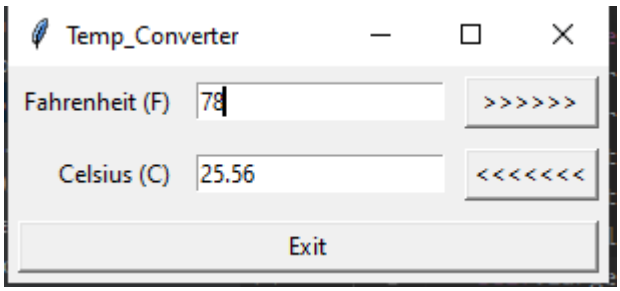
Project #3: Temperature Conversion GUI

Source Code

```
from tkinter import *
#convert to Degree Fahrenheight
def convert_fahr():
    words = fbtext.get()
    ftemp = float(words)
    celbox.delete(0, END)
    celbox.insert(0, '%.2f' % (tocel(ftemp)))
    return
#convert to Degree Celcius
def convert_cel():
    words = cbtext.get()
    ctemp = float(words)
    fahrbox.delete(0, END)
    fahrbox.insert(0, '%.2f' % (tofahr(ctemp)))
#Celcious Conversion formular
def tocel(fahr):
    return (fahr-32) * 5.0 / 9.0
#Fahr Conversion Fornular
def tofahr(cel):
    return cel * 9.0 / 5.0 + 32
#************ App GUI***********
app = Tk()
app.title('Temp_Converter')

fahrlabel = Label(app, text = 'Fahrenheit (F)')
fahrlabel.grid(row = 0, column = 0, padx = 5, pady = 5, sticky = E)

cellabel = Label(app, text = ' Celsius (C)')
cellabel.grid(row = 1, column = 0, padx = 5, pady = 5, sticky = E)

fbtext = StringVar()
fbtext.set('')
fahrbox = Entry(app, textvariable=fbtext)
fahrbox.grid(row = 0, column = 1, padx = 5, pady = 5)

cbtext = StringVar()
cbtext.set('')
celbox = Entry(app, textvariable=cbtext)
celbox.grid(row = 1, column = 1, padx = 5, pady = 5)
#************************buttons************************
BTNfgo = Button(app, text = '>>>>>>', command = convert_fahr)
BTNfgo.grid(row = 0, column = 2, padx = 5, pady = 5, sticky = N+S+E+W)

BTNcgo = Button(app, text = '<<<<<<<', command = convert_cel)
BTNcgo.grid(row = 1, column = 2, padx = 5, pady = 5, sticky = N+S+E+W)

BTNexit = Button(app, text = 'Exit', command = quit)
BTNexit.grid(row = 3, column = 0, padx = 5, pady = 5, sticky = N+S+E+W, columnspan
= 3)
```

```
app.mainloop()
```

Output Screen



Project #5: Guess the Number Game GUI

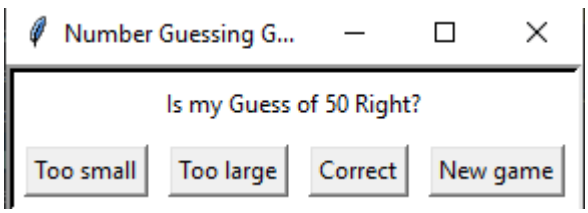
The computer guesses a number and the user provides the hints.

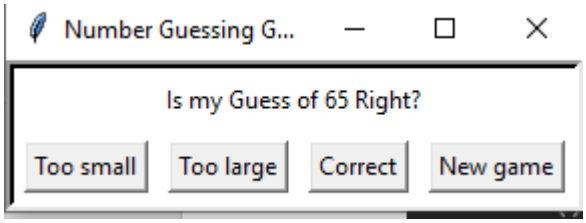
Source Code

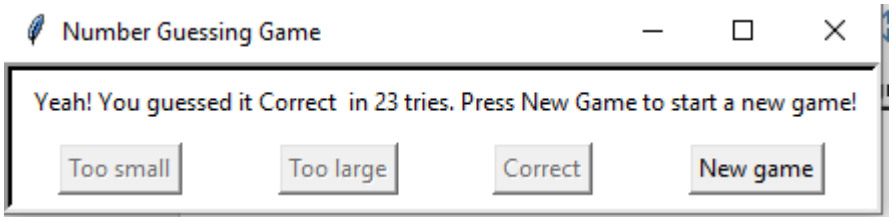
```
import random

from breezypythongui import EasyFrame

#Guess Game main Class
class GuessingGame(EasyFrame):
#class defination
    def __init__(self):
        EasyFrame.__init__(self, title="Number Guessing Game")

        self.lowerBound = 1
        self.upperBound = 100
        self.count = 0
        self.myNumber = (self.lowerBound + self.upperBound) // 2

        guess = "Is my Guess of " + str(self.myNumber) + " Right?"

        self.myLabel = self.addLabel(text=guess, row=0, column=0, sticky="NSEW",
columnspan=4)

        self.small = self.addButton(text="Too small", row=1, column=0,
command=self.goLarge)

        self.large = self.addButton(text="Too large", row=1, column=1,
command=self.goSmall)

        self.correct = self.addButton(text="Correct", row=1, column=2,
command=self.goCorrect)

        self.newButton = self.addButton(text="New game", row=1, column=3,
command=self.newGame)

# Updates the Computer Guess if the attempt is not correct
    def update(self):
```

```
        self.myNumber = (self.lowerBound + self.upperBound) // 2
        guess = "Is my Guess of " + str(self.myNumber) + " Right?"
        self.myLabel['text'] = guess

    # check if the guess is larger than the exact number
    def goLarge(self):
        self.lowerBound = self.myNumber + 1
        self.count += 1
        self.update()
#check if the guess is smaller than the exact number
    def goSmall(self):
        self.upperBound = self.myNumber - 1
        self.count += 1
        self.update()
#check if the guess is correct
    def goCorrect(self):
        self.count += 1
        self.myLabel['text'] = f" Yeah! You guessed it Correct  in {self.count}
tries. Press New Game to start a new game!"
        self.small["state"] = "disabled"
        self.large["state"] = "disabled"
        self.correct["state"] = "disabled"

    def newGame(self):
        self.upperBound = 100
        self.lowerBound = 1
        self.count = 0
        self.update()
        self.small["state"] = "active"
        self.large["state"] = "active"
        self.correct["state"] = "active"

#main function that calls the class
def main():
    game1 = GuessingGame()
    game1.mainloop()

if __name__ == "__main__":
    try:
        while True:
            main()
    except KeyboardInterrupt:
        print("\nProgram closed.")
```

Output Screens




Number Guessing G...
Is my Guess of 65 Right?
Too small
Too large
Correct
New game


Number Guessing Game
Yeah! You guessed it Correct in 23 tries. Press New Game to start a new game!
Too small
Too large
Correct
New game