G.S.Mandal's

MAHARASHTRA INSTITUTE OF TECHNOLOGY, AURANGABAD

(An Autonomous Institute)

PROJECT REPORT

ON

"Age Calculator"

SUBMITTED

BY

NAME OF STUDENT: **Saleha Khanam Abdul Hameed** Roll No: **92**

UNDER THE GUIDANCE

OF

Dr. Vaishali Bhagile

DEPARTMENT OF COMPUTER APPLICATIONS

2024-25

DECLEARATION

To,

The Head,

Computer Applications Department,

Maharashtra Institute of Technology, Aurangabad.

Respected mam,

I Ms. **Saleha Khanam Abdul Hamid** hereby declare that, the project titled "**Age Calculator**" developed and submitted as the partial fulfillment of submission for FYMCA in the subject of Python Lab, under the guidance of Dr. Vaishali Bhagile is my original work and has not duplicated from any other sources.

Date

Place

You're sincerely

Saleha Khanam Abdul Hamid

G.S.Mandal's

MAHARASHTRA INSTITUTE OF TECHNOLOGY, AURANGABAD
(An Autonomous Institute)

Department of Computer Applications

Certificate

This is to certify that Ms. **Saleha Khanam Abdul Hameed** Student of First Year of MCA (part-I) has satisfactorily completed the project on **Age Calculator** as partial fulfillment of Project work for the subject Python Lab in the course Master of Computer Applications during the academic year **2024-25**

Internal Guide

Dr. Prashant Chintal

Head of Department

External Examiner

INDEX

Abstract

This age calculator allows you to enter your birthday and then it shows you each birthday for the next one hundred years. If you are asking your self, "How many days until my birthday?" this calculator will show you that as well. If you hover over the birthday's in the left panel of the age calculator, you can see what day of the week your birthday lands on for your next birthday, future birthday days and past birthdays. The age calculator also uses your birthday to determine your western astrological sign and your Chinese astrological sign. If you find this calculator useful, be sure to check out some of the other calculators in the menu above, share this link with your friends on FaceBook or Pinterest, or link to the age calculator with the birthday or other facts you enter by copying the address at the bottom of the calculator itself. Your support is hugely appreciated! The calculators on this page are a tool that allows you to enter data to calculate an unofficial projection of your benefit. This is not an official estimate and there is no guarantee that you will receive these amounts. The accuracy of the benefit projection will depend on how closely the data you enter matches your actual data in the future. The calculator uses the data you input and does not compare that data against your actual account

Introduction

1.1 Relevance of Project

The age of a person can be counted differently in different cultures. This calculator is based on the most common age system. In this system, age grows at the birthday. For example, the age of a person that has lived for 3 years and 11 months is 3 and the age will turn to 4 at his/her next birthday one month later. Most western countries use this age system. In some cultures, age is expressed by counting years with , if one baby was born just one day before the Traditional Chinese New Year, 2 days later the baby will be at age 2 even though he/she is only 2 days old. In some situations, the months and days result of this age calculator may be confusing, especially when the starting date is the end of a month. For example, we all count Feb. 20 to March 20 to be one month. However, there are two ways to calculate the age from Feb. 28, 2015 to Mar. 31, 2015. If thinking Feb. 28 to Mar. 28 as one month, then the result is one month and 3 days. If thinking both Feb. 28 and Mar. 31 as the end of the month, then the result is one month. Both calculation results are reasonable. Similar situations exist for dates like Apr. 30 to May 31, May 30 to June 30, etc. The confusion comes from the uneven number of days in different months. In our calculation, we used the former method.

1.2 Purpose

This age calculator allows you to enter your birthday and then it shows you each birthday for the next one hundred years. If you are asking yourself, "How many days until my birthday?" this calculator will show you that as well. If you hover over the birthday's in the left panel of the age calculator, you can see what day of the week your birthday lands on for your next birthday, future birthday days and past birthdays. The age calculator also uses your birthday to determine your western astrological sign and your Chinese astrological sign. If you find this calculator useful, be sure to check out some of the other calculators in the menu above, share this link with your friends on FaceBook or Pinterest, or link to the age calculator with the birthday or other facts you enter by copying the address at the bottom of the calculator itself. Your support is hugely appreciated! But, if you have ever asked yourself, "How many days old am I?" or even "How many seconds old am I?" than this age calculator will tell you! In addition to years, the age calculator measures the number of whole months, weeks, days, hours, minutes or even seconds that have elapsed since your first birthday. For many of us, the difference between now and your birthday can be some very large numbers and it may make you think of some of the many things that have happened or that you have done since you were born!
If you select one of the panels from 'Tell me about...' popup list near the bottom of the age calculator settings, you can learn more about other age related topics.

Requirements Analysis

To create a Python age calculator, you'll need to analyze the requirements for both hardware and software, as well as the input and output devices.

Hardware and Software Requirements:

Hardware:

1. Computer: Any modern computer capable of running Python.

2. Input Device: Keyboard for user input.

3. Output Device: Monitor or display screen for output.

Software:

1. Python: The programming language for developing the age calculator.

2. Text Editor/IDE: Any text editor or Integrated Development Environment (IDE) such as Visual Studio Code, PyCharm, or IDLE.

3. Operating System: Compatible with Windows, macOS, or Linux.

Input and Output Device:

Input Device:

Keyboard: To input the user's birth date.

Output Device:

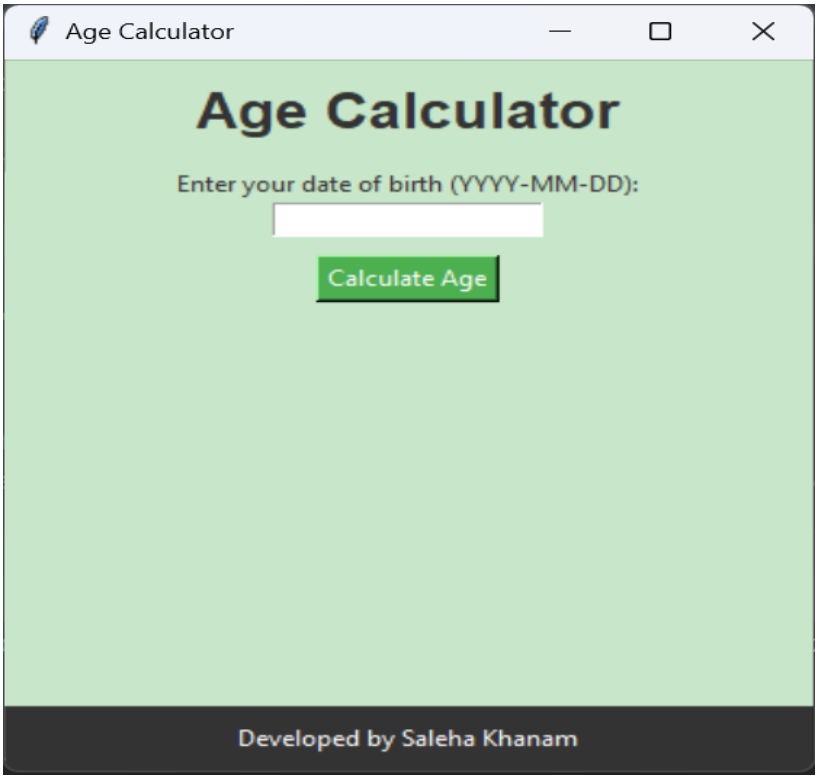
Monitor or Display Screen: To display the calculated age.

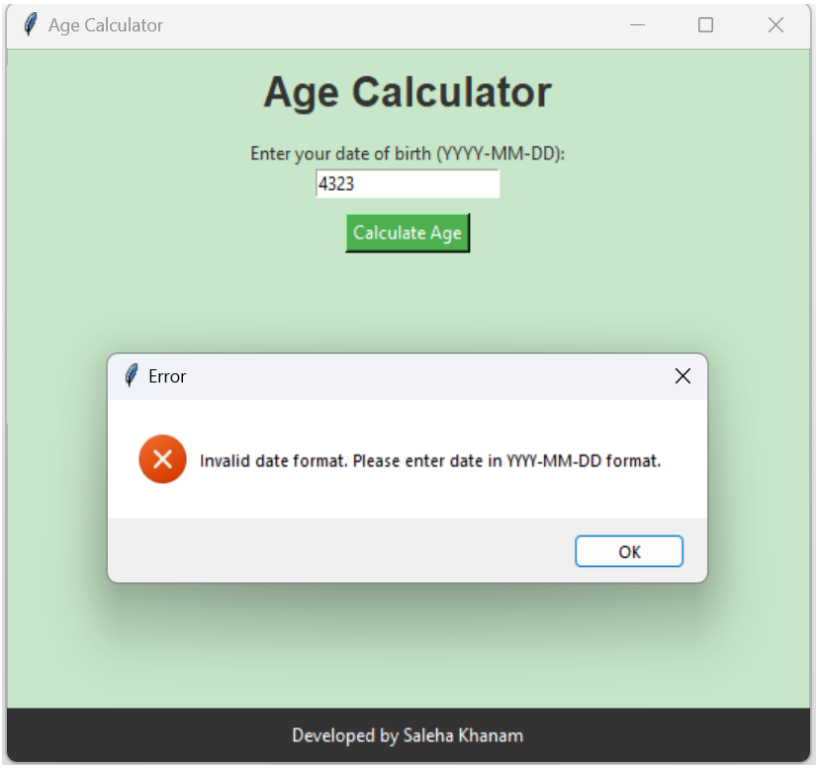
Coding

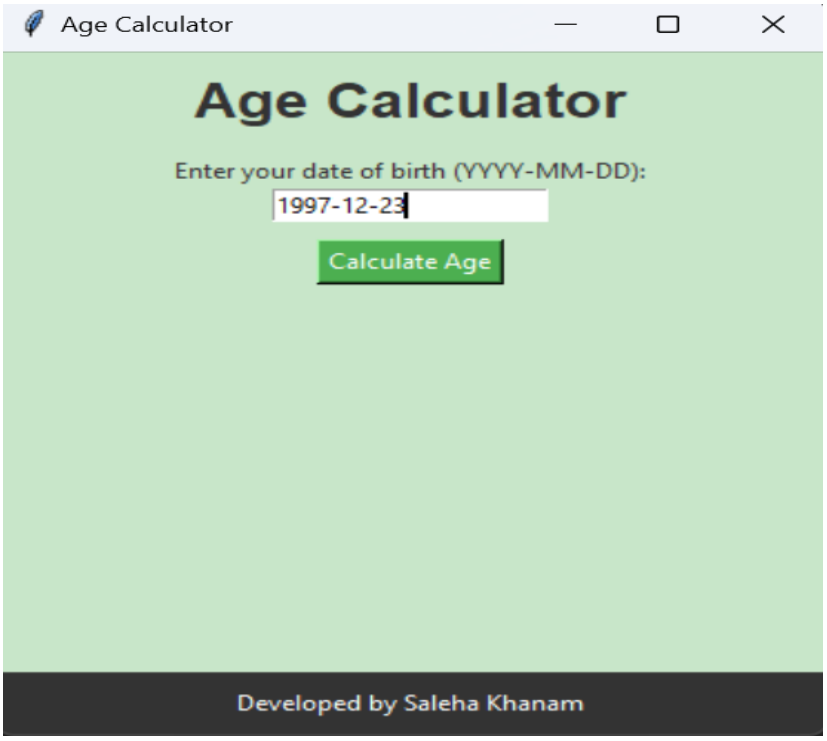
```
import tkinter as tk
from tkinter import ttk, messagebox
from datetime import datetime
import threading
import time

def calculate_age():
    dob_str = entry_dob.get()
    try:
        birthdate = datetime.strptime(dob_str, "%Y-%m-%d").date()
        show_loading_message()
        age = calculate_age_from_date(birthdate)
        hide_loading_message()
        messagebox.showinfo("Age", f"You are {age} years old.")
    except ValueError:
        messagebox.showerror("Error", "Invalid date format. Please enter date in
YYYY-MM-DD format.")

def calculate_age_from_date(birthdate):
    today = datetime.today().date()
    age = today.year - birthdate.year - ((today.month, today.day) <
(birthdate.month, birthdate.day))
    return age

def show_loading_message():
    progress_bar.pack(pady=5)
    progress_bar.start(10)

def hide_loading_message():
    progress_bar.stop()
    progress_bar.pack_forget()

# Create main window
root = tk.Tk()
root.title("Age Calculator")
root.geometry("300x300")  # Set window size

# Set background color to light green
root.configure(bg="#C8E6C9")

# Create heading label
heading_label = tk.Label(root, text="Age Calculator", font=("Helvetica", 20,
"bold"), bg="#C8E6C9", fg="#333333")
heading_label.pack(pady=10)
```

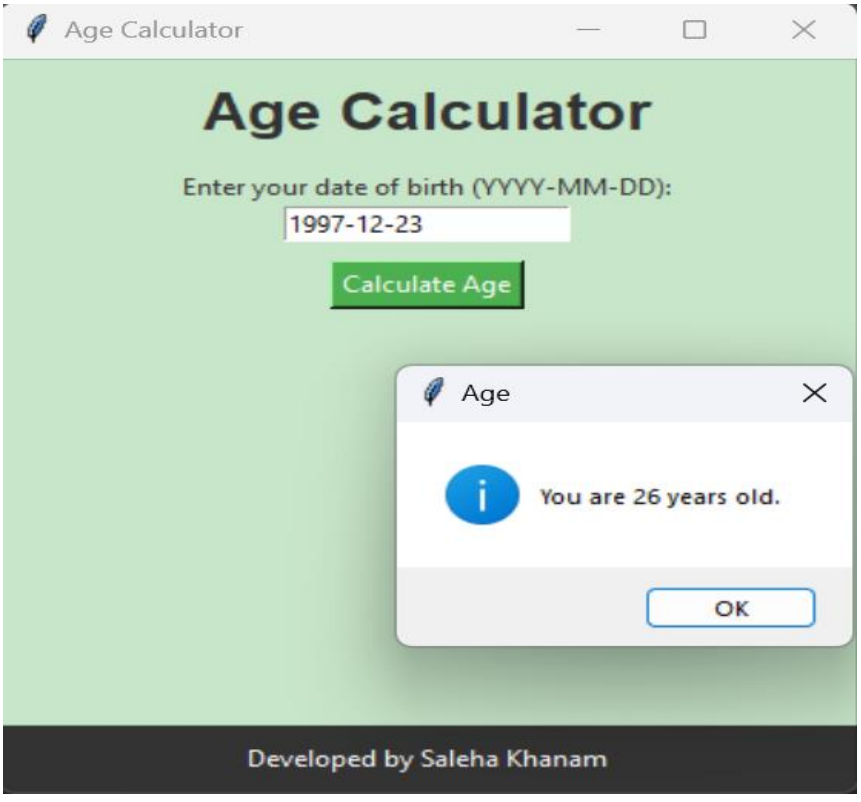
```
# Create labels and entry for date of birth
label_dob = tk.Label(root, text="Enter your date of birth (YYYY-MM-DD):",
bg="#C8E6C9", fg="#333333")
label_dob.pack()

entry_dob = tk.Entry(root)
entry_dob.pack()

# Create button to calculate age
button_calculate = tk.Button(root, text="Calculate Age", command=calculate_age,
bg="#4CAF50", fg="white")
button_calculate.pack(pady=10)

# Create footer bar
footer_bar = tk.Label(root, text="Developed by Saleha Khanam", bg="#333333",
fg="white", height=2)
footer_bar.pack(side="bottom", fill="x")

# Create progress bar for loading animation
progress_bar = ttk.Progressbar(root, orient="horizontal", length=200,
mode="indeterminate")

# Run the GUI
root.mainloop()
```

Snaps


Age Calculator
Age Calculator
Enter your date of birth (YYYY-MM-DD):
Calculate Age
Developed by Saleha Khanam


Age Calculator
Age Calculator
Enter your date of birth (YYYY-MM-DD):
4323
Calculate Age
Error
Invalid date format. Please enter date in YYYY-MM-DD format.
OK
Developed by Saleha Khanam


Age Calculator
Age Calculator
Enter your date of birth (YYYY-MM-DD):
1997-12-23
Calculate Age
Developed by Saleha Khanam


Age Calculator
Age Calculator
Enter your date of birth (YYYY-MM-DD):
1997-12-23
Calculate Age
Age
You are 26 years old.
OK
Developed by Saleha Khanam

Advantages & Disadvantages

Advantages

- **Quick Age Determination:** Provides instant calculation of someone's age without manual calculation.
- **Convenience:** Saves time and effort, especially when needing to calculate ages for multiple individuals.
- **Accuracy:** When used correctly, age calculators can provide accurate results, reducing the chances of human error.
- **Useful for Planning:** Helpful for planning events, meetings, or activities that require knowing participants' ages.
- **Educational Tool:** Can be used as a simple educational tool for learning about date and time calculations.

Disadvantages

- **Inaccuracy:** May provide incorrect results due to not accounting for leap years or exact birth times.
- **Limited Scope:** May not accommodate all age calculation needs or specific cultural differences.
- **Privacy Concerns:** Requires inputting personal information like birthdates, raising privacy risks if not used on a secure platform.
- **Dependency on Technology:** Can foster reliance on technology for basic calculations that could be done manually.
- **Data Security:** Risks personal data being collected or compromised if used on insecure platforms.

Conclusion

The conclusion of an age calculator project in Python would typically summarize what was achieved, the challenges faced, and the lessons learned during the development process. Here's a sample conclusion for such a project:

In this project, we successfully developed an age calculator in Python. The goal of the project was to create a simple tool that takes a user's birthdate as input and calculates their age.

Throughout the development process, we learned several key concepts:

1. Input Validation: We implemented input validation to ensure that the user entered the birthdate in the correct format (YYYY-MM-DD). This helped improve the accuracy of the calculations and provided a better user experience.

2. Date Manipulation: We utilized Python's datetime module to perform date calculations. This module allowed us to easily calculate the age based on the current date and the user's birthdate.

3. Error Handling: We included error handling mechanisms to handle cases where the user entered an invalid date format. This ensured that the program did not crash and provided informative error messages to the user.

4. User Interface: While our project focused on a command-line interface, we could further enhance it by developing a graphical user interface (GUI) using libraries such as Tkinter or PyQt.

5. Testing: Testing played a crucial role in ensuring the correctness and reliability of our program. We tested the calculator with various input scenarios to validate its functionality.

Challenges encountered during the project included handling different date formats, ensuring robust error handling, and deciding on the best way to present the calculated age to the user.

Overall, this project provided valuable experience in Python programming, input validation, date manipulation, and error handling. It serves as a foundation for more complex projects involving date and time calculations.

In future iterations of the project, we could explore additional features such as calculating age in different units (e.g., months, days), incorporating a graphical user interface for improved usability, and potentially integrating with other applications or platforms.

This age calculator project demonstrates the power and versatility of Python for practical applications and lays the groundwork for further exploration into software development.

This conclusion provides a summary of what was accomplished in the project, highlights key learnings, discusses challenges faced, and suggests potential avenues for future development.

REFRENCES

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2) https://www.w3schools.com/python/

3) https://wiki.python.org/moin/BeginnersGuide

4) https://stackoverflow.com/

5) https://www.youtube.com/watch?v=t2_Q2BRzeEE&list=PLGjplNEQ1it8-0CmoljS5yeV-GlKSUEt0