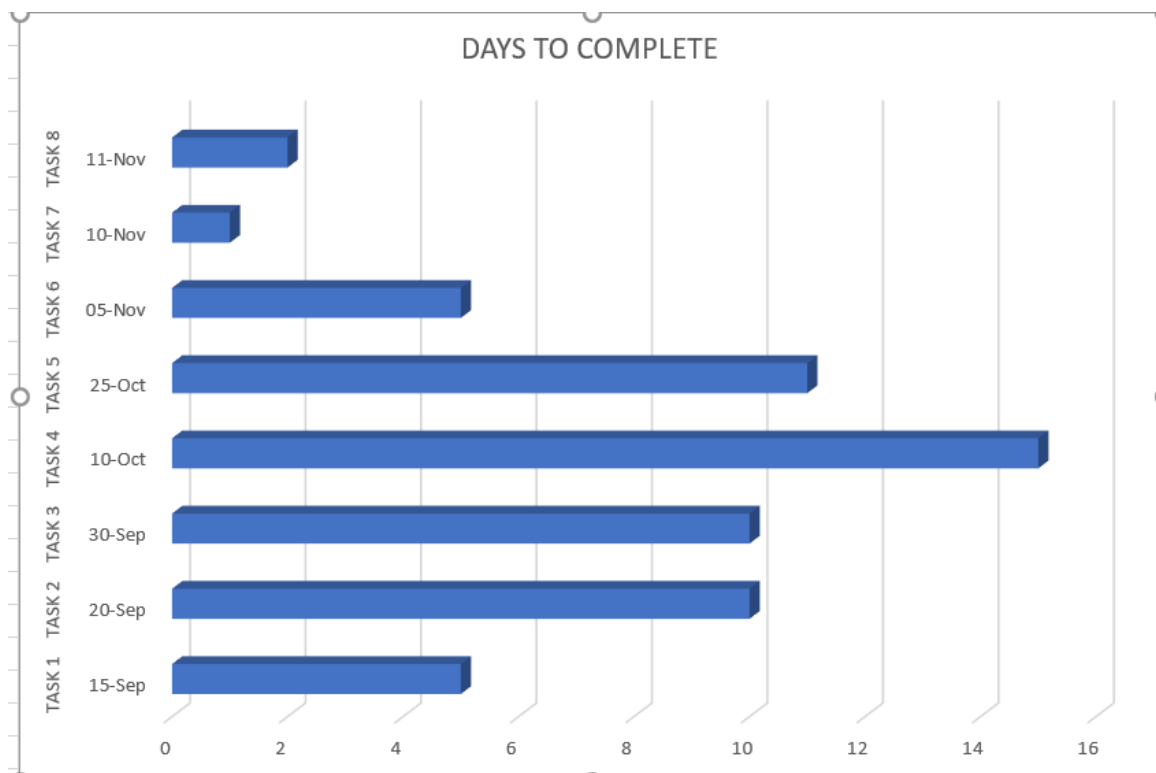


Figure 2.1 Gantt Chart

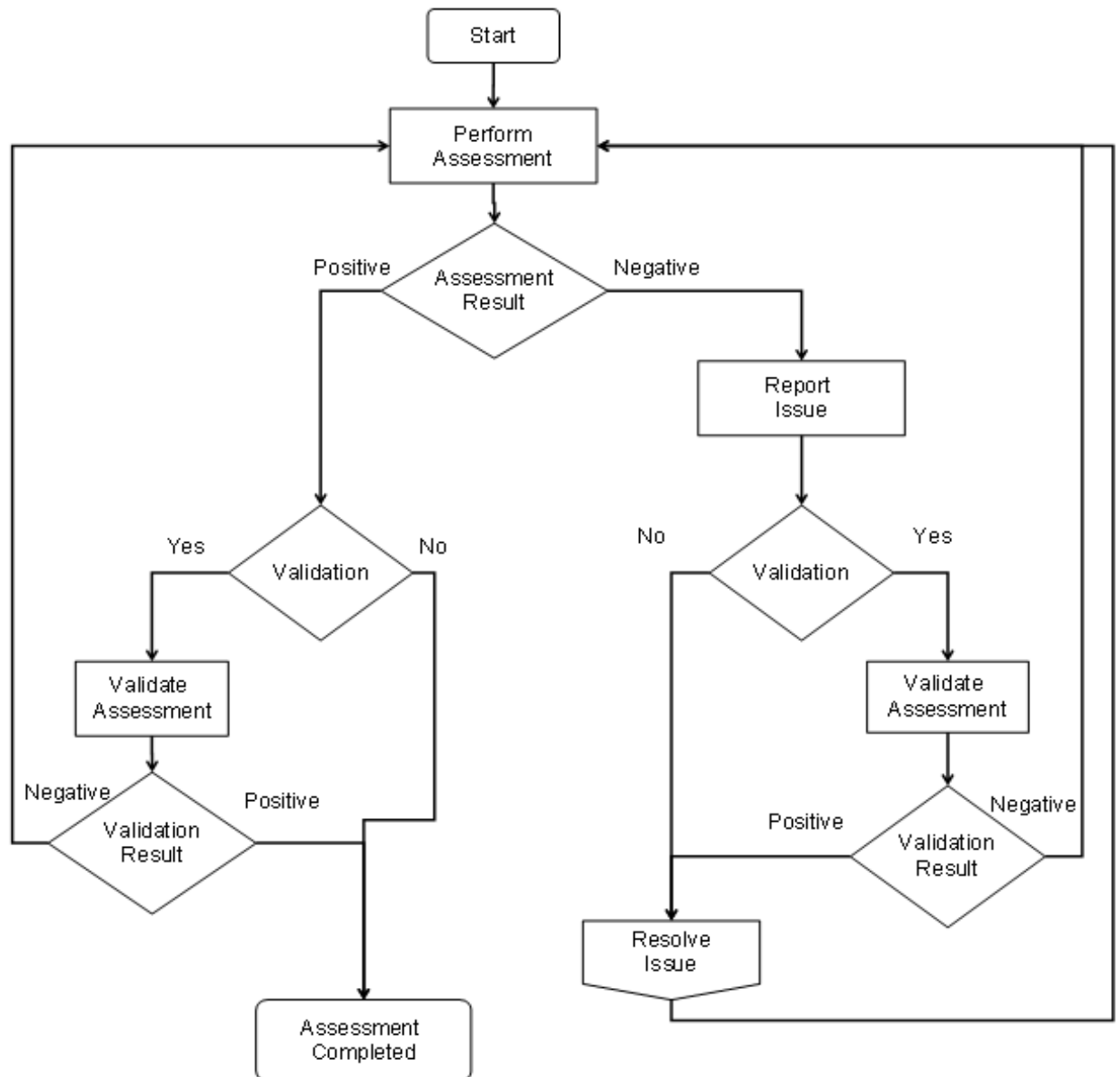


Figure 2.2 Flow Chart

CHAPTER 3

TECHNOLOGIES USED

GUI (GRAPHICAL USER INTERFACE)

In this project we have used 'Tkinter' which is the easiest among all to get started with. It is Python's standard GUI package. It is the most commonly used toolkit for GUI Programming in Python. Tkinter provides widgets like Button, frame, label, entry, radio buttons, checkbox, menu, scrollbar etc.

PYTHON FILE HANDLING

File handling is an important part of any web application. Python has several functions for creating, reading, updating, and deleting files. Python treats file differently as text or binary and this is important. Each line of code includes a sequence of characters and they form text file. Each line of a file is terminated with a special character, called the EOL or End of Line characters like comma {,} or newline character.

PYTHON DATABASE

Python can be used in database applications. We can connect our python programs to the database to insert, update, delete, create the data and work on it. The cursor class allows python code to execute command in database session. Cursors are created by the `connection.cursor ()` method, they are bound to the connection for the entire lifetime and all the commands are executed in the context of the database session wrapped by the connection.

CHAPTER 4

WORK DIVISION

1. MUKESH KUMAR SAH

- ❖ GUI
- ❖ DIFFERENT MODULES AND WINDOWS OF GUI
- ❖ OVERALL CALCULATIONS FOR FITNESS CALCULATOR

2. MANAS PANDEY

- ❖ DATABASE
- ❖ PROJECT INTERFACE DESIGN

3. AKULA SRUJAN RAJ

- ❖ INFORMATION OF FITNESS DATA AND DESIGN

CHAPTER 5

IMPLEMENTATION

SCREENSHOT OF ALL THE WINDOWS

1ST

The screenshot displays the 'Fitness Calculator' application window. The form contains the following data:

Field	Value	Unit
Name	MUKESH	
Age	23	
Gender	Male	
Weight	70	KG
Height	1.8	METERS
BP low	60	
BP high	110	
Pulse Rate	133	
RBC Count	5000	cells/mL
WBC Count	8000	cells/mL
Platelets	200	cells/mL
HB	15	g/dL
URIC Acid	0.20	mg/dL
Cholestrol	1.7	mg/dL

Buttons: VIEW, Generate Report

Background code snippet:

```
self.t1 = text(self.t1, height = 500 , width =  
self.t1.grid(column =0, row= 0)  
fname2 = self.eview.get()  
with open(fname2 + '.txt','r') as fr:  
    a=fr.read()  
    self.t1.insert(END,a)  
root4.mainloop()  
object = fit()
```

This is the main windows of the project i.e., **“FITNESS CALCULATOR”**. Here we insert the fitness values of the person to generate the report.

2ND

The screenshot shows a web browser window with a 'Report' modal open. The modal contains the following information:

Field	Value	Unit
NAME :	MUKESH	
AGE :	23	YEARS
BMI (Body Mass Index) :	21.604938271604937	KG/m ²
BP (High/Medium/Low) :	Normal	
Pulse Rate (High/Medium/Low) :	LightModerate	
RBC Count (High/Medium/Low) :	Medium	
WBC (High/Medium/Low) :	Medium	
Platelets (High/Medium/Low) :	Medium	
HB (High/Medium/Low) :	High	
URIC Acid (High/Medium/Low) :	Medium	
Cholestrol (High/Medium/Low) :	Low	

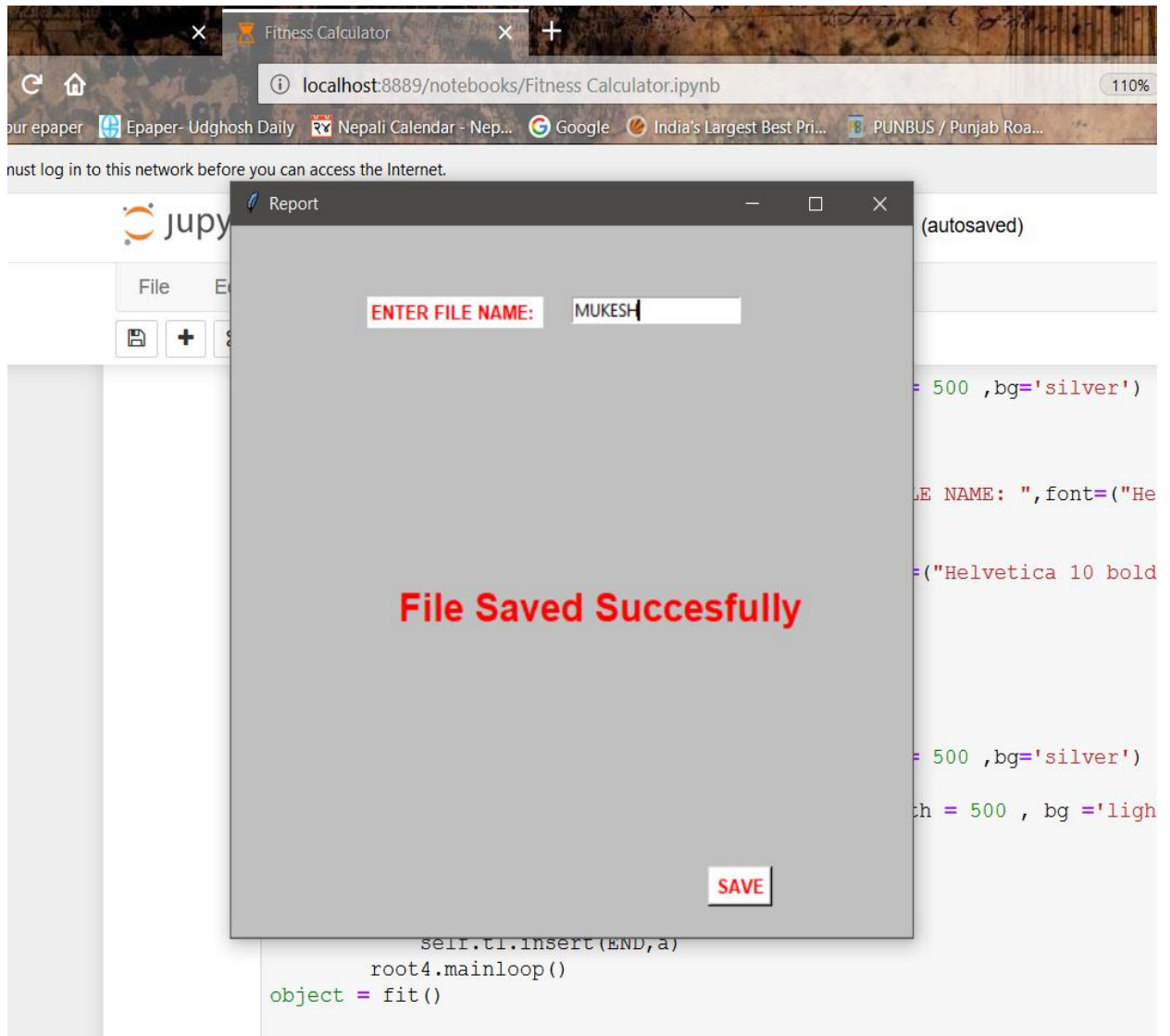
At the bottom of the modal are two buttons: 'SAVE' and 'NEW REPORT'.

The background shows a Jupyter Notebook interface with the following code visible:

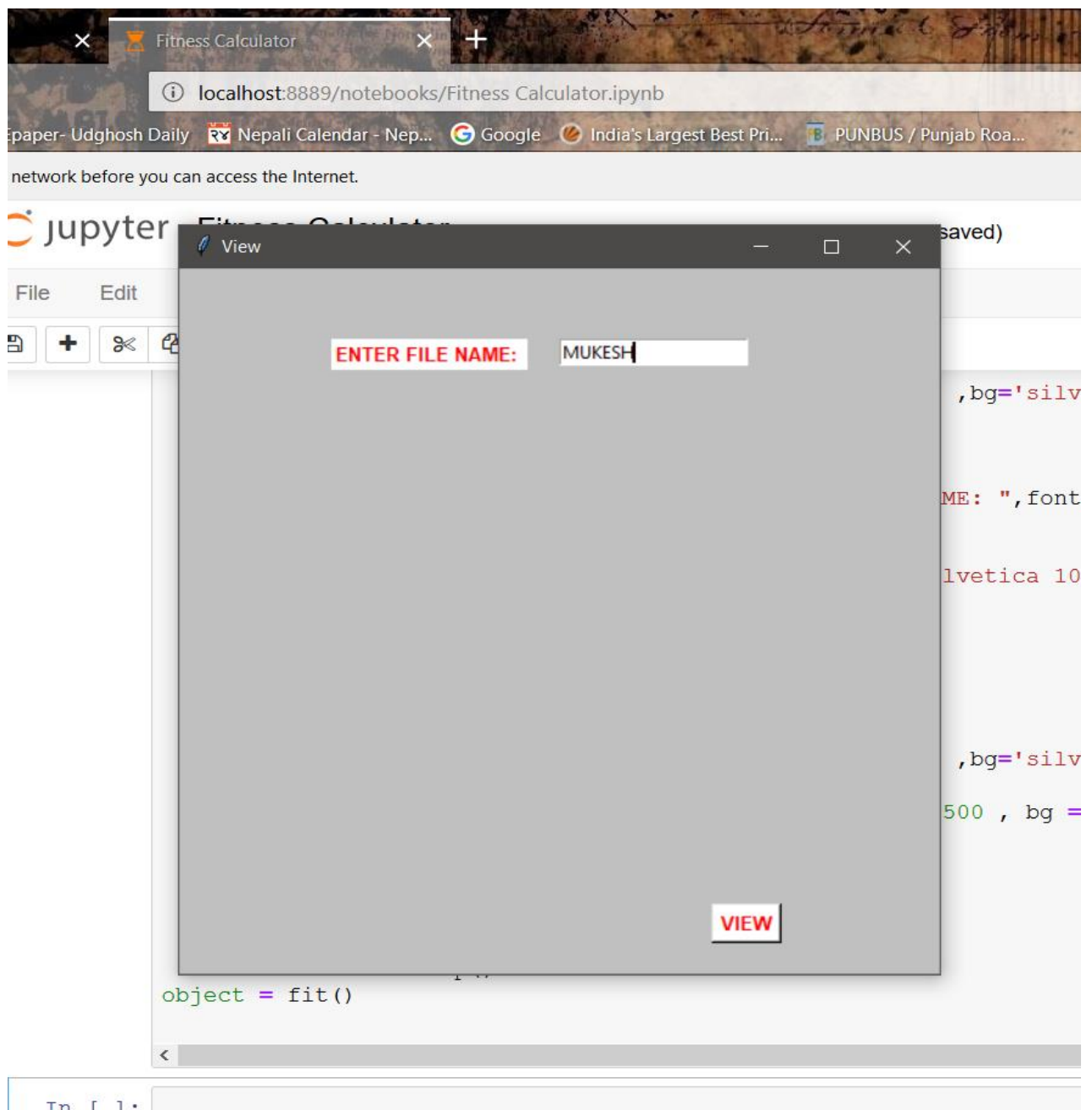
```
root4.mainloop()
object = fit()
```

After inserting the fitness values of the person, we press the 'Generate Report' button and this second window shows the fitness of a person.

3RD

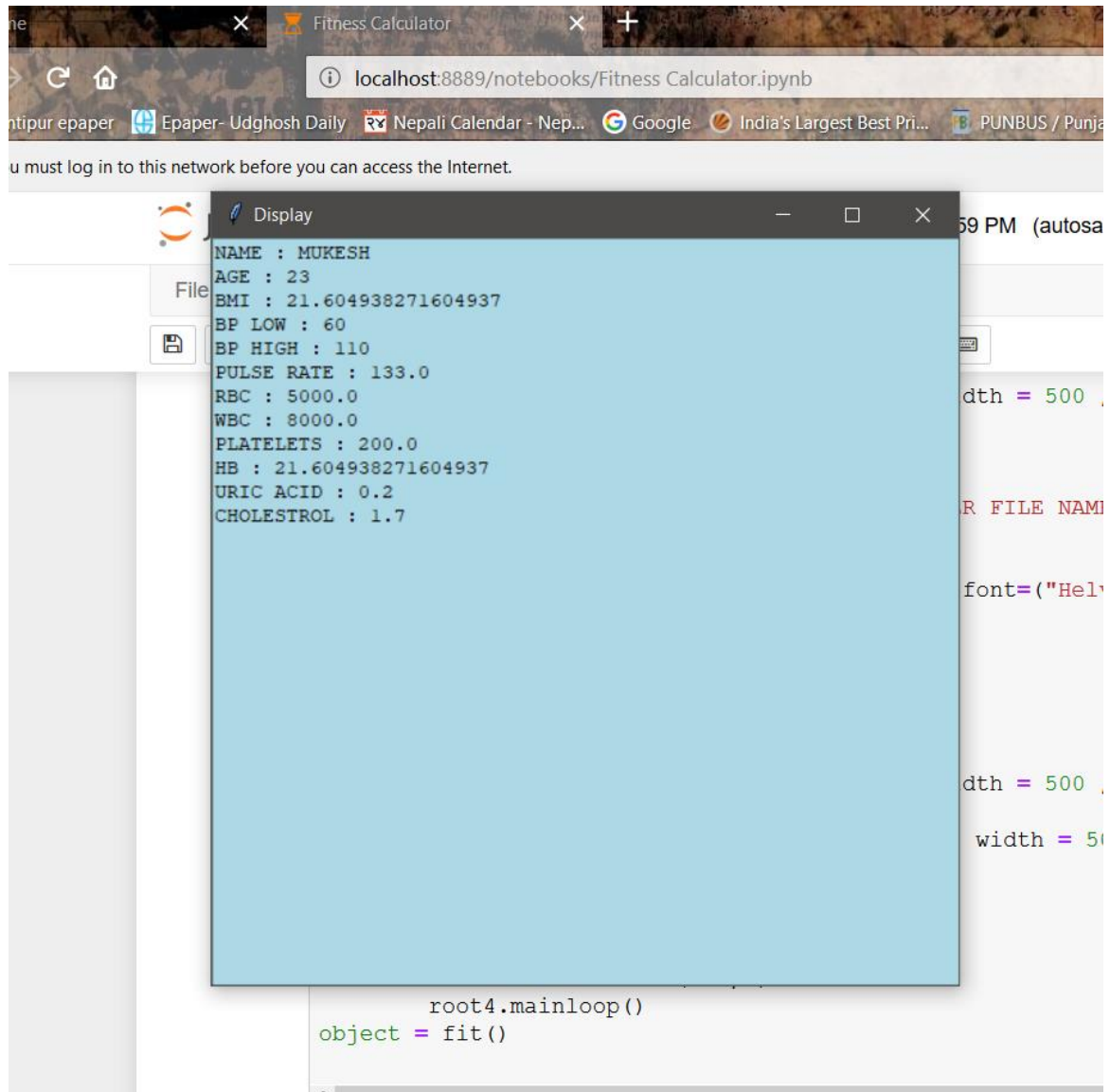


After the report is generated, we have the option to save the report or to create the new report. After pressing the save button, this window is opened to save the generated report as desired name.



In the 1st window, we have the option or button to view the generated report. When the user enters the name of the saved file name, then saved report is opened as 5th window.

5TH



This is the windows of the generated report, when the user manually wants to open the particular users report, then the user has to enter the saved file name and the report is opened.

REFERENCES
