PROJECT REPORT

ON

PENSION AND COMMUTATION CALCULATOR FOR BANK EMPLOYEES

SUBMITTED BY:

NAMBALLA VENKATA SAI CHARAN	11909079
MUDIT GIRIA	11909086
PRANJAL KUMAR JANA	11916312

INTRODUCTION

Our project topic is pension and commutation calculator for bank employees to ease the work for a BANK EMPLOYEE.

Language we used to create the calculator was PYTHON 3

BASIC REQUIREMENTS

INPUT :- User enter the values to calculate the Pension.

Process :- The application processes the values according to the formula and throws the value on the display.

Output :- The user is given the calculated values.

REQUIREMENTS

- Software
  1. Operating System : MAC/WINDOWS/LINUX
  2. Language : Python
- Hardware
  1. Processor : Dual Core
  2. Hard Disk : 100Mb
  3. Memory : 1 GB
  4. Monitor : Any color Monitor

5. Keyboard : Any standard Keyboard
6. Mouse : Any standard Mouse
7. Network : Not required

LIBRARIES USED

In this project we used two libraries

1. TKINTER
2. PILLOW

TKINTER :- this library is basically used to create Graphical User Interface Tkinter is the standard GUI library for Python. Python when combined with Tkinter provides a fast and easy way to create GUI applications. Tkinter provides a powerful object-oriented interface to the Tk GUI toolkit.

Creating a GUI application using Tkinter is an easy task. All you need to do is perform the following steps –

- Import the Tkinter module.
- Create the GUI application main window.
- Add one or more of the above-mentioned widgets to the GUI application.
- Enter the main event loop to take action against each event triggered by the user.

PILLOW :- It is a Python Imaging Library (PIL), which adds support for opening, manipulating, and saving images. The current version identifies and reads a large number of formats. Write support is intentionally restricted to the most commonly used interchange and presentation formats.

To install pillow using pip, just run the below command in your command prompt –

python -m pip install pip
python -m pip install pillow

MODULES

- Commutation Module

This module would take all the values and give you the Commutation

Made by : Namballa Venkata sai charan
11909079

- Pension Module

This module will calculate the pension generated from the PF

Made by : Mudit Giria
11909086

All the Modules compiled and edited with GUI

Made by : Pranjal kumar jana
11916312

FORMULA USED

- PENSION

$$\text{PENSION} = \frac{\text{BASIC PAY} + \text{P.F} + \text{SPECIAL PAY} + \text{STAGNATED PAY} + \text{GRADUATION PAY}}{2}$$

- If number of years worked is > 33yr
  Pension will be like above
- If number of years worked is < 33yr
  Pension = Pension – x(3.030)
  Where x = 33 – no. of years worked
- If number of years worked < 10yr
  Pension = 0.0

COMMUTATION

$$\text{COMMUTATION AMOUNT} = \frac{\text{Pension} \times \text{Commutation Percentage}}{100}$$

- If Commutation Percentage >= 33.33

  Then commutation percentage used in formula is 33.33
- If Commutation Percentage < 33.33

  Then commutation percentage used in formula is same

$$\text{Commutation value} = \text{Commutation amount} \times \text{commutation factor} \times 12$$

- If Age is < 61

  Commutation Factor = 9.81
- If Age is > 61

  Commutation Factor = 9.81 – x(0.3297)

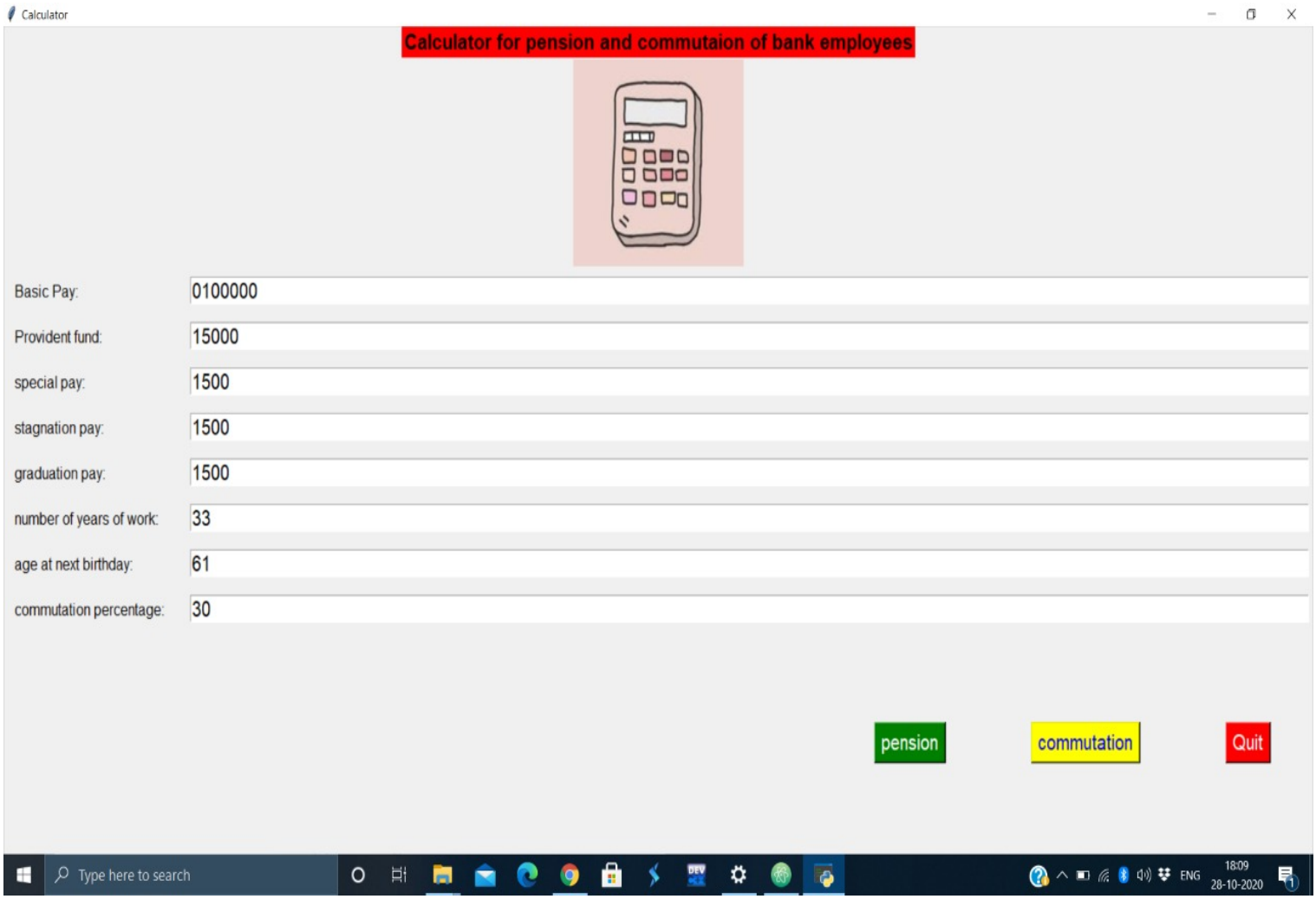
  Where x = Age – 61

Reduced Pension = Pension – Commutation Amnt

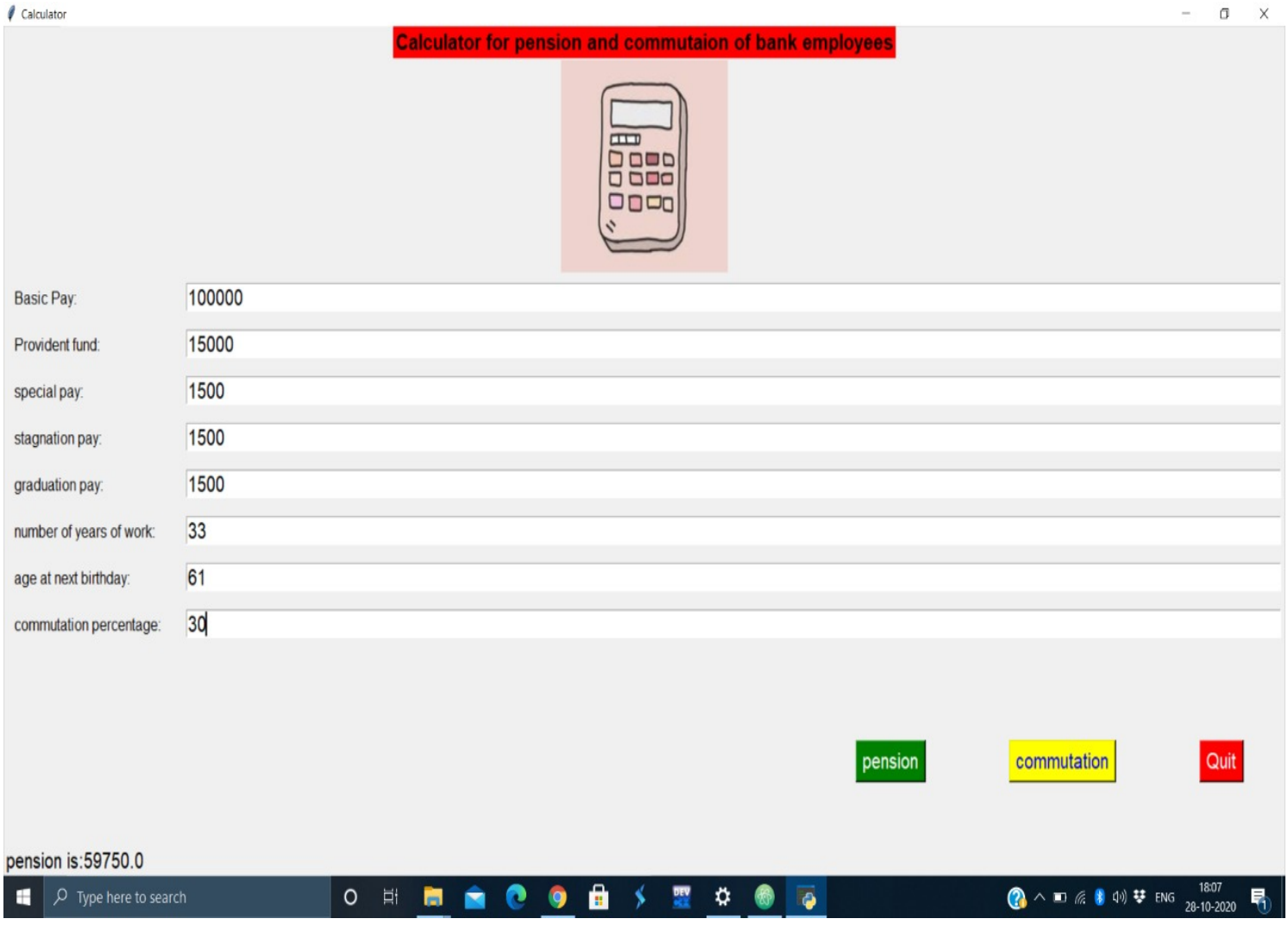
Per year = 3.030357

INPUTS REQUIRED

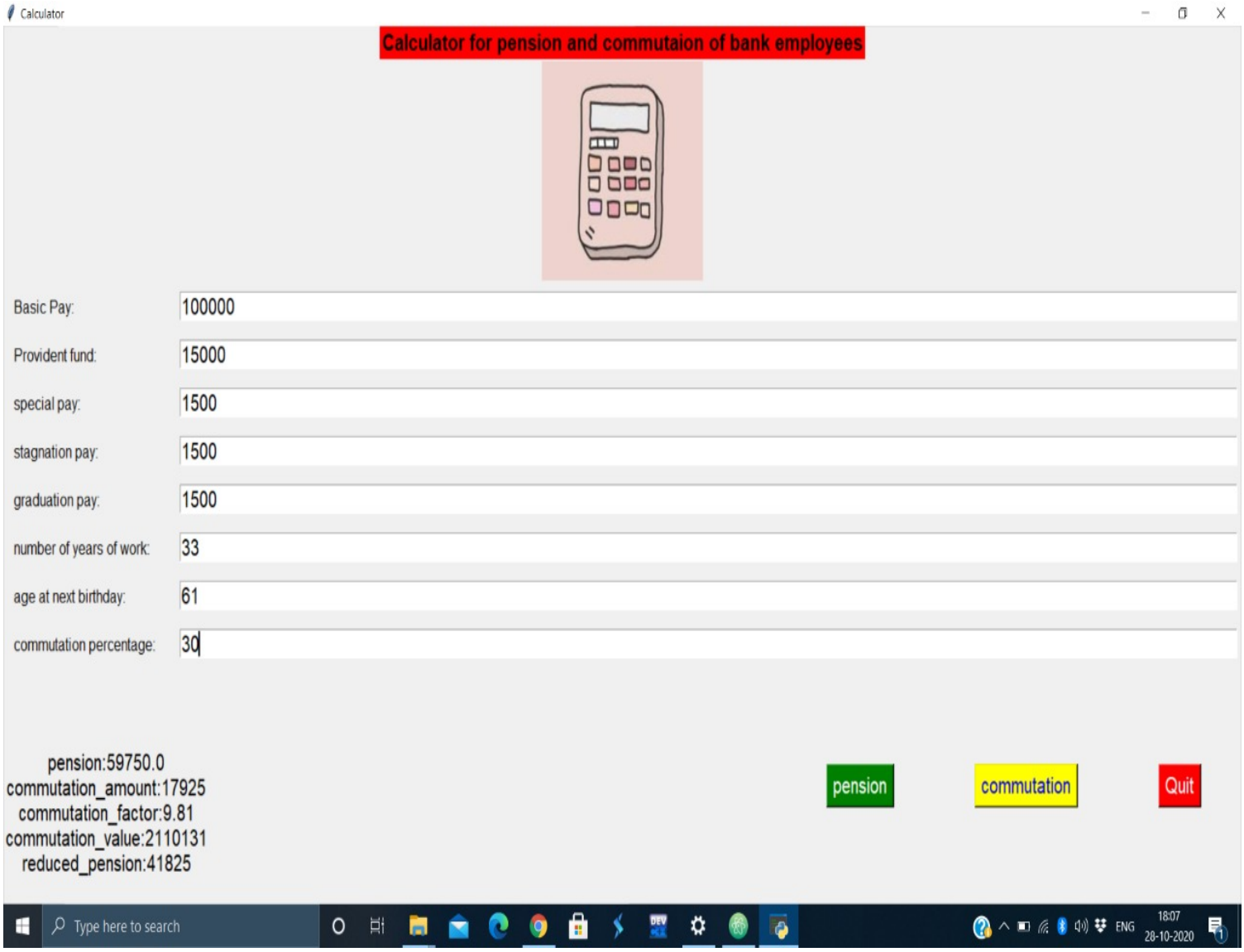
- Basic Pay
- Provident fund
- Special pay
- Stagnation pay
- Graduation pay
- Number of years of work
- Age at next birthday
- Commutation percentage



OUTPUT FOR PENSION



OUTPUT FOR COMMUTATION



BIBLIOGRAPHY

- ALL BANKING SOLUTIONS
  www.allbankingsolutions.com
- JAGRAN JOSH
  www.jagranjosh.com
- ALL IN ONE BANKING
  www.allinonebanking.co.in