

PYTHON

ASSIGNMENT 8

STUDENT NAME: TELORE GANESH BHASKAR

CLASS: TYBBACA

ROLLNO: 235353

GUIDE: PROF. LANDE R.D

ASSIGNMENT BASED ON: PYTHON GUI PROGRAMMING USING TKINTER

ASSIGNMENT 8

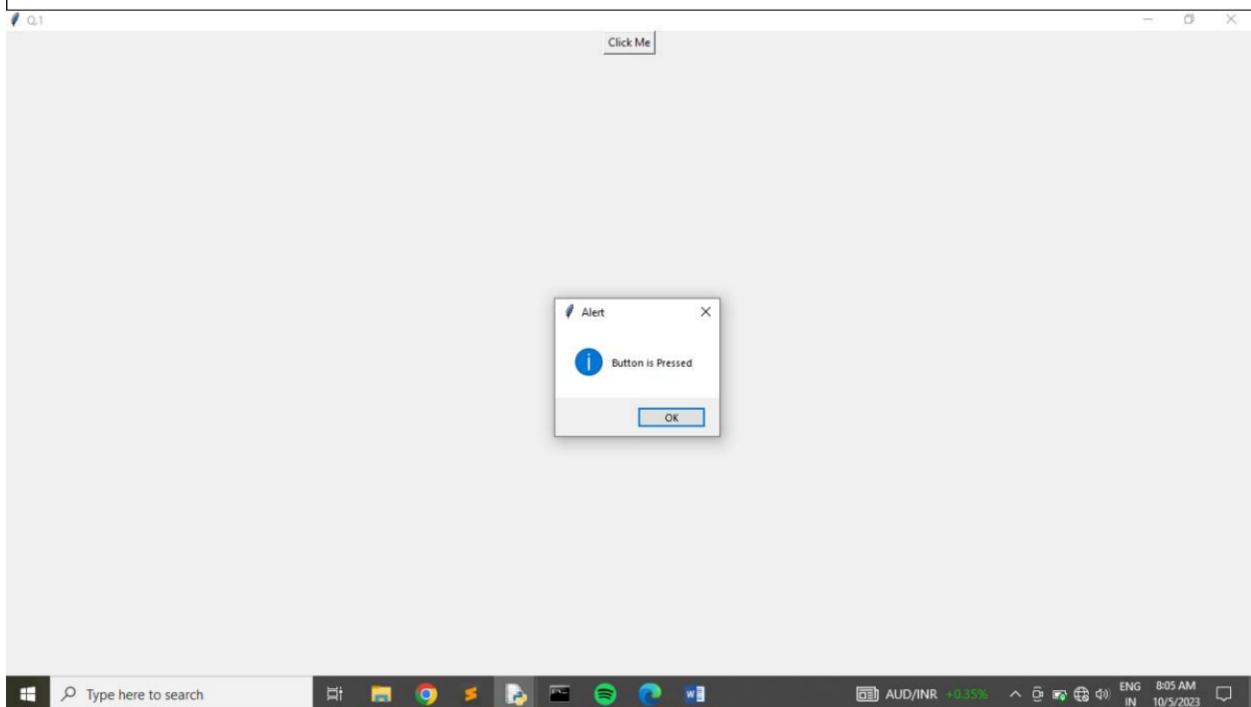
SET-A

Q.1 Write Python GUI program to display an alert message when a button is pressed.

Ans:

```
from tkinter import *
from tkinter import messagebox
body=Tk()
body.geometry("1024x1024")
body.title("Q.1")
def showAlert():
    messagebox.showinfo("Alert","Button is Pressed")
submit=Button(body,text="Click Me",command=showAlert)
submit.pack()
body.mainloop()
```

Output:



ASSIGNMENT 8

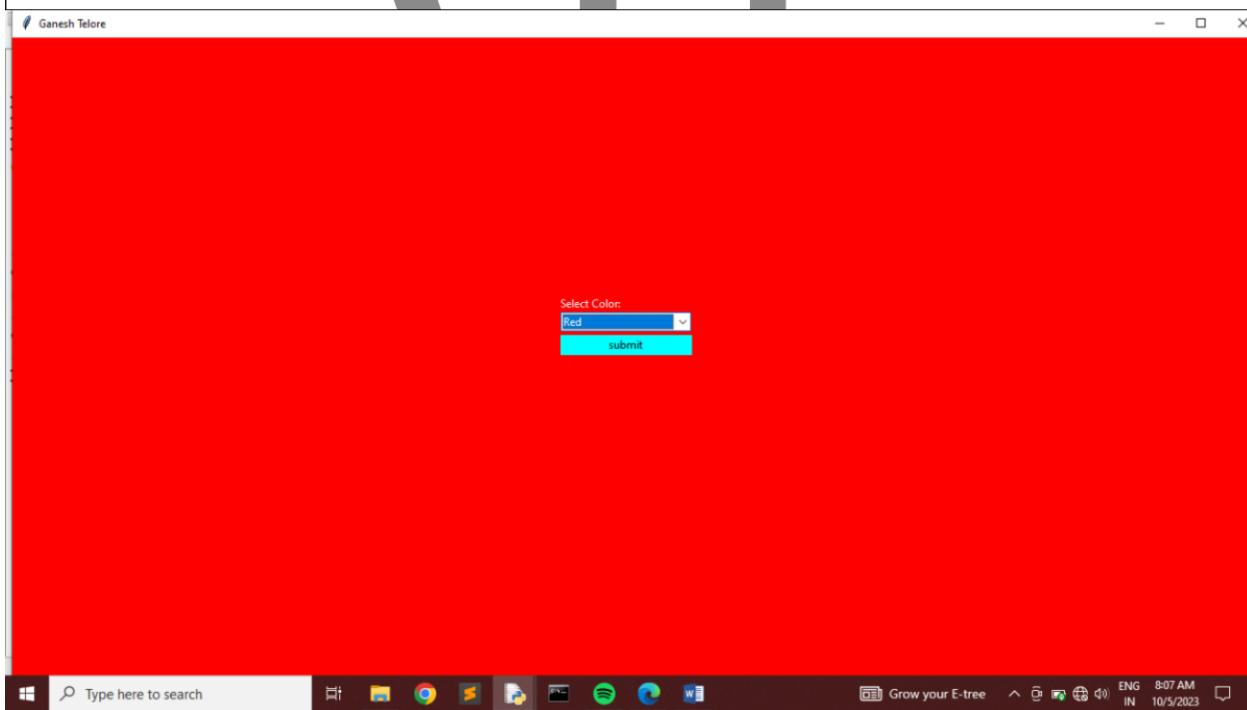
SET-A

Q.2 Write Python GUI program to Create background with changing colors

Ans:

```
from tkinter import *
from tkinter import ttk as widget
body=Tk()
body.title('Ganesh Telore')
body.geometry("1800x1800")
def changeBg():
    color=dropdown.get()
    body.configure(bg=f'{color}')
    label.configure(bg=f'{color}',foreground="white")
label=Label(body,text="Select Color: ")
dropdown=widget.Combobox(state="readonly", values=["Green","Blue","Red","Black","Orange"])
submit=Button(body,text="submit",command=changeBg, padx=51, activebackground="black",
activeforeground="white", bg="cyan",borderwidth=0)
label.place(x=597,y=280)
dropdown.place(x=600,y=300)
submit.place(x=600,y=325)
body.mainloop()
```

Output:



ASSIGNMENT 8

SET-A

Q.3 Write a Python GUI program to create a label and change the label font style (font name, bold, size) using tkinter module.

Ans:

```
from tkinter import *
gui=Tk()
gui.geometry('1800x1800')
gui.title("Ganesh Telore")
gui.configure(bg="cyan")
text=Label(gui,text="This is a Label..!",font=('Calisto MT Bold',30,'bold'), bg="cyan", fg="white")
text.place(x=500,y=300)
gui.mainloop()
```

Output:



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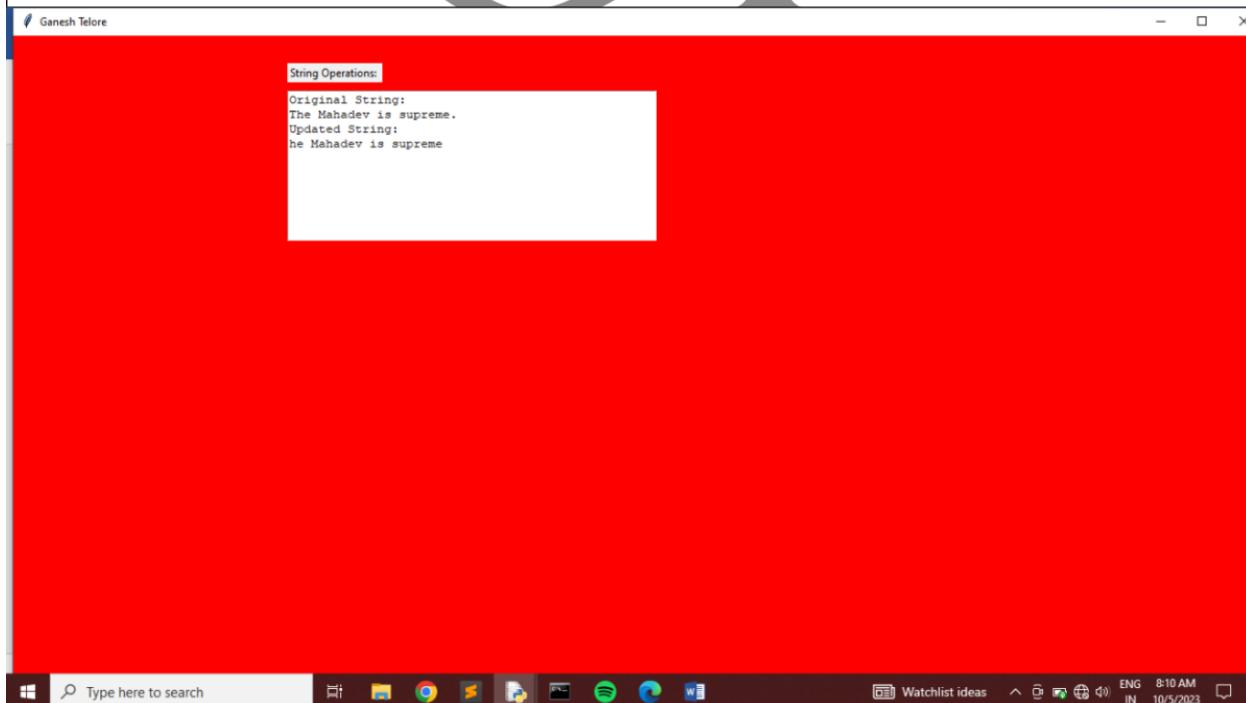
SET-A

Q.4 Write a Python GUI program to create a Text widget using tkinter module. Insert a string at the beginning then insert a string into the current text. Delete the first and last character of the text.

Ans:

```
from tkinter import *
import tkinter as tk
gui=Tk()
gui.geometry("1800x1800")
gui.title("Ganesh Telore")
gui.config(bg="red")
label=Label(text="String Operations: ")
text=Text(gui,width=50,height=10)
str1="Mahadev is supreme."
str2="The "
remchar1=str(str2[1:])
remchar2=str(str1[:-1])
label.place(x=300,y=30)
text.place(x=300,y=60)
text.insert(tk.END,"Original String: \n"+str2+str1)
text.insert(tk.END,"Updated String: \n"+remchar1+remchar2)
text.configure(state="disabled")
gui.mainloop()
```

Output:



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SET-A

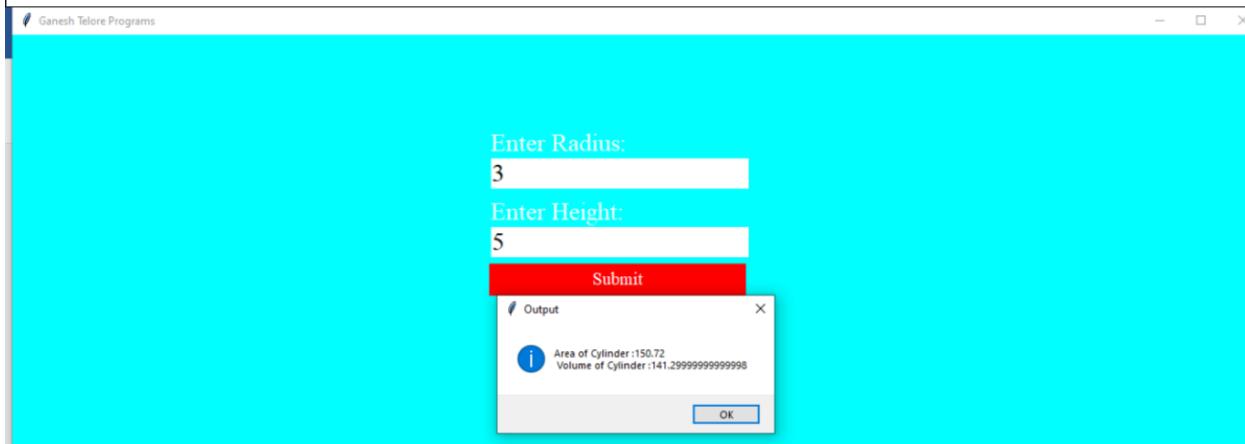
Q.5 Write a Python GUI program to accept dimensions of a cylinder and display the surface area and volume of cylinder.

Ans:

```
from tkinter import *
from tkinter import messagebox
gui=Tk()
gui.geometry("1800x1800")
gui.title("Ganesh Telore Programs")
def Calculate():
    r=float(tb1.get())
    h=float(tb2.get())
    newr=r*r*h
    area=2*3.14*r*(r+h)
    volume=3.14*r*r*h
    messagebox.showinfo("Output",f"Area of Cylinder :{area}\n Volume of Cylinder :{volume}")

gui.configure(bg="cyan")
lbl1=Label(gui,text="Enter Radius:",bg="cyan", fg="white", font=("Times New Roman",20))
tb1=Entry(gui, font=("Times New Roman",20), bd=0)
lbl2=Label(gui,text="Enter Height:",bg="cyan", fg="white",font=("Times New Roman",20))
tb2=Entry(gui, font=("Times New Roman",20),bd=0)
submit=Button(gui,text="Submit",width=25,font=("Times New Roman",15),bg="red",
fg="white",bd=0, command=Calculate)
lbl1.place(x=520,y=100)
tb1.place(x=524,y=135)
lbl2.place(x=520,y=175)
tb2.place(x=524,y=210)
submit.place(x=522,y=250)
gui.mainloop()
```

Output:



ASSIGNMENT 8

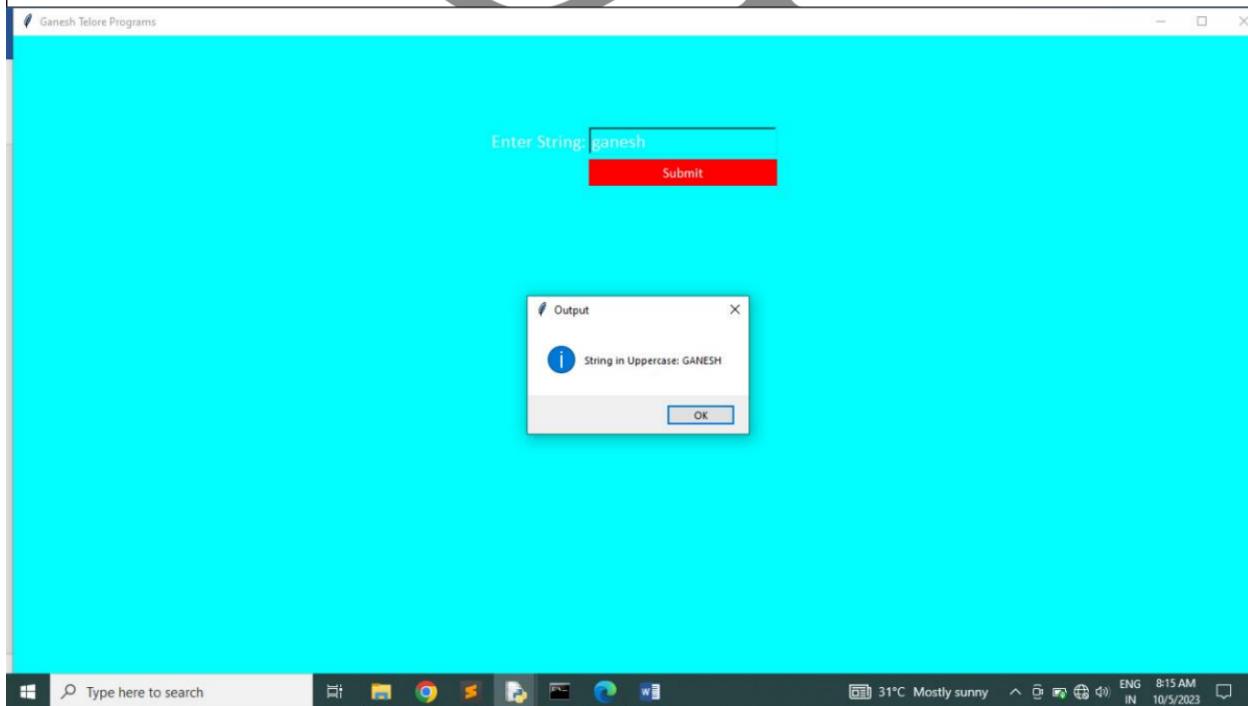
SET-A

Q.6 Write Python GUI program that takes input string and change letter to upper case when a button is pressed.

Ans:

```
from tkinter import *
from tkinter import messagebox
gui=Tk()
gui.geometry("1800x1800")
gui.title("Ganesh Telore Programs")
gui.config(bg="cyan")
def strtoupp():
    string=tb1.get()
    strupp=string.upper()
    messagebox.showinfo("Output",f"String in Uppercase: {strupp}")
lbl=Label(gui,text="Enter String: ",font=("Calibri",15),fg="white",bg="cyan")
tb1=Entry(gui,font=("calibri",15), bg="cyan", bd=2, fg="white")
submit=Button(gui,text="Submit",font=("calibri",12), width=25, bg="red", bd=0, fg="white",
              command=strtoupp)
lbl.place(x=520,y=100)
tb1.place(x=630,y=100)
submit.place(x=630,y=135)
gui.mainloop()
```

Output:



ASSIGNMENT 8

SET-B

Q.1 Write Python GUI program to take input of your date of birth and output your age when a button is pressed.

Ans:

```
from tkinter import *
gui=Tk()
gui.geometry("1800x1800")
gui.title("Ganesh Telore Programs")
gui.config(bg="skyblue")
def calage():
    birthdate=date.get()
    year=int(birthdate[-4:])
    op=2023-year
    lbl1.config(text=f"OP: Your Age is {op} years")

lbl=Label(gui,text="Select DOB: ", font=("Calisto MT Regular",20), bg="skyblue", fg="white")
date=Entry(gui,font=("Calisto MT Regular",20),bg="skyblue", fg="white")
submit=Button(gui,text="Submit", font=("calisto MT Regular",15),bd=0, width=27,
              bg="red", fg="white", command=calage)
lbl1=Label(gui, text="", bg="skyblue", fg="white", font=("Calisto MT Regular",20))
lbl.place(x=550,y=100)
date.place(x=550,y=140)
submit.place(x=551,y=180)
lbl1.place(x=550, y=240)
gui.mainloop()
```

Output:



ASSIGNMENT 8

SET-B

Q.2 Write Python GUI program which accepts a sentence from the user and alters it when a button is pressed. Every space should be replaced by *, case of all alphabets should be reversed, digits are replaced by ?.

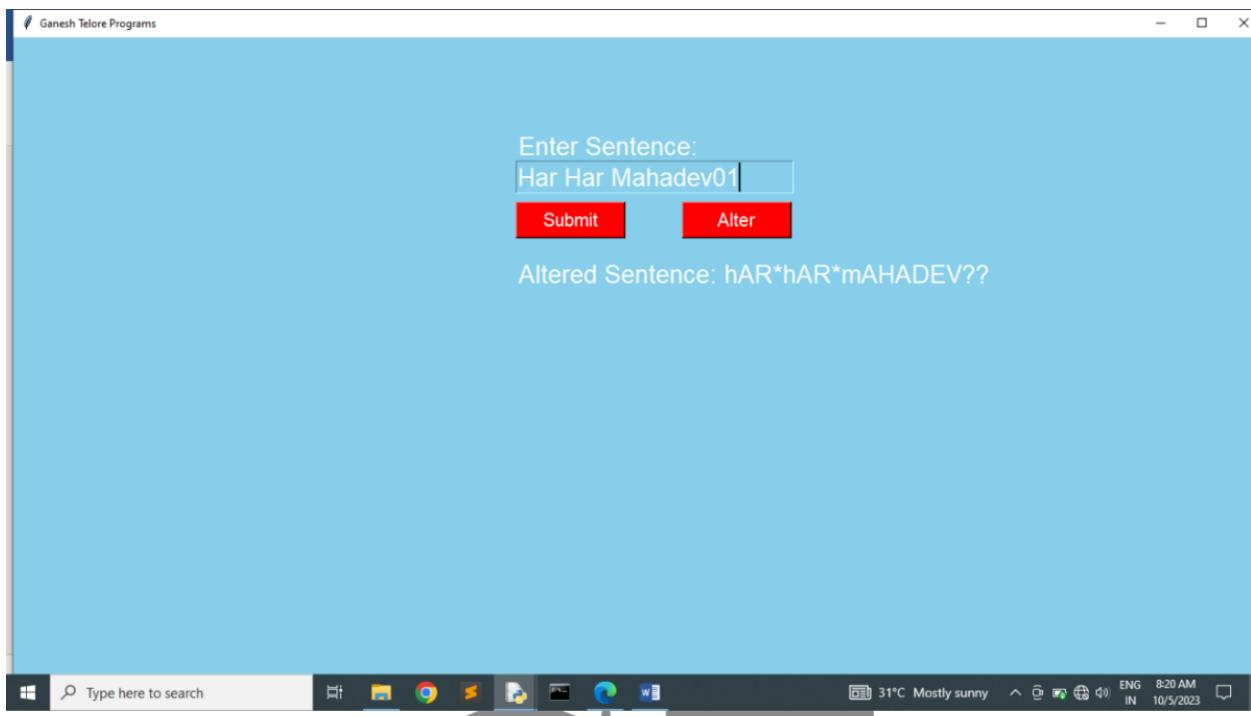
Ans:

```
from tkinter import *
gui=Tk()
gui.geometry("1800x1800")
gui.title("Ganesh Telore Programs")
gui.config(bg="skyblue")
def display():
    original=tb1.get()
    lbl2.config(text=f"Original Sentence :{original}")

def displayalter():
    Constant ="?"
    string=tb1.get()
    for i in string:
        if i.isdigit():
            string=string.replace(i,"?")
    altered=string.swapcase().replace(" ","*")
    lbl2.config(text=f"Altered Sentence: {altered}")

lbl1=Label(gui,text="Enter Sentence: ",font=("Calisto MT Regular",20), bg="skyblue", fg="white")
tb1=Entry(gui,font=("Calisto MT Regular",20), bg="skyblue",fg="white")
submit=Button(gui,text="Submit", font=("Calisto MT Regular",15), width=10,
              bg="red", fg="white", command=display)
alter=Button(gui,text="Alter",font=("Calisto MT Regular",15), bg="red",
             width=10, fg="white", command=displayalter)
lbl2=Label(gui,text="",font=("Calisto MT Regular",20), bg="skyblue", fg="white")
lbl1.place(x=550,y=100)
tb1.place(x=550,y=135)
submit.place(x=550,y=180)
alter.place(x=732,y=180)
lbl2.place(x=550, y=240)
gui.mainloop()
```

Output:



GT

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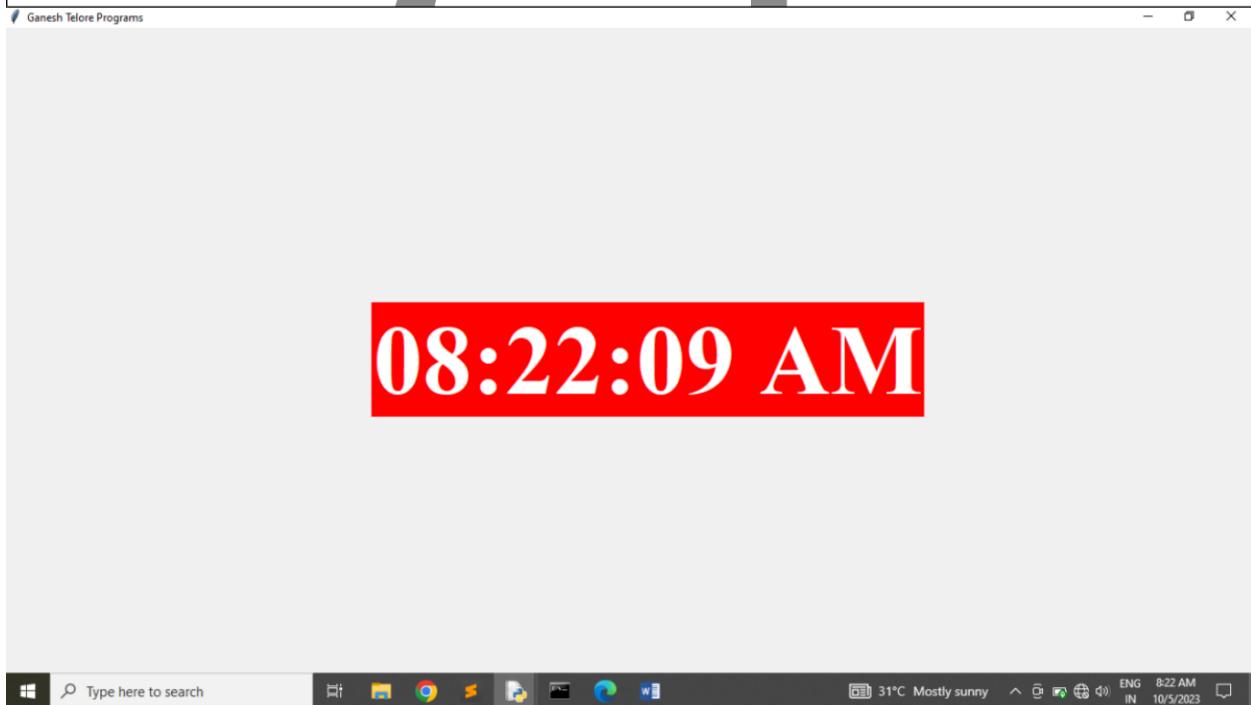
SET-B

Q.3 Write Python GUI A program to create a digital clock with Tkinter to display the time.

Ans:

```
from tkinter import *
from tkinter.ttk import *
from time import strftime
gui=Tk()
gui.geometry("300x300")
gui.title("Ganesh Telore Programs")
def livetime():
    string=strftime("%I:%M:%S %p")
    lbl.config(text=string)
    lbl.after(1000,livetime)
lbl=Label(gui,font=("Times New Roman",80,'bold'),background="red", foreground="white")
lbl.place(x=400,y=300)
livetime()
gui.mainloop()
```

Output:



ASSIGNMENT 8

SET-B

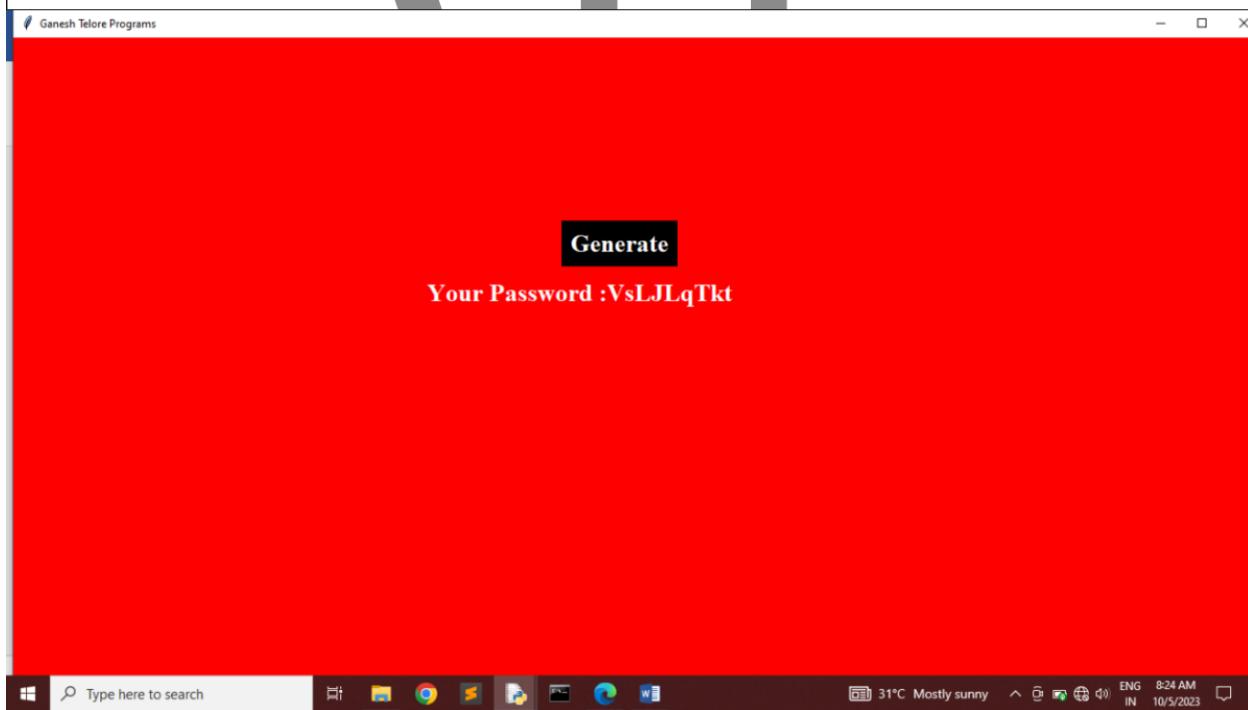
Q.4 Create a program to generate a random password with upper and lower case letters.

Ans:

```
from tkinter import *
import string
import random
gui=Tk()
gui.geometry("1800x1800")
gui.title("Ganesh Telore Programs")
gui.config(bg="red")
def generatepwd():
    pwd=".join(random.choices(string.ascii_uppercase+string.ascii_lowercase+string.digits, k=9))"
    lbl.config(text="Your Password :" +pwd)

lbl=Label(gui,text="",font=("Times New Roman",20,'bold'),bg="red", fg="white")
submit=Button(gui,text="Generate",font=("Times New Roman",20,'bold'),bg="black",fg="white",
bd=0,command=generatepwd)
submit.place(x=600,y=200)
lbl.place(x=450,y=260)
gui.mainloop
```

Output:



ASSIGNMENT 8

SET-B

Q.5 Write Python GUI program which accepts a number n to displays each digit of number in words.

Ans:

```
from tkinter import *
from tkinter import messagebox
gui=Tk()
gui.geometry("1900x1900")
gui.title("Ganesh Telore Programs")
gui.config(bg="cyan")
def printinword(digit):
    lbl1.config(text="Kindly Check the Interactive Mode for the Output..!")
if digit=='0':
    print("Zero",end=" ")
elif digit=='1':
    print("One",end=" ")
elif digit=='2':
    print("Two",end=" ")
elif digit=='3':
    print("Three",end=" ")
elif digit=='4':
    print("Four ",end=" ")
elif digit=='5':
    print("Five",end=" ")
elif digit=='6':
    print("Six",end=" ")
elif digit=='7':
    print("Seven",end=" ")
elif digit=='8':
    print("Eight",end=" ")
elif digit=='9':
    print("Nine",end=" ")

def getdata():
    n=tb1.get()
    i=0
    l=len(n)
    while i<l:
        printinword(n[i])
        i=i+1

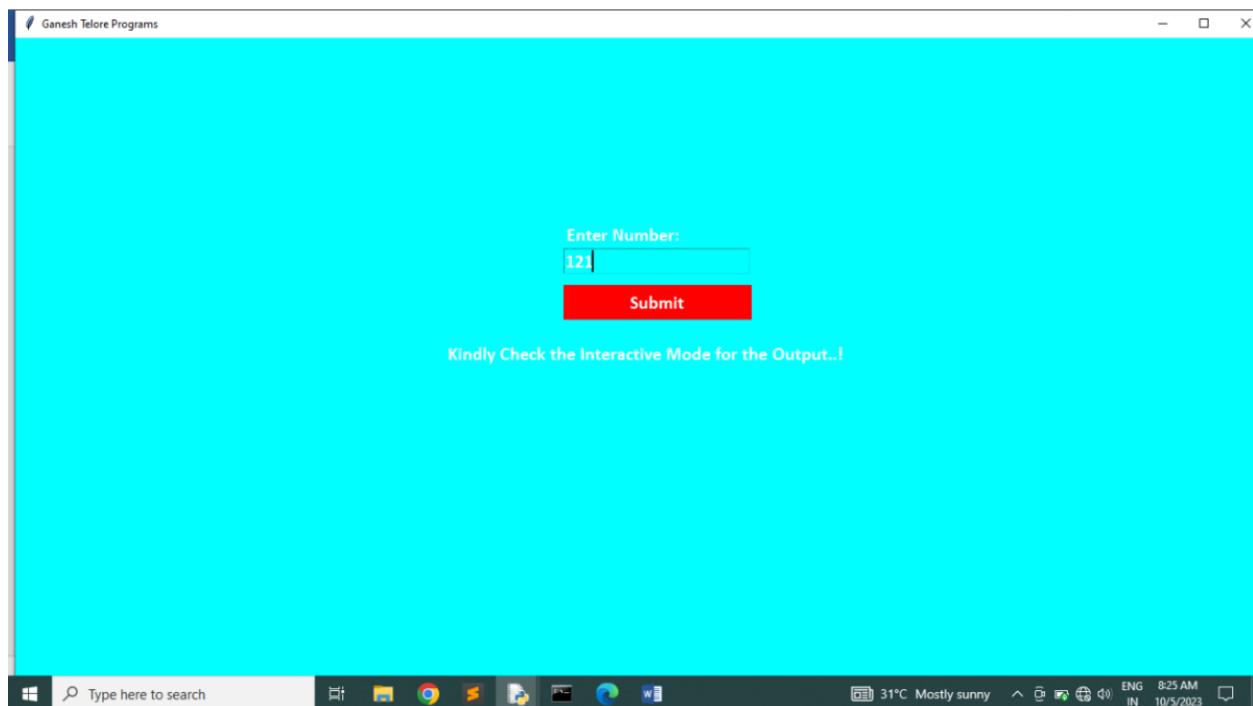
lbl=Label(gui,text="Enter Number: ",font=("Calibri",15,'bold'),bg="cyan", fg="white")
tb1=Entry(gui,font=("Calibri",15,'bold'),bg="cyan", fg="white")
submit=Button(gui,text="Submit",font=("Calibri",15,'bold'),bg="red",bd=0,width=20, fg="white",
command=getdata)
```



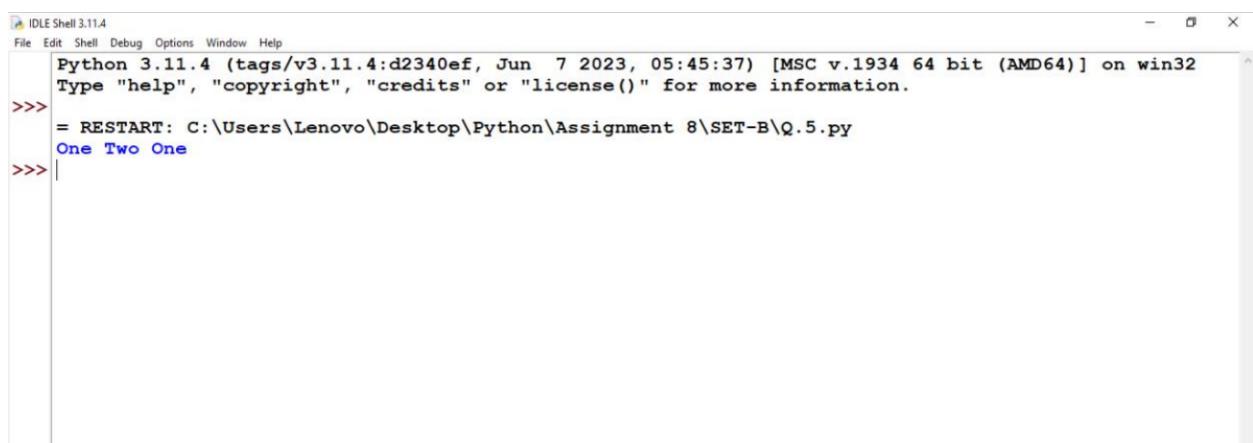
```
lbl1=Label(gui,text="",font=("Calibri",15,'bold'),bg="cyan", fg="white")
lbl.place(x=600,y=200)
tb1.place(x=600,y=230)
submit.place(x=600,y=270)
lbl1.place(x=470,y=330)
gui.mainloop()
```

Output:

OUTPUT 1



OUTPUT 2



ASSIGNMENT 8

SET-B

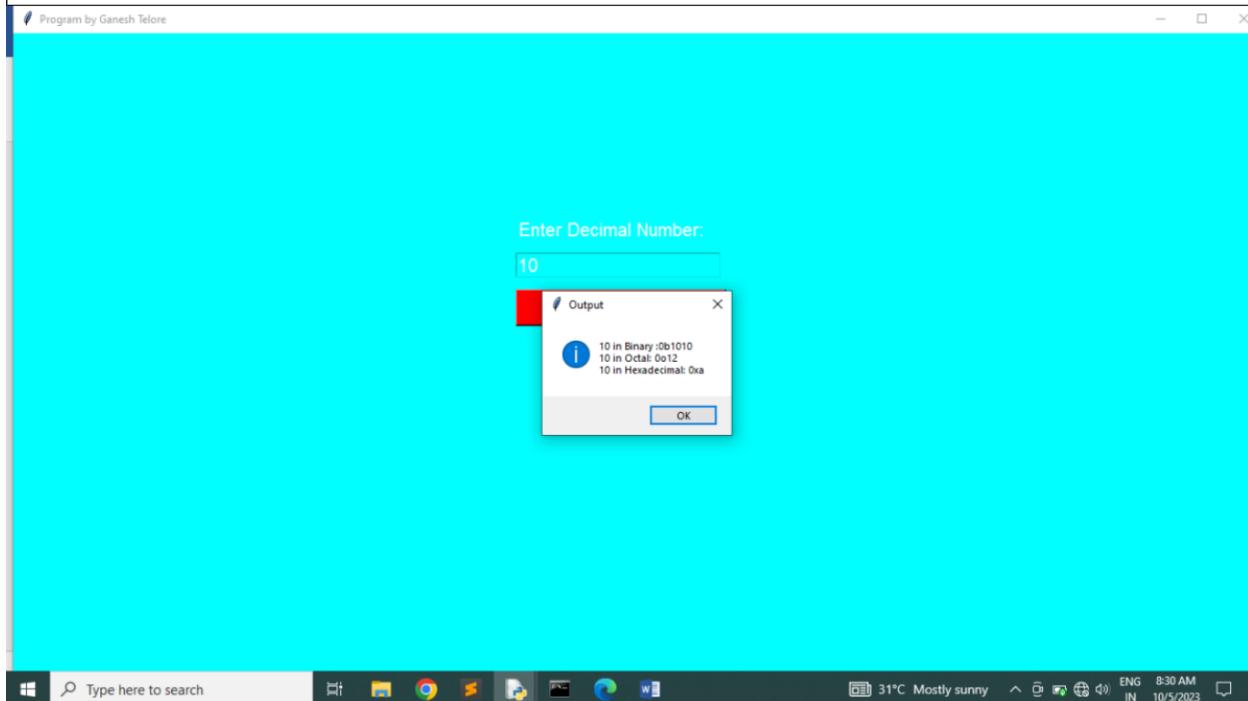
Q.6 Write Python GUI program to accept a decimal number and convert and display it to binary, octal and hexadecimal number.

Ans:

```
from tkinter import *
from tkinter import messagebox
gui=Tk()
gui.geometry("1800x1800")
gui.config(bg="cyan")
gui.title("Program by Ganesh Telore")
def convert():
    n=int(tb1.get())
    messagebox.showinfo("Output",f"{n} in Binary :{bin(n)}\n{n} in Octal: {oct(n)}\n{n} in Hexadecimal: {hex(n)}")

lbl1=Label(gui,text="Enter Decimal Number: ",font=("Calisto",15),bg="cyan", fg="white")
tb1=Entry(gui,font=("Calisto",15),bg="cyan", fg="white")
submit=Button(gui,text="Submit",font=("Calisto",15),bg="red", fg="white",
              width="20", command=convert)
lbl1.place(x=550,y=200)
tb1.place(x=550,y=240)
submit.place(x=550,y=280)
gui.mainloop()
```

Output:



ASSIGNMENT 8

SET-B

Q.7 Write Python GUI program to add items in listbox widget to print and delete the selected items from listbox on button click. Provide two separate button for print and delete.

Ans:

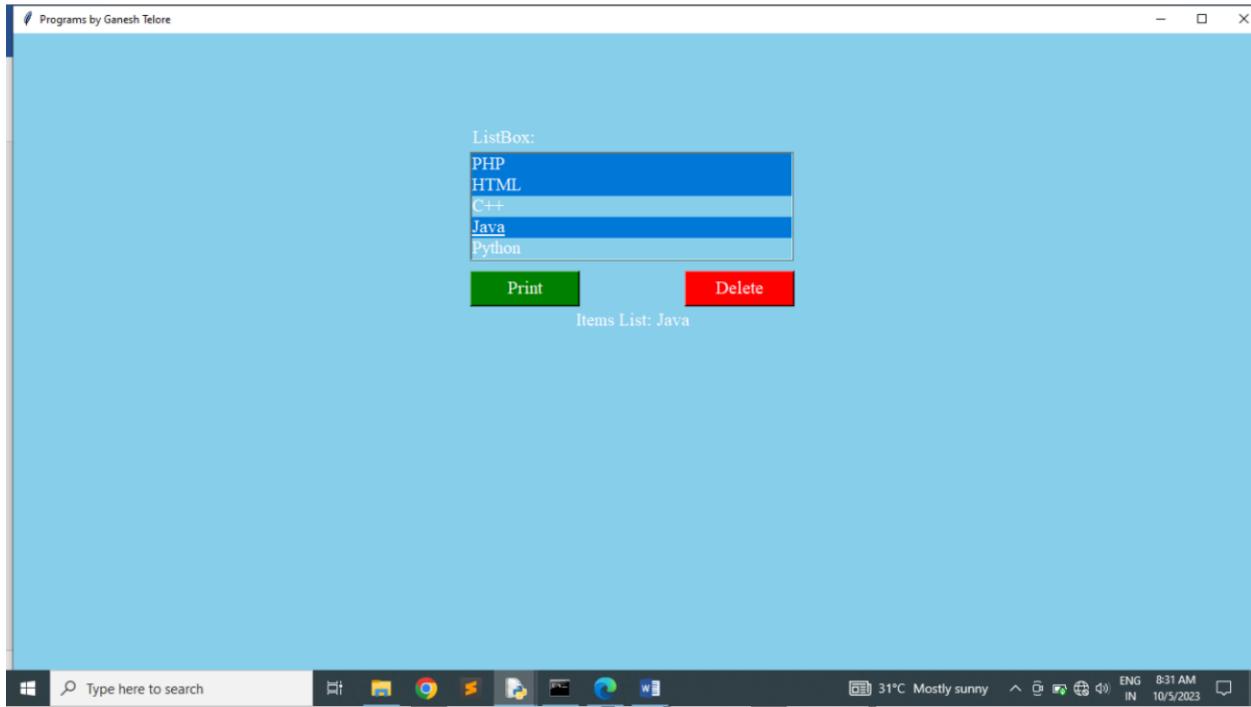
```
from tkinter import *
gui=Tk()
gui.geometry("1800x1800")
gui.title("Programs by Ganesh Telore")
def printitems():
    for i in box.curselection():
        lbl1.config(text="Items List: "+box.get(i))
        gui.after(1000,gui.update())

def deleteitems():
    for i in box.curselection()[:-1]:
        box.delete(i)

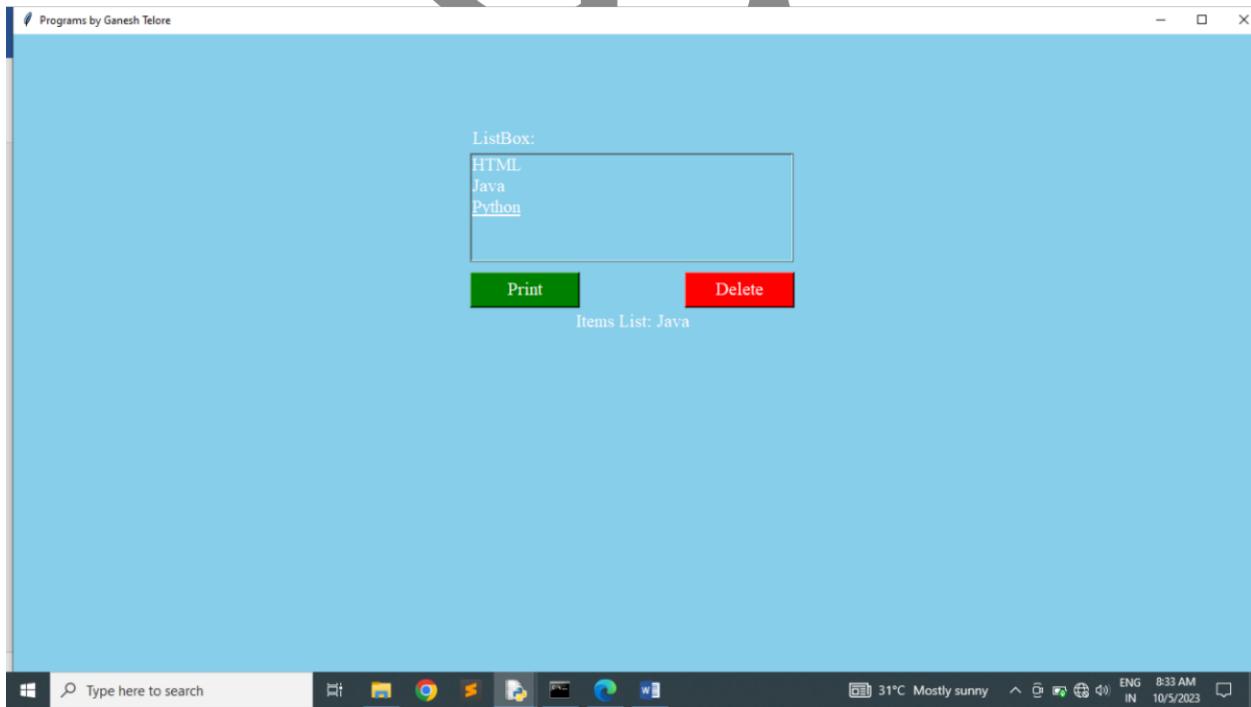
label=Label(gui,text="ListBox: ",font=("Times New Roman",15),bg="skyblue",fg="white")
box=Listbox(gui,width=35,height=5,font=("Times New
Roman",15),bg="skyblue",fg="white",selectmode=MULTIPLE)
Print=Button(gui,text="Print",width=10, font=("Times New
Roman",15),bg="green",fg="white",command=printitems)
Delete=Button(gui,width=10,text="Delete",font=("Times New
Roman",15),bg="red",fg="white",command=deleteitems)
lbl1=Label(gui,width=50,text="",font=("Times New Roman",15),bg="skyblue",fg="white")
gui.config(bg="skyblue")
box.insert("end", "PHP", "HTML", "C++", "Java", "Python")
label.place(x=500,y=100)
box.place(x=500,y=130)
Print.place(x=500,y=260)
Delete.place(x=735,y=260)
lbl1.place(x=400,y=300)
gui.mainloop()
```

Output:

OUTPUT 1[PRINTING SELECTED ELEMENTS]



OUTPUT 2[AFTER DELETING ELEMENTS]



ASSIGNMENT 8

SET-B

Q.8 Write Python GUI program to add menu bar with name of colors as options to change the background color as per selection from menu option.

Ans:

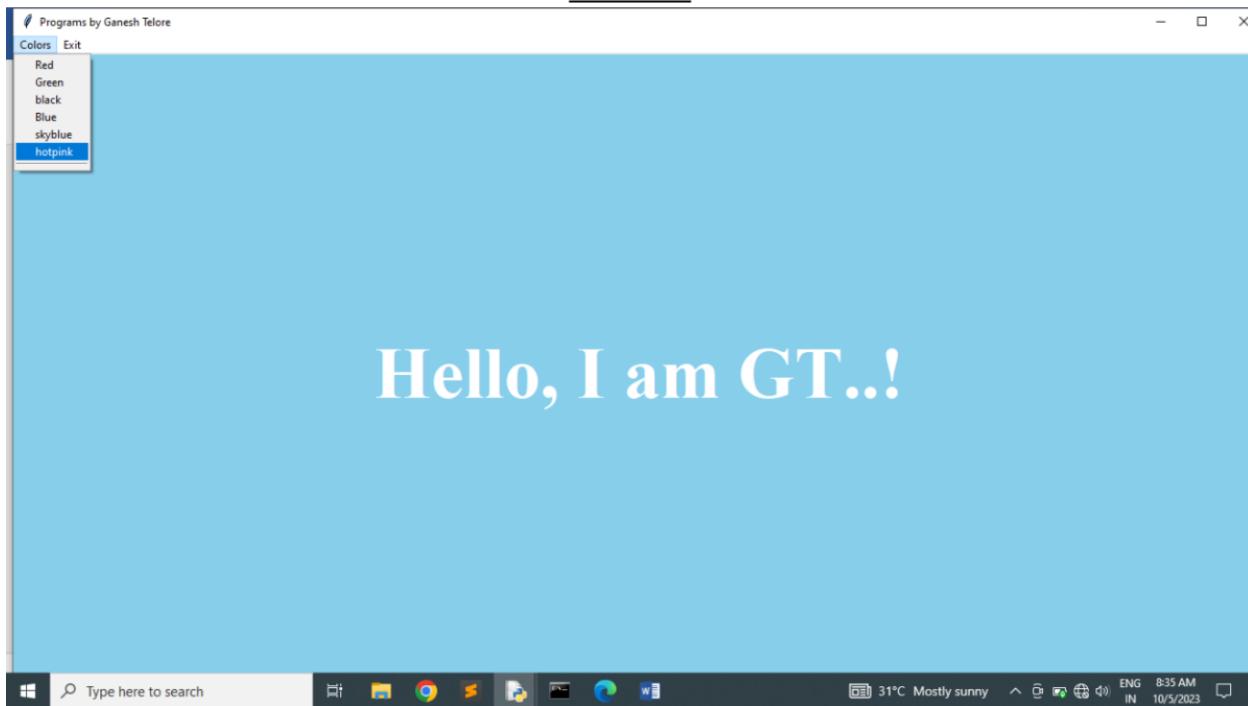
```
from tkinter import *
gui=Tk()
gui.geometry("1800x1800")
gui.title("Programs by Ganesh Telore")
gui.config(bg="skyblue")
def red():
    gui.config(bg="red")
    lbl.config(bg="red")
def green():
    gui.config(bg="green")
    lbl.config(bg="green")
def black():
    gui.config(bg="#000")
    lbl.config(bg="black")
def blue():
    gui.config(bg="blue")
    lbl.config(bg="blue")
def skyblue():
    gui.config(bg="skyblue")
    lbl.config(bg="skyblue")
def hotpink():
    gui.config(bg="#cb0162")
    lbl.config(bg="#cb0162")

menubar=Menu(gui)
colors=Menu(menubar,tearoff=0)
colors.add_command(label="Red", command=red)
colors.add_command(label="Green", command=green)
colors.add_command(label="black", command=black)
colors.add_command(label="Blue", command=blue)
colors.add_command(label="skyblue", command=skyblue)
colors.add_command(label="hotpink", command=hotpink)
colors.add_separator()
menubar.add_cascade(label="Colors",menu=colors)
menubar.add_command(label="Exit",command=gui.quit)
lbl=Label(gui,text="Hello, I am GT..!", font=("Times New Roman",60,"bold"),fg="#fff",bg="skyblue")
gui.config(menu=menubar)
lbl.pack(pady=300)
gui.mainloop()
```

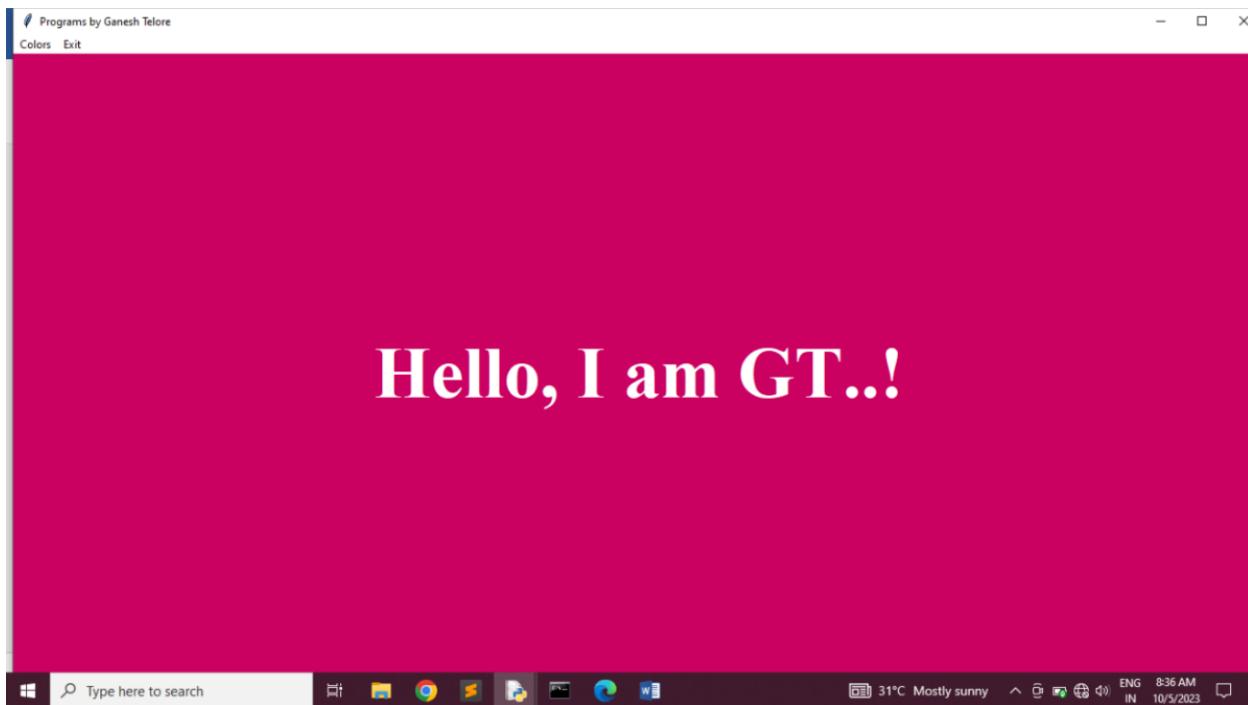
Output:



OUTPUT 1



GT
OUTPUT 2



ASSIGNMENT 8

SET-B

Q.9 Write Python GUI program to accept a number n and check whether it is Prime, Perfect or Armstrong number or not. Specify three radio buttons.

Ans:

```
from tkinter import *
from tkinter import messagebox
def check():
    if(int(r.get())==1):
        flag=False
        num=int(tb1.get())
        if(num==1):
            messagebox.showinfo("Alert",f"{num} is not Prime Number.")
        elif num>1:
            for i in range(2,num):
                if(num%i)==0:
                    flag=True
                    break
            if flag:
                messagebox.showinfo("Alert",f"{num} is not Prime Number.")
            else:
                messagebox.showinfo("Alert",f"{num} is Prime Number.")
    elif(int(r.get())==2):
        sum1=0
        num=int(tb1.get())
        for i in range(1,num):
            if(num%i==0):
                sum1=sum1+i
        if(sum1==num):
            messagebox.showinfo("Alert",f"{num} is Perfect Number.")
        else:
            messagebox.showinfo("Alert",f"{num} is not Perfect Number.")
    elif(int(r.get())==3):
        num=int(tb1.get())
        sum2=0
        temp=num
        while temp>0:
            digit=temp%10
            sum2=sum2+digit**3
            temp=temp//10
        if num==sum2:
            messagebox.showinfo("Alert",f"{num} is Armstrong Number.")
        else:
            messagebox.showinfo("Alert",f"{num} is not Armstrong Number.")
    else:
```

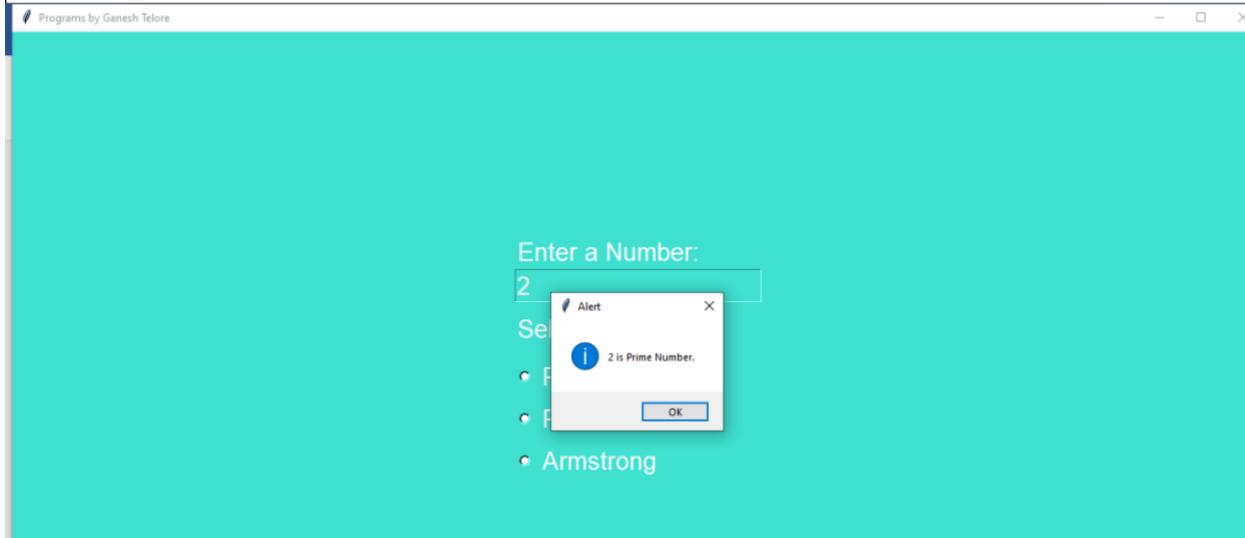
```

messagebox.showinfo("Alert","No Option Selected..!")

gui=Tk()
gui.geometry("1800x1800")
gui.title("Programs by Ganesh Telore")
gui.config(bg="#40e0d0")
lbl=Label(gui,text="Enter a Number: ", font=("New Times Roman",20), bg="#40e0d0", fg="#fff")
tb1=Entry(gui, font=("New Times Roman",20), bg="#40e0d0", fg="#fff")
lbl1=Label(gui,text="Select an Option: ", font=("New Times Roman",20), bg="#40e0d0", fg="#fff")
r=IntVar()
r1=Radiobutton(gui,text="Prime", variable=r, value=1, command=check, font=("New Times
Roman",20),
                bg="#40e0d0", fg="#fff")
r2=Radiobutton(gui,text="Perfect", variable=r, value=2, command=check, font=("New Times
Roman",20),
                bg="#40e0d0", fg="#fff")
r3=Radiobutton(gui,text="Armstrong", variable=r, value=3, command=check, font=("New Times
Roman",20),
                bg="#40e0d0", fg="#fff")
lbl2=Label(gui,bg="#40e0d0")
lbl2.pack(anchor=W,padx=550,pady=100)
lbl.pack(anchor=W,padx=550,pady=0)
tb1.pack(anchor=W,padx=550,pady=0)
lbl1.pack(anchor=W,padx=550,pady=10)
r1.pack(anchor=W,padx=550)
r2.pack(anchor=W,padx=550)
r3.pack(anchor=W,padx=550)
gui.mainloop()

```

Output:



ASSIGNMENT 8

SET-B

Q.10 Write a Python GUI program to create a label and change the label font style (font name, bold, size). Specify separate checkbutton for each style.

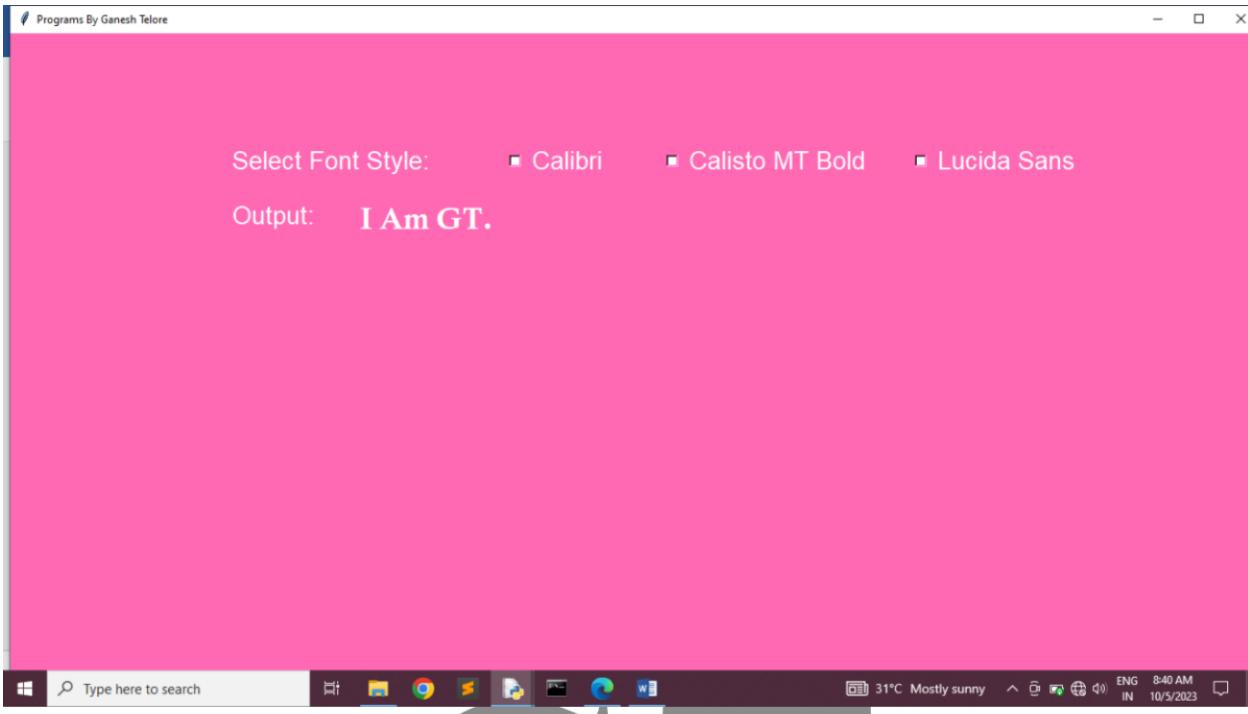
Ans:

```
from tkinter import *
gui=Tk()
def edittext():
    val1=int(cv1.get())
    val2=int(cv2.get())
    val3=int(cv3.get())
    if val1==1:
        lbl2.config(font=("Calibri",25,"bold"))
    elif val2==1:
        lbl2.config( font=("Calisto MT Bold",25,"bold"))
    elif val3==1:
        lbl2.config(font=("Lucida Sans",25,"bold"))

gui.geometry("1800x1800")
gui.title("Programs By Ganesh Telore")
gui.config(bg="HOT PINK")
lbl1=Label(gui,text="Select Font Style: ",bg="hot pink", fg="#fff", font=("New Times Roman",20))
cv1=IntVar()
cv2=IntVar()
cv3=IntVar()
cb1=Checkbutton(gui,text="Calibri",variable=cv1, onvalue=1,
                 offvalue=0,height=2,width=10,bg="hot pink",fg="#fff",font=("New Times
Roman",20),command=edittext)
cb2=Checkbutton(gui,text="Calisto MT Bold",variable=cv2, onvalue=1,
                 offvalue=0,height=2,width=20,bg="hot pink",fg="#fff",font=("New Times
Roman",20),command=edittext)
cb3=Checkbutton(gui,text="Lucida Sans",variable=cv3, onvalue=1,
                 offvalue=0,height=2,width=10,bg="hot pink",fg="#fff",font=("New Times
Roman",20),command=edittext)
lbl2=Label(gui,text="I Am GT.",bg="hot pink", fg="#fff",font=("Times New Roman",20))
lbl3=Label(gui,text="Output: ",bg="hot pink",fg="#fff", font=("New Times Roman",20))
lbl1.place(x=240,y=120)
lbl3.place(x=240,y=180)
lbl2.place(x=380,y=180)
cb1.place(x=500,y=100)
cb2.place(x=650,y=100)
cb3.place(x=980,y=100)

gui.mainloop()
```

Output:



GT

ASSIGNMENT 8

SET-C

Q.1 Write a Python GUI program to implement simple calculator.

Ans:

```
from tkinter import *
gui=Tk()
exp=""
def getdata(val):
    global exp
    exp=exp+val
    lbl2.config(text=f"Inputs :{exp}")

def equals():
    global exp
    res=""
    res=eval(exp)
    lbl3.config(text=f"Result :{res}")

def clear():
    global exp
    exp=""
    lbl2.config(text=exp)

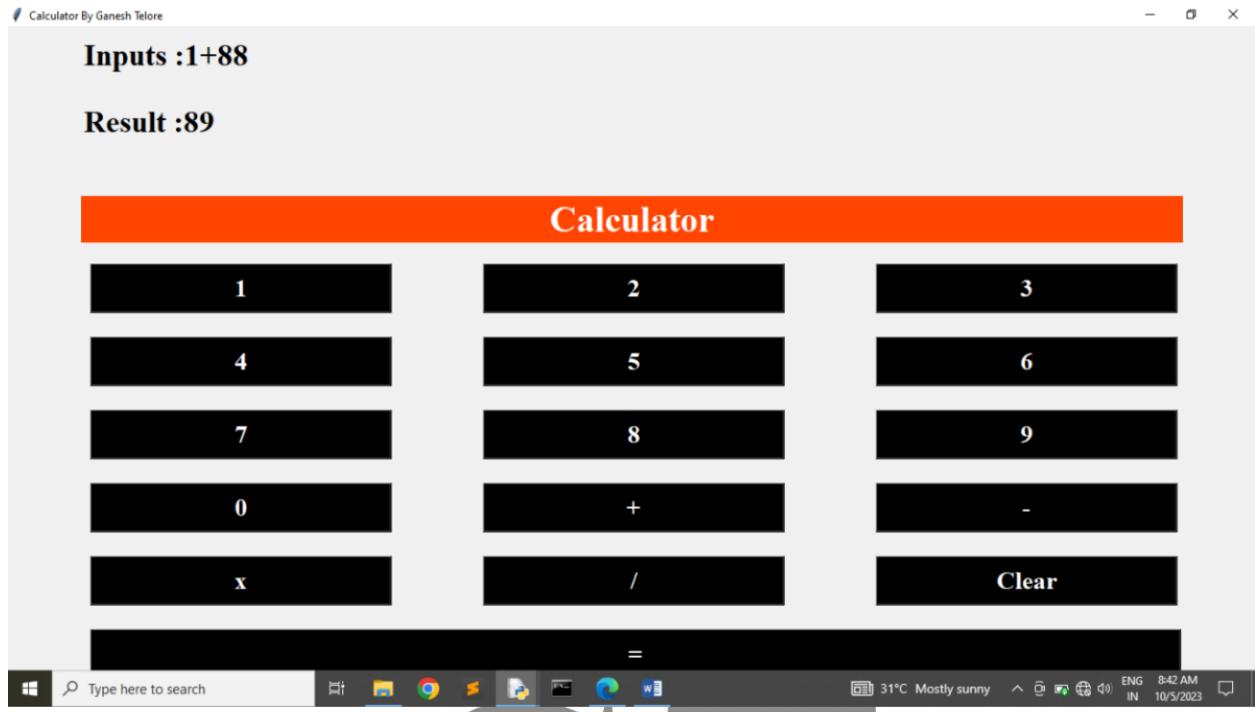
gui.geometry("1800x1800")
gui.title("Calculator By Ganesh Telore")
inputt=StringVar()
lbl2=Label(gui,text="", font=("Times New Roman",25,"bold"),
           fg="#000")
lbl3=Label(gui,text="", font=("Times New Roman",25,"bold"),
           fg="#000")
lbl1=Label(gui,text="Calculator", font=("Times New Roman",30,"bold"),bg="orangered",
           fg="#fff", width=50)
b1=Button(gui,text="1",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
           command=lambda: getdata("1"))
b2=Button(gui,text="2",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
           command=lambda: getdata("2"))
b3=Button(gui,text="3",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
           command=lambda: getdata("3"))
b4=Button(gui,text="4",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
           command=lambda: getdata("4"))
b5=Button(gui,text="5",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
           command=lambda m=5:getdata("5"))
b6=Button(gui,text="6",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
           command=lambda m=6:getdata("6"))
```



```
b7=Button(gui,text="7",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=lambda m=7:getdata("7"))
b8=Button(gui,text="8",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=lambda m=8:getdata("8"))
b9=Button(gui,text="9",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=lambda m=9:getdata("9"))
b0=Button(gui,text="0",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=lambda m=0:getdata("0"))
add=Button(gui,text="+",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=lambda: getdata("+"))
subtract=Button(gui,text="-",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=lambda: getdata("-"))
multiply=Button(gui,text="x",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=lambda: getdata("*"))
divide=Button(gui,text="/",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=lambda: getdata("/"))
clear=Button(gui,text="Clear",width=20,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=clear)
ans=Button(gui,text "=",width=74,font=("Times New Roman",20,"bold"), bg="#000", fg="#fff",
command=lambda: equals())
lbl2.pack(anchor=W,pady=10,padx=80)
lbl3.pack(anchor=W,pady=20,padx=80)
lbl1.pack(pady=40)
b1.place(x=90,y=260)
b2.place(x=520,y=260)
b3.place(x=950,y=260)
b4.place(x=90,y=340)
b5.place(x=520,y=340)
b6.place(x=950,y=340)
b7.place(x=90,y=420)
b8.place(x=520,y=420)
b9.place(x=950,y=420)
b0.place(x=90,y=500)
add.place(x=520,y=500)
subtract.place(x=950,y=500)
multiply.place(x=90,y=580)
divide.place(x=520,y=580)
clear.place(x=950,y=580)
ans.place(x=90,y=660)
gui.mainloop()
```

Output:





GT

GT