

# COMPUTER PROJECT

NAME:      **AYUSHI ROY**

CLASS:      **XII**

ROLL:      **11**

SECTION:      **I**

TOPIC:

**QUIZ**

# CERTIFICATE

This is to certify that Ms. Ayushi Roy, a bonafide student of class XII I has successfully completed the project titled **SIGMA** in the Computer Lab during the Year 2020-2021 for the A.I.S.S.C.E Computer Science Examination– 2021.

It is further certified that this project is the individual work of the Candidate.

External Examiner

Internal Examiner

DATED:

SEAL:

# ACKNOWLEDGEMENT

I gratefully acknowledge my sincere thanks to our Computer Science Teacher Mrs. Dhrita Adhya for her remarkable, valuable guidance and supervision throughout the project work. I am also utmost indebted to all my batch mates for their encouragement, help, suggestion and readily helpful service in the successful completion of the project.

I wish to express my deep gratitude and sincere thanks to the Principal Mrs. Joyoti Chaudhuri, Delhi Public School, Ruby Park for her encouragement and for all the facilities that she provided for this project work.

Ayushi Roy

# **INDEX**

1. Certificate
2. Acknowledgment
3. Hardware and  
Software requirements
4. Objectives of the Project
5. Header files
6. User Defined Modules
7. Functions
8. Source Code
9. Output Screen
10. Limitations
11. Bibliography and References

# HARDWARE AND SOFTWARE REQUIREMENTS

## **HARDWARE REQUIREMENTS:**

**PROCESSOR:** Intel® Core™ i5 8250U CPU @  
1.60 GHz 1.80 GHz

**MEMORY:** 8.00GB

**HARD DISK:** 28.0 KB

## **SOFTWARE REQUIREMENTS:**

**OPERATING SYSTEM:** 64-bit operating system

**PROGRAMMING IDE:** Spyder(anaconda3)

# OBJECTIVES OF THE PROJECT

- Various inputs like **NAME, CLASS, EMAIL, ROLL NO.**, are taken input from the user.
- A **THREE** round quiz begins, containing **TWO MCQ** rounds and **ONE INTEGER** type round.
- An **'ID'** is created for every user using their email.
- **SCORE** for each round is displayed at the end and the **TOTAL SCORE** along with their personal information input is displayed at the end.
- A **BACKGROUND IMAGE** has been included at the beginning.

# USER DEFINED MODULES

## AND

### FUNCTIONS USED

### AND THEIR PURPOSE

#### **FUNCTIONS:**

- **ro1shuff:** To shuffle round 1 Questions
- **ro2shuff:** To shuffle round 2 Questions
- **ro1showresult :** To show round 1 result
- **ro2showresult :** To show round 2 result
- **ro3sowresult :** To show round 3 result
- **ro1calc :** To show round 1 calculations
- **ro2calc :** To show round 2 calculations
- **ro1selectedcoices :** To show round 1 opts
- **ro2selectedchoices :** To show round 2 opts
- **queview1 :** To show round 1 questions
- **queview2 :** To show round 2 questions
- **queview3\_5 :** To show round 3 Q 5
- **queview3\_4 :** To show round 3 Q 4
- **queview3\_3 :** To show round 3 Q 3

- **queview3\_2** : To show round 3 Q 2
- **queview3\_1** : To show round 3 Q 1
- **quizstarted** : Command to start quiz
- **round1** : Creating window for round 1
- **round2** : Creating window for round 2
- **round3** : Creating window for round 3
- **round1started** : Command for round 1
- **round2started** : Command for round 2
- **round3started** : Command for round 3
- **ok** : Command for ok button
- **personalinfo** : To take input from user
- **startispressed** : Command for start button
- **instructions** : To print personal info
- **nextispressed** : Command for next button

## **MODULES :**

- **tkinter** : For creating **GUI**.
- **PIL**: For processing image(background image) in Python.
- **Random**: For shuffling of questions in Round 1 and 2



# SOURCE CODE

```
from tkinter import *
import tkinter.messagebox
from tkinter import ttk
from PIL import Image
import random

#ro1_que= round 1 questions
#ro2_que= round 2 questions
#ro3_que= round 3 questions
#ro1_ans_ch= round 1 answers choice
#ro2_ans_ch= round 2 answers choice
#ro3_ans= round 3 answers
#ro1_ans= round 1 answers
#ro2_ans= round 2 answers
#ro1shuff= shuffle ro1 questions
ro1_que= [
```

"Who is the author of the book '1984'?",

"Which of the following keyword is used to create a function in Python ?",

"To Declare a Global variable in python we use the keyword ?",

"The lead character in the film 'The Bandit Queen' has been played by",

"The famous book 'Anandmath' was authored by",

]

ro2\_que= ["It was a hot day and 4 couples drank together 44 bottles of cold drink.

Anita had 2, Biva 3, Chanchala 4 and Dipti 5 bottles.

Mr. Panikkar drank just as many bottles as his wife, but each of the

other men drank more than his wife- Mr. Dubey twice, Mr. Narayan

three times and Mr. Rao four times as many bottles. Then, one of the

following statements is correct. Which one is it?",

"A bag contains coloured balls of which atleast 90% are red. Balls

are drawn from the bag one by one and their colours are noted. It is found

that 49 of the first 50 balls drawn are red. Thereafter, 7 out of every

8 balls drawn are red. The number of balls in the bag CAN NOT be",

"Let 'a' be the 81-digit number all digits of which are equal to 1. Then

the number 'a' is ",

"The number 2532645918 is divisible by",

"The number of solutions of  $2\sin x + \cos x = 3$  is"

]

ro3\_que= ["How many ways are there to put one white and one black rook on a chessboard

so that they do not attack each other?",

""The number of different factors of 1800 equals "",

""The sum of all the distinct four-digit numbers that can be formed using

the digits 1,2,3,4,5 each digit appearing atmost once is "",

""The sum of all integers from 1 to 1000 that are divisible by 2 or 5

but not divisible by 4 equals "",

""The number of pairs of integers(m,n)satisfying  $m^2+n^2+m*n=1$  is"

]

rol\_ans\_ch= [

["George Orwell","Thomas Hardy","Emile Zola","Walter Scott"],

["function","void","fun","def"],

["all","var","let","global"],

["Rupa Ganguly","Seema Biswas","Pratibha Sinha","Shabana Azmi"],

```
["Sarojini Naidu","Bankim Chandra Chattopadhyay","Sri Aurobindo","Rabindranath Tagore"]
```

```
]
```

```
ro2_ans_ch= [
```

```
["Mrs. Panikkar is Chanchala","Anita's husband had 8 bottles","Mr.Narayan had 12 bottles",
```

```
"Mrs.Rao is Dipti"],
```

```
["170","210","250","194"],
```

```
["Divisible by 9 but not divisible by 27",
```

```
"Divisible by 27 but not divisible by 81",
```

```
"Divisible by 81 but not divisible by 243",
```

```
"Divisible by 243"],
```

```
["3 but not 11",
```

```
"11 but not 3",
```

```
"Both 3 and 11",
```

```
"Neither 3 nor 11"],
```

```
["1","2","infinite","no solution"]
```

```
]
```

```
ro3_ans_= [
```

```
"3136",  
"36",  
"399960",  
"175000",  
"6"  
]
```

```
ro1_ans= [0,3,3,1,1]  
ro2_ans= [1,2,2,2,3]
```

```
user_ans1=[]  
user_ans2=[]  
user_ans3=[]  
indexes1=[]  
indexes2=[]  
indexes3=[]
```

```
def ro1shuff():  
    global indexes1  
    while (len(indexes1)<5):  
        x1=random.randint(0,4)
```

```

        if x1 in indexes1:
            continue
        else:
            indexes1.append(x1)

def ro2shuff():
    global indexes2
    while (len(indexes2)<5):
        x2=random.randint(0,4)  #Shuffling of ro2 que is
being done.
        if x2 in indexes2:
            continue
        else:
            indexes2.append(x2)

```

#ro1showresult= result of round 1

#ro2showresult= result of round 2

#ro3showresult = result of round 3

```
def rolshowresult(score1):  
    global r2,b6  
    #For Round 1  
    rol_lblq.destroy()  
    rol_opt1.destroy()  
    rol_opt2.destroy()  
    rol_opt3.destroy()  
    rol_opt4.destroy()  
  
    rol_resultlbl= Label(  
        r2,  
        text=("<<Your score for Round 1 is>>"  
            ,score1),  
        font = ("Arial",20),  
        width = 500,  
        justify = "center",  
        wraplength = 400,  
        background = "blanchedalmond",  
    )  
    rol_resultlbl.pack(pady=(200,200))
```



```
b6=Button(r2,text="NEXT",font=("Times New Roman",26),bg="steelblue",
```

```
command=roundtwo)
```

```
b6.place(x=290,y=380)
```

```
def ro2showresult(score2):
```

```
    global r3,b7
```

```
    #For Round 2
```

```
    ro2_lblq.destroy()
```

```
    ro2_opt1.destroy()
```

```
    ro2_opt2.destroy()
```

```
    ro2_opt3.destroy()
```

```
    ro2_opt4.destroy()
```

```
    ro2_resultlbl= Label(
```

```
        r3,
```

```
        text=("<<Your score for Round 2 is>>")
```

```
        ,score2),
```

```
        font = ("Arial",20),
```

```
        width = 500,
```

```
        justify = "center",
```

```
        wraplength = 400,  
        background = "blanchedalmond",  
    )  
    ro2_resultlbl.pack(pady=(250,250))
```

```
    b7=Button(r3,text="NEXT",font=("Times New  
Roman",26),bg="steelblue",  
              command=roundthree)  
    b7.place(x=330,y=380)
```

```
def ro3showresult():  
    #FOR ROUND 3  
    global r4,r5,b9,b24,ro3_lblq5  
    global E5,L  
    global score3  
    r4.destroy()  
    r5=Tk()  
    r5.title("WELCOME TO SIGMA")  
    r5.geometry('800x700')  
    r5.config(bg="blanchedalmond")
```

```
r5.resizable(0,0)
```

```
ro3_resultlbl= Label(  
    r5,  
    text("<<Your score for Round 3 is>>"  
        ,score3),  
    font = ("Arial",20),  
    width = 500,  
    justify = "center",  
    wraplength = 400,  
    background = "blanchedalmond",  
)  
ro3_resultlbl.pack(pady=(200,200))
```

```
b9=Button(r5,text="NEXT",font=("Times New  
Roman",26),bg="steelblue",  
          command=final)  
b9.place(x=320,y=380)
```

```
def final():          #FINAL WINDOW  
    global r5
```

```
global cl,nm,em
```

```
global score1,score2,score3
```

```
r5.destroy()
```

```
r8=Tk() # CREATING FINAL WINDOW
```

```
r8.title("RESULT")
```

```
r8.geometry('800x700')
```

```
r8.config(bg="blanchedalmond")
```

```
r8.resizable(0,0)
```

```
l21=Label(r8,text=("NAME : ",nm))
```

```
#nm=name
```

```
l21.config(bg="blanchedalmond",font=("Tew Cen  
MT",22))
```

```
l21.pack(pady=50)
```

```
l22=Label(r8,text=("CLASS : ",cl))
```

```
#cl=class
```

```
l22.config(bg="blanchedalmond",font=("Tew Cen  
MT",22))
```

```
l22.pack(pady=50)
```

```
l23=Label(r8,text=("ROLL NO. : ",rn))
```

```
#rn=roll number
```

```
l23.config(bg="blanchedalmond",font=("Tew Cen  
MT",22))
```

```
l23.pack(pady=50)
```

```
l24=Label(r8,text=("EMAIL ID : ",em))  
#em=email id
```

```
l24.config(bg="blanchedalmond",font=("Tew Cen  
MT",22))
```

```
l24.pack(pady=50)
```

```
final_score=score1+score2+score3
```

```
l50=Label(r8,text=("Your Final score",str(final_score)))
```

```
l50.config(bg="blanchedalmond",font=("Tew Cen  
MT",22))
```

```
l50.pack(pady=50)
```

```
def rolcalc():
```

```
    #For round 1
```

```
    global indexes1,user_ans1,rol_ans
```

```
    global score1
```

```
    x4 = 0
```

```
    score1 = 0
```

```
for i in indexes1:
    if user_ans1[x4] == ro1_ans[i]:
        score1 = score1 + 1
    x4 += 1
ro1showresult(score1)
```

```
def ro2calc():
    #For round 2
    global indexes2,user_ans2,ro2_ans
    global score2
    x5 = 0
    score2= 0
    for i in indexes2:
        if user_ans2[x5] == ro2_ans[i]:
            score2 = score2 + 1
        x5 += 1
    ro2showresult(score2)
```

```
ro1ques =1
```

```
ro2ques=1
```

```
ro3ques=1
```

```
def ro1selectedchoices():
```

```
    #For round 1
```

```
    global radiovar1,user_ans1
```

```
    global ro1_lblq
```

```
    global ro1_opt1,ro1_opt2,ro1_opt3,ro1_opt4
```

```
    global ro1ques
```

```
    getvalue1 = radiovar1.get()
```

```
    user_ans1.append(getvalue1)
```

```
    radiovar1.set(-1)
```

```
    if ro1ques < 5:
```

```
        ro1_lblq.config(text= ro1_que[indexes1[ro1ques]])
```

```
        ro1_opt1['text'] = ro1_ans_ch[indexes1[ro1ques]][0]
```

```
        ro1_opt2['text'] = ro1_ans_ch[indexes1[ro1ques]][1]
```

```
        ro1_opt3['text'] = ro1_ans_ch[indexes1[ro1ques]][2]
```

```
        ro1_opt4['text'] = ro1_ans_ch[indexes1[ro1ques]][3]
```

```
        ro1ques += 1
```

```
    else:
```

```
        ro1calc()
```

```
def ro2selectedchoices():  
    #For round 2  
  
    global radiovar2,user_ans2  
  
    global ro2_lblq  
  
    global ro2_opt1,ro2_opt2,ro2_opt3,ro2_opt4  
  
    global ro2ques  
  
    getvalue2 = radiovar2.get()  
    user_ans2.append(getvalue2)  
    radiovar2.set(-1)  
    if ro2ques < 5:  
        ro2_lblq.config(text= ro2_que[indexes2[ro2ques]])  
        ro2_opt1['text'] = ro2_ans_ch[indexes2[ro2ques]][0]  
        ro2_opt2['text'] = ro2_ans_ch[indexes2[ro2ques]][1]  
        ro2_opt3['text'] = ro2_ans_ch[indexes2[ro2ques]][2]  
        ro2_opt4['text'] = ro2_ans_ch[indexes2[ro2ques]][3]  
  
        ro2ques += 1  
    else:  
        ro2calc()
```



```
def queview1():  
    #For Round 1  
  
    global ro1_lblq,ro1_opt1,ro1_opt2,ro1_opt3,ro1_opt4  
  
    global r2  
  
    ro1_lblq=Label(  
        r2,  
        text = ro1_que[indexes1[0]],  
        font = ("Arial", 16),  
        width = 500,  
        justify = "center",  
        wraplength = 400,  
        background = "blanchedalmond",  
    )  
  
    ro1_lblq.pack(pady=(100,30))  
  
  
    global radiovar1  
  
    radiovar1 = IntVar()  
  
    radiovar1.set(-1)  
  
  
    ro1_opt1 = Radiobutton(  
        r2,
```

```
text = ro1_ans_ch[indexes1[0]][0],
font = ("Times", 12),
value = 0,
variable = radiovar1,
command = ro1selectedchoices,
background = "blanchedalmond",
)
ro1_opt1.pack(pady=5)
```

```
ro1_opt2 = Radiobutton(
    r2,
    text = ro1_ans_ch[indexes1[0]][1],
    font = ("Times", 12),
    value = 1,
    variable = radiovar1,
    command = ro1selectedchoices,
    background = "blanchedalmond",
)
ro1_opt2.pack(pady=5)
```

```
ro1_opt3 = Radiobutton(  
    r2,  
    text = ro1_ans_ch[indexes1[0]][2],  
    font = ("Times", 12),  
    value = 2,  
    variable = radiovar1,  
    command = ro1selectedchoices,  
    background = "blanchedalmond",  
)  
ro1_opt3.pack(pady=5)
```

```
ro1_opt4 = Radiobutton(  
    r2,  
    text = ro1_ans_ch[indexes1[0]][3],  
    font = ("Times", 12),  
    value = 3,  
    variable = radiovar1,  
    command = ro1selectedchoices,  
    background = "blanchedalmond",
```

```
)  
ro1_opt4.pack(pady=5)
```

```
def queview2():  
    #For Round 2  
    global ro2_lblq,ro2_opt1,ro2_opt2,ro2_opt3,ro2_opt4  
    global r3  
    ro2_lblq=Label(  
        r3,  
        text = ro2_que[indexes2[0]],  
        font = ("Arial", 16),  
        width = 500,  
        justify = "center",  
        wraplength = 800,  
        background = "blanchedalmond",  
    )  
    ro2_lblq.pack(pady=(100,30))  
  
    global radiovar2  
    radiovar2 = IntVar()  
    radiovar2.set(-1)
```

```
ro2_opt1 = Radiobutton(  
    r3,  
    text = ro2_ans_ch[indexes2[0]][0],  
    font = ("Times", 12),  
    value = 0,  
    variable = radiovar2,  
    command = ro2selectedchoices,  
    background = "blanchedalmond",  
)  
ro2_opt1.pack(pady=5)
```

```
ro2_opt2 = Radiobutton(  
    r3,  
    text = ro2_ans_ch[indexes2[0]][1],  
    font = ("Times", 12),  
    value = 1,  
    variable = radiovar2,  
    command = ro2selectedchoices,  
    background = "blanchedalmond",
```

)

ro2\_opt2.pack(pady=5)

ro2\_opt3 = Radiobutton(

    r3,

    text = ro2\_ans\_ch[indexes2[0]][2],

    font = ("Times", 12),

    value = 2,

    variable = radiovar2,

    command = ro2selectedchoices,

    background = "blanchedalmond",

)

ro2\_opt3.pack(pady=5)

ro2\_opt4 = Radiobutton(

    r3,

    text = ro2\_ans\_ch[indexes2[0]][3],

    font = ("Times", 12),

    value = 3,

```
        variable = radiovar2,  
        command = ro2selectedchoices,  
        background = "blanchedalmond",  
    )  
    ro2_opt4.pack(pady=5)
```

```
def quiview3_5():  
    #for round 3 q 5  
    global ro3_ans,E4,E5,ro3_lblq4,ro3_lblq5,b24,b23,L  
    global score3  
    ro3_lblq4.destroy()  
    E4.destroy()  
    b23.destroy()  
    ro3_lblq5=Label(  
        r4,  
        text=ro3_que[4],  
        font=("Arial",16),  
        width=500,  
        justify="center",  
        wraplength=400,
```

```
        bg="blanchedalmond"
    )
    ro3_lblq5.pack(pady=(100,30))
```

```
E5=Entry(r4,width=40)
E5.place(x=320,y=400)
```

```
if E5.get()=="6":
    score3=score3+2
else:
    score3=score3
```

```
b24=Button(r4,text="NEXT",font=("Verdana",24),bg="steelblue",
            command=ro3showresult)
b24.place(x=550,y=550)
```

```
def quiview3_4():
    #for round 3 q 4
```



```
global ro3_ans,E3,E4,ro3_lblq4,ro3_lblq3,L,b23,b22
```

```
global score3
```

```
ro3_lblq3.destroy()
```

```
E3.destroy()
```

```
b22.destroy()
```

```
ro3_lblq4=Label(  
    r4,  
    text=ro3_que[3],  
    font=("Arial",16),  
    width=500,  
    justify="center",  
    wraplength=400,  
    bg="blanchedalmond"  
)
```

```
ro3_lblq4.pack(pady=(100,30))
```

```
E4=Entry(r4,width=40)
```

```
E4.place(x=320,y=400)
```

```
if E4.get()=="175000":
```

```
score3=score3+2
```

```
else:
```

```
score3=score3
```

```
b23=Button(r4,text="NEXT",font=("Verdana",24),bg="steelblue",
```

```
command=quiview3_5)
```

```
b23.place(x=550,y=550)
```

```
def quiview3_3():
```

```
#for round 3 q 3
```

```
global ro3_ans,E2,E3,b22,b21,ro3_lblq2,ro3_lblq3,L
```

```
global score3
```

```
ro3_lblq2.destroy()
```

```
b21.destroy()
```

```
E2.destroy()
```

```
ro3_lblq3=Label(
```

```
    r4,
```

```
    text=ro3_que[2],
```

```
    font=("Arial",16),
```

```
width=500,  
justify="center",  
wraplength=400,  
bg="blanchedalmond"  
)  
ro3_lblq3.pack(pady=(100,30))
```

```
L=Label(r4,text="Your  
Answer",bg="blanchedalmond",font=("Snap ITC",22))
```

```
L.place(x=25,y=300)
```

```
E3=Entry(r4,width=40)
```

```
E3.place(x=320,y=400)
```

```
if E3.get()=="399960":
```

```
    score3=score3+2
```

```
else:
```

```
    score3=score3
```

```
b22=Button(r4,text="NEXT",font=("Verdana",24),bg="steelblue",
```

```
command=quiview3_4)
```

```
b22.place(x=550,y=550)
```

```
def quiview3_2():
```

```
    #for round 3 q 2
```

```
    global ro3_lblq1,ro3_ans,E1,E2,b20,b21,ro3_lblq2,L
```

```
    global score3
```

```
    b20.destroy()
```

```
    ro3_lblq1.destroy()
```

```
    E1.destroy()
```

```
    ro3_lblq2=Label(
```

```
        r4,
```

```
        text=ro3_que[1],
```

```
        font=("Arial",16),
```

```
        width=500,
```

```
        justify="center",
```

```
        wraplength=400,
```

```
        bg="blanchedalmond"
```

```
    )
```

```
    ro3_lblq2.pack(pady=(100,30))
```

```
L=Label(r4,text="Your  
Answer",bg="blanchedalmond",font=("Snap ITC",22))
```

```
L.place(x=25,y=300)
```

```
E2=Entry(r4,width=40)
```

```
E2.place(x=320,y=400)
```

```
if E2.get()=="36":
```

```
    score3=score3+2
```

```
else:
```

```
    score3=score3
```

```
b21=Button(r4,text="NEXT",font=("Verdana",24),bg="steelblue",
```

```
        command=quiview3_3)
```

```
b21.place(x=550,y=550)
```

```
def queview3_1():
```

```
    #For round 3 question 1
```

```
    global ro3_lblq1,ro3_ans,E1,b20,L
```

```
    global score3
```

```
score3=0

ro3_lblq1=Label(
    r4,
    text=ro3_que[0],
    font=("Arial",16),
    width=500,
    justify="center",
    wraplength=400,
    bg="blanchedalmond"
)

ro3_lblq1.pack(pady=(100,30))
```

```
L=Label(r4,text="Your
Answer",bg="blanchedalmond",font=("Snap
ITC",22)).place(x=25,y=300)
```

```
E1=Entry(r4,width=40)
```

```
E1.place(x=320,y=400)
```

```
if E1.get()=="3136":
```

```
    score3=score3+2
```

```
else:
```

```
    score3=score3
```

```
b20=Button(r4,text="NEXT",font=("Verdana",24),bg="steelblue",
```

```
        command=quiview3_2)
```

```
b20.place(x=550,y=550)
```

```
def quizstarted():
```

```
    global r1
```

```
    global r2
```

```
    r1.destroy()
```

```
    r2=Tk() #3rd WINDOW
```

```
    r2.title("WELCOME TO SIGMA")
```

```
    r2.geometry('700x500')
```

```
    r2.config(bg="blanchedalmond")
```

```
    r2.resizable(0,0)
```

```
    global l15
```

```
    global b4
```

```
    l15=Label(r2,text="LET'S START")
```

```
    l15.config(bg="blanchedalmond",font=("Times New Roman",26))
```

```
l15.pack(pady=200)

b4=Button(r2,text="Round 1>>",font=("Times New
Roman",26),bg="steelblue",

        command=round1started)

b4.place(x=240,y=380)
```

```
def roundtwo():
```

```
    global r2,b6,r3
```

```
    r2.destroy()
```

```
    r3=Tk() #4th Window
```

```
    r3.title("WELCOME TO SIGMA")
```

```
    r3.geometry('800x700')
```

```
    r3.config(bg="blanchedalmond")
```

```
    r3.resizable(0,0)
```

```
    global l16
```

```
    global b5
```

```
    l16=Label(r3,text="LET'S START")
```

```
    l16.config(bg="blanchedalmond",font=("Times New
Roman",26))
```

```
    l16.pack(pady=200)
```



```
b5=Button(r3,text="Round 2>>",font=("Times New Roman",26),bg="steelblue",
```

```
command=round2started)
```

```
b5.place(x=300,y=380)
```

```
def roundthree():
```

```
    global r3,b7,r4
```

```
    r3.destroy()
```

```
    r4=Tk() #4th Window
```

```
    r4.title("WELCOME TO SIGMA")
```

```
    r4.geometry('800x700')
```

```
    r4.config(bg="blanchedalmond")
```

```
    r4.resizable(0,0)
```

```
    global l17
```

```
    global b8
```

```
    l17=Label(r4,text="LET'S START")
```

```
    l17.config(bg="blanchedalmond",font=("Times New Roman",26))
```

```
    l17.pack(pady=200)
```

```
b8=Button(r4,text="Round 3>>",font=("Times New  
Roman",26),bg="steelblue",  
command=round3started)  
b8.place(x=300,y=380)
```

```
def round1started():
```

```
    global l15  
    global b4  
    global r2  
    global r3  
    l15.destroy()  
    b4.destroy()  
    ro1shuff()  
    queview1()
```

```
def round2started():
```

```
    global l16  
    global b5  
    l16.destroy()  
    b5.destroy()
```

```
ro2shuff()
```

```
queview2()
```

```
def round3started():
```

```
    global l17
```

```
    global b8
```

```
    l17.destroy()
```

```
    b8.destroy()
```

```
    #ro3shuff()
```

```
    queview3_1()
```

```
def ok():
```

```
    global r2
```

```
    global r7
```

```
    r1.destroy()
```

```
    r7.destroy()
```

```
    r2=Tk() #3rd WINDOW
```

```
    r2.title("WELCOME TO SIGMA")
```

```
    r2.geometry('700x500')
```

```
    r2.config(bg="blanchedalmond")
```

```
r2.resizable(0,0)
```

```
global l15
```

```
global b4
```

```
l15=Label(r2,text="LET'S START")
```

```
l15.config(bg="blanchedalmond",font=("Times New  
Roman",26))
```

```
l15.pack(pady=200)
```

```
b4=Button(r2,text="Round 1>>",font=("Times New  
Roman",26),bg="steelblue",
```

```
command=round1started)
```

```
b4.place(x=240,y=380)
```

```
def quizstarted():
```

```
    global r1
```

```
    global e1,e2,e3,e4,e5,e6
```

```
    global nm,cl,rn,em
```

```
    global r7
```

```
    nm=e1.get()
```

```
    cl=e2.get()
```

```
rn=e3.get()+e4.get()
```

```
em=e5.get()+e6.get()
```

```
if len(e1.get())==0 or len(e5.get())==0:
```

```
    messagebox.showwarning("Error","REQUIRED  
FIELDS")
```

```
else:
```

```
    em1=e5.get()
```

```
    r7=Tk()
```

```
    r7.title("LOGIN ID")
```

```
    r7.geometry('300x200')
```

```
    r7.config(bg="blanchedalmond")
```

```
    r7.resizable(0,0)
```

```
    l20=Label(r7,text=("YOUR ID IS :  
",em1),font=("Arial Rounded  
MT",10),bg="blanchedalmond")
```

```
    l20.pack(pady=20)
```

```
    b10=Button(r7,text="OK",font=("Times New  
Roman",20),bg="black",fg="white",
```

```
command=ok)
```

```
b10.place(x=230,y=130)
```

```
def personalinfo():
```

```
    global r1
```

```
    r1=Tk() #2nd WINDOW (PERSONAL  
INFORMATION)
```

```
    r1.title("WELCOME TO SIGMA")
```

```
    r1.geometry('700x500')
```

```
    r1.config(bg="blanchedalmond")
```

```
    r1.resizable(0,0)
```

```
    l14=Label(text="PLEASE FILL UP THE DETAILS",)
```

```
    l14.config(bg="blanchedalmond",font=("Times New  
Roman",26))
```

```
    l14.pack(pady=30)
```

```
#name
```

```
global e1
```

```
global nm
```

```
Label(r1,text="ENTER NAME  
**",bg="blanchedalmond",font=("Snap  
ITC",22)).place(x=25,y=130)
```

```
e1=Entry(r1,width=40,)
```

```
e1.place(x=400,y=140)
```

```
#class
```

```
global e2
```

```
Label(r1,text="ENTER  
CLASS",bg="blanchedalmond",font=("Snap  
ITC",22)).place(x=25,y=200)
```

```
e2=ttk.Combobox(r1)
```

```
e2['values']=('IX','X','XI','XII')
```

```
e2.current()
```

```
e2.place(x=400,y=210)
```

#roll no.

global e3

global e4

Label(r1,text="ENTER ROLL  
NO.",bg="blanchedalmond",font=("Snap  
ITC",22)).place(x=25,y=270)

e3=ttk.Combobox(r1)

e3['values']=('0','1','2','3','4','5','6','7','8','9')

e3.place(x=400,y=280)

e4=ttk.Combobox(r1)

e4['values']=('0','1','2','3','4','5','6','7','8','9')

e4.place(x=550,y=280)

#EMAIL ID

global e5,e6

Label(r1,text="ENTER EMAIL ID  
\*\*",bg="blanchedalmond",font=("Snap  
ITC",22)).place(x=25,y=340)

e5=Entry(r1,width=20)

e5.place(x=400,y=350)



```
e6=ttk.Combobox(r1)
```

```
e6['values']=('@gmail.com','@yahoo.com','@icloud.com')
```

```
e6.current(0)
```

```
e6.place(x=550,y=350)
```

```
b3=Button(r1,text="START THE  
QUIZ",font=("Microsoft Sans Serif",18),bg="steelblue",  
command=quizstarted)
```

```
b3.place(x=230,y=420)
```

```
def startispressed():
```

```
    r.destroy()
```

```
    personalinfo()
```

```
def instructions():
```

```
    l2=Label(r,text="READ THE INSTRUCTIONS  
CAREFULLY : ")
```

```
    l2.config(font=("Modern No. 20",20),bg="beige")
```

```
l2.pack(pady=40)
```

```
l3=Label(r,text="1. There are three rounds  
")
```

```
l3.config(font=("Lucida Sans",18),bg="beige")
```

```
l3.pack(pady=2)
```

```
l4=Label(r,text="2. 1st Round : General Knowledge And  
Current Affairs")
```

```
l4.config(font=("Lucida Sans",18),bg="beige")
```

```
l4.pack()
```

```
l5=Label(r,text="                2nd Round :  
Mathematics(MCQ)                ")
```

```
l5.config(font=("Lucida Sans",18),bg="beige")
```

```
l5.pack()
```

```
l6=Label(r,text="    3rd Round : Mathematics(INTEGER  
TYPE)                ")
```

```
l6.config(font=("Lucida Sans",18),bg="beige")
```

```
l6.pack()
```

```
l7=Label(r,text=" 3. Each round has five questions.  
")
```

```
l7.config(font=("Lucida Sans",18),bg="beige")
```

```
l7.pack()
```

```
l8=Label(r,text="  ROUND 1 & ROUND 2 : Each  
question has 4 options.")
```

```
l8.config(font=("Lucida Sans",18),bg="beige")
```

```
l8.pack()
```

```
l9=Label(r,text="                                Out of which  
ONE is correct.")
```

```
l9.config(font=("Lucida Sans",18),bg="beige")
```

```
l9.pack()
```

```
l10=Label(r,text="                                Each question is  
of 1 mark.")
```

```
l10.config(font=("Lucida Sans",18),bg="beige")
```

```
l10.pack()
```

```
l11=Label(r,text=" ROUND 3 : Consists of INTEGER  
TYPE QUESTIONS. ")
```

```
l11.config(font=("Lucida Sans",18),bg="beige")
```

```
l11.pack()
```

```
l12=Label(r,text="Each question is of 2 mark.")
```

```
l12.config(font=("Lucida Sans",18),bg="beige")
```

```
l12.pack()
```

```
l13=Label(r,text="CLICK ON START BUTTON TO  
START THE QUIZ")
```

```
l13.config(font=("Algerian",20),bg="black",fg="white")
```

```
l13.pack(pady=20)
```

```
b2=Button(r,text="START",
```

```
        command = startispressed)
```

```
b2.config(font=("Microsoft Sans  
Serif",24),bg="steelblue")
```

```
b2.pack(pady=20)
```

```
def nextispressed():
```

```
img1.destroy()
```

```
img2.destroy()
```

```
l1.destroy()
```

```
b1.destroy()
```

```
instructions()
```

```
r=Tk() #MAIN WINDOW FOR GUI
```

```
r.title("WELCOME TO SIGMA")
```

```
r.geometry('800x700')
```

```
r.config(bg="beige")
```

```
r.resizable(0,0)
```

```
a1=
```

```
PhotoImage(file='C:\\Users\\ASUS\\Documents\\sigma\\new1.png')
```

```
img1= Label(r,image = a1)
```

```
img1.place(x =0,y = 0)
```

```
a2=PhotoImage(file='C:\\Users\\ASUS\\Documents\\sigma\\woodenbg5.png')
```

```
img2=Label(r,image=a2)
```

```
img2.place(x=0,y=220)
```

```
l1=Label(r,text="TO READ INSTRUCTIONS, CLICK  
NEXT")
```

```
l1.config(font=("Comic Sans MS",24),bg="antiquewhite")
```

```
l1.place(x=95,y=350)
```

```
b1=Button(r,text="NEXT",
```

```
        command = nextispresed, )
```

```
b1.config(font=("Microsoft Sans Serif",28),bg="sienna")
```

```
b1.place(x=340,y=550)
```

```
r.mainloop()
```

# OUTPUT



WELCOME TO SIGMA

**READ THE INSTRUCTIONS CAREFULLY :**

1. There are three rounds
2. 1st Round : General Knowledge And Current Affairs  
2nd Round : Mathematics(MCQ)  
3rd Round : Mathematics(INTEGER TYPE)
3. Each round has five questions.  
ROUND 1 & ROUND 2 : Each question has 4 options.  
Out of which ONE is correct.  
Each question is of 1 mark.  
ROUND 3 : Consists of INTEGER TYPE QUESTIONS.  
Each question is of 2 mark.

**CLICK ON START BUTTON TO START THE QUIZ**

**START**

WELCOME TO SIGMA

**PLEASE FILL UP THE DETAILS**

**ENTER NAME \*\***

**ENTER CLASS**

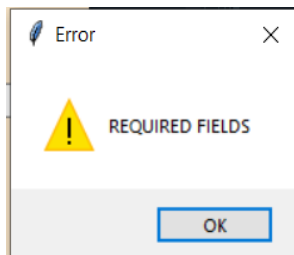
**ENTER ROLL NO.**

**ENTER EMAIL ID \*\***

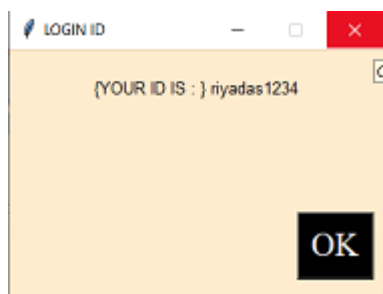
**START THE QUIZ**

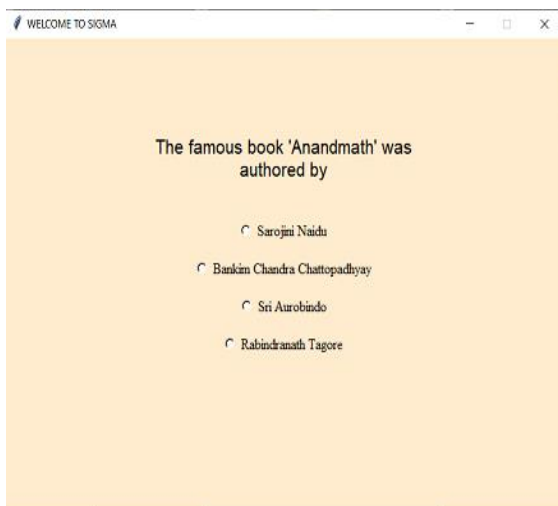
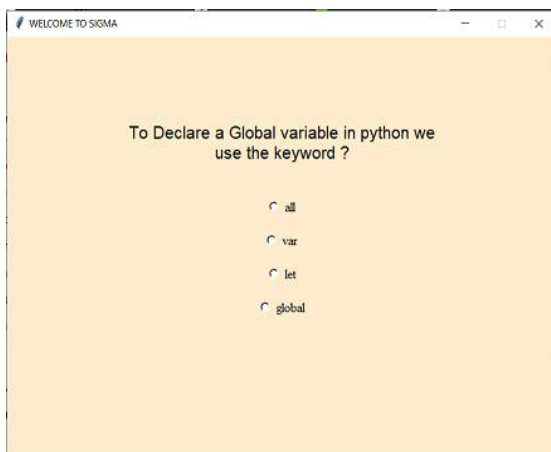
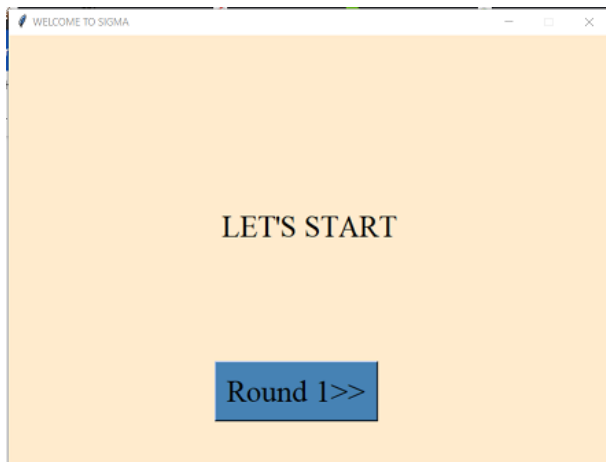
- \*\* are REQUIRED FIELDS
- If those fields are left empty, then the following warning box will come.
- If the warning box comes, OK must be clicked to continue.

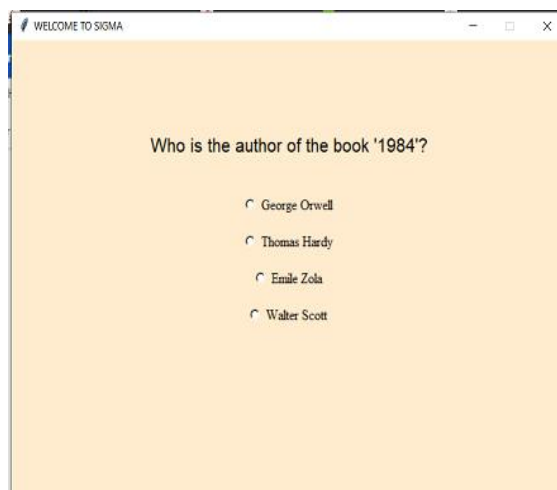
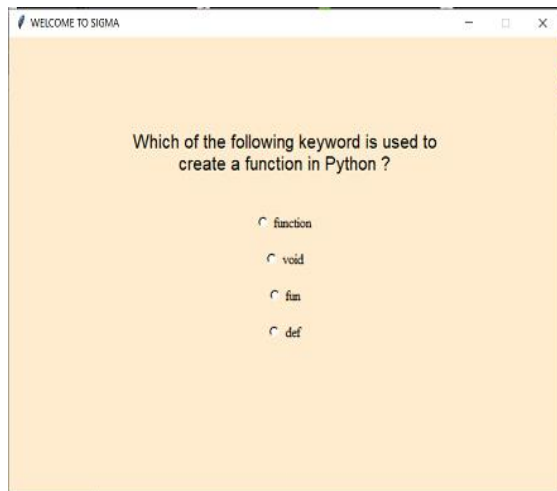


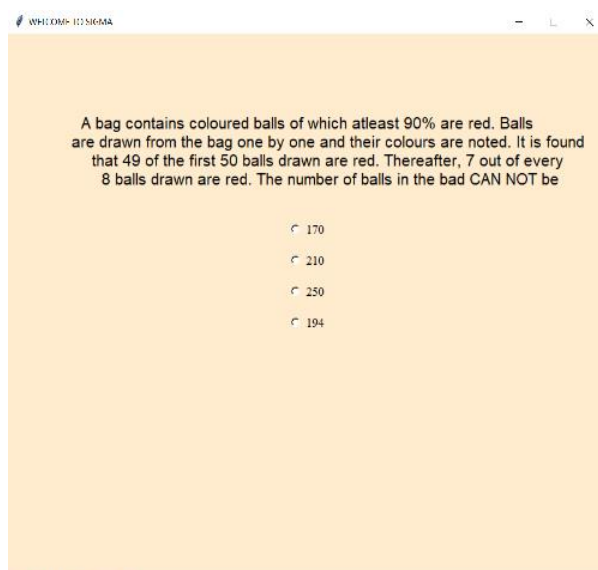
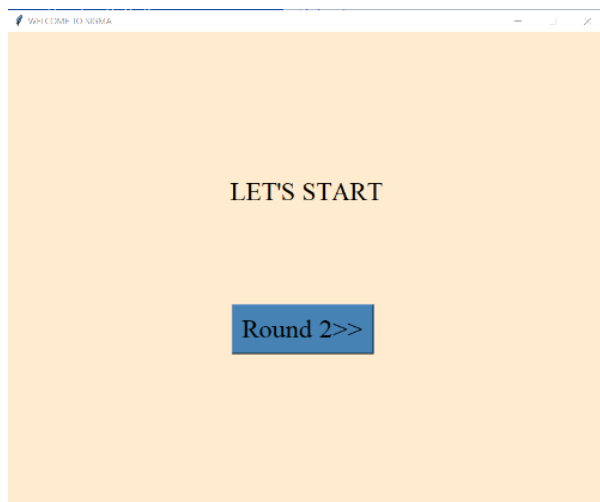
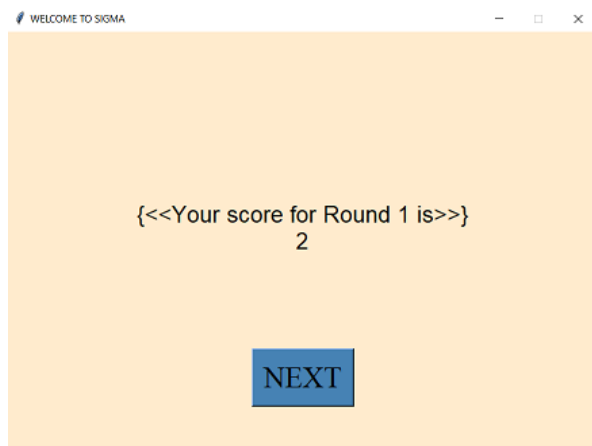
A main application window with a light orange background. The title bar says 'WELCOME TO SIGMA'. The main text says 'PLEASE FILL UP THE DETAILS'. Below this are four rows of labels and input fields: 'ENTER NAME \*\*' with a text box containing 'Riya Das'; 'ENTER CLASS' with a dropdown menu showing 'XII'; 'ENTER ROLL NO.' with two dropdown menus, both showing '2'; and 'ENTER EMAIL ID \*\*' with a text box containing 'riyadas1234' and a dropdown menu showing '@gmail.com'. At the bottom is a large blue button that says 'START THE QUIZ'.

After the details are entered and the “START THE QUIZ” button is pressed, the user will get an ID.









WPI.COM 12 SIGMA

The number of solutions of  $2\sin x + \cos x = 3$  is

- ☐ 1
- ☐ 2
- ☐ infinite
- ☐ no solution

WPI.COM 12 SIGMA

The number 2532645918 is divisible by

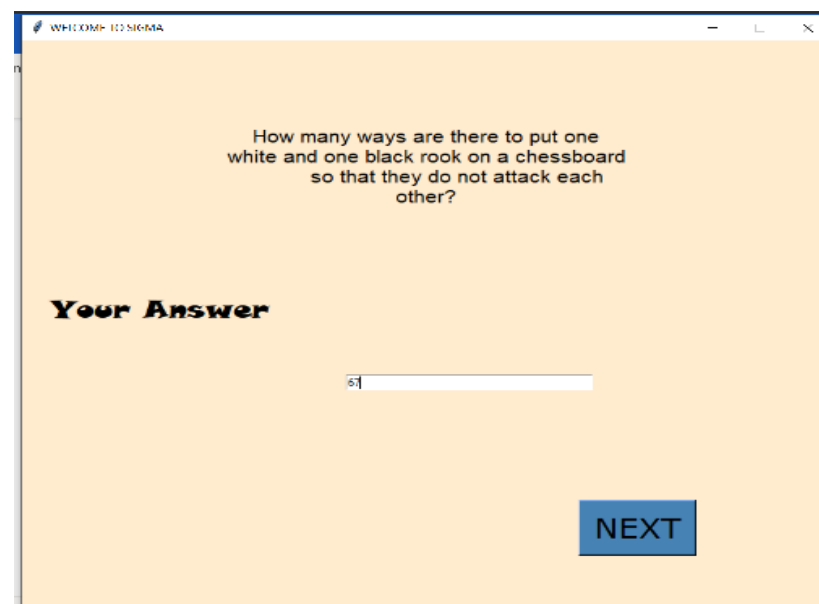
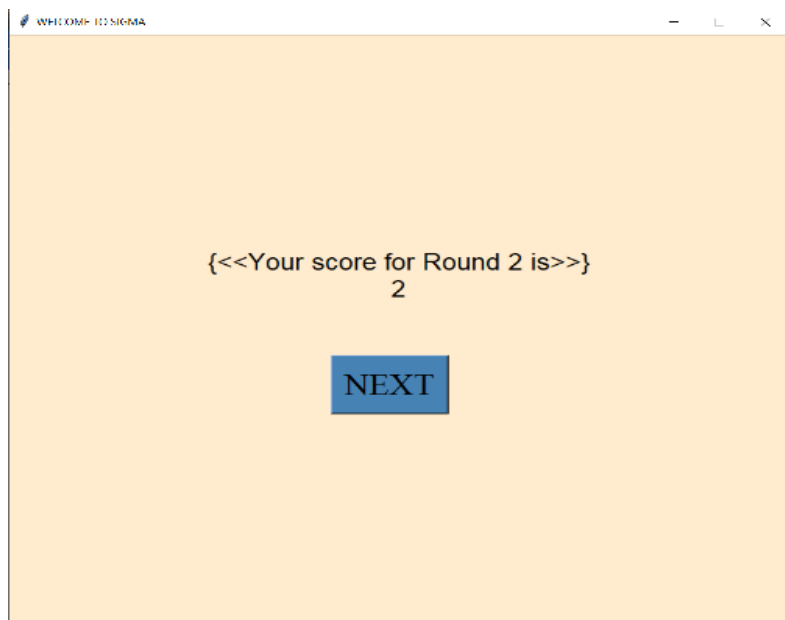
- ☐ 3 but not 11
- ☐ 11 but not 3
- ☐ Both 3 and 11
- ☐ Neither 3 nor 11

It was a hot day and 4 couples drank together 44 bottles of cold drink.  
Anita had 2, Biva 3, Chanchala 4 and Dipti 5 bottles.  
Mr. Panikkar drank just as many bottles as his wife, but each of the other men drank more than his wife- Mr. Dubey twice, Mr. Narayan three times and Mr. Rao four times as many bottles. Then, one of the following statements is correct. Which one is it?

- ☐ Mrs. Panikkar is Chanchala
- ☐ Anita's husband had 8 bottles
- ☐ Mr. Narayan had 12 bottles
- ☐ Mrs. Rao is Dipti

Let 'a' be the 81-digit number all digits of which are equal to 1. Then the number 'a' is

- ☐ Divisible by 9 but not divisible by 27
- ☐ Divisible by 27 but not divisible by 81
- ☐ Divisible by 81 but not divisible by 243
- ☐ Divisible by 243



WHICOMP 10 SIGMA

The number of different factors of 1800 equals

**Your Answer**

54

NEXT

WHICOMP 10 SIGMA

The sum of all the distinct four-digit numbers that can be formed using the digits 1,2,3,4,5 each digit appearing atmost once is

**Your Answer**

74

NEXT



The sum of all integers from 1 to 1000 that  
are divisible by 2 or 5  
but not divisible by 4 equals

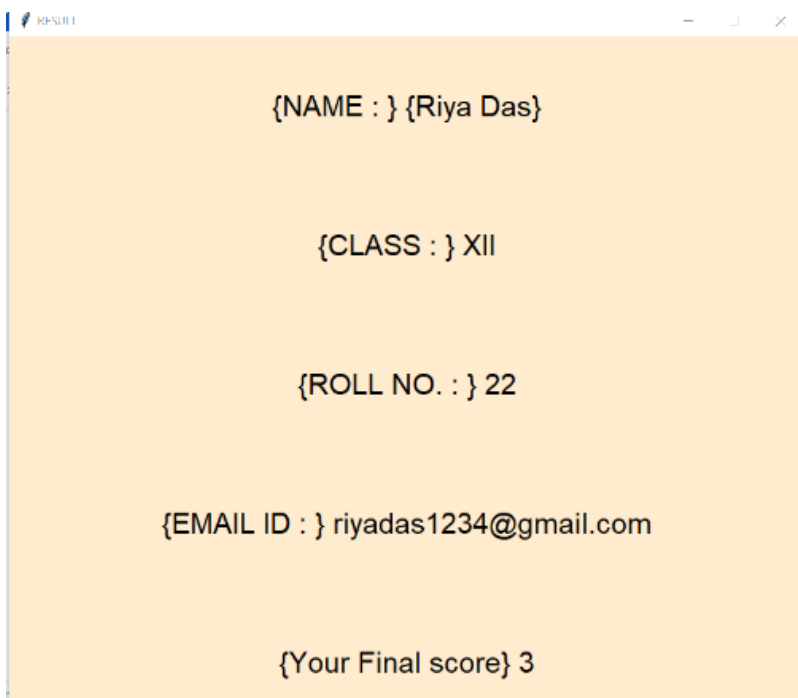
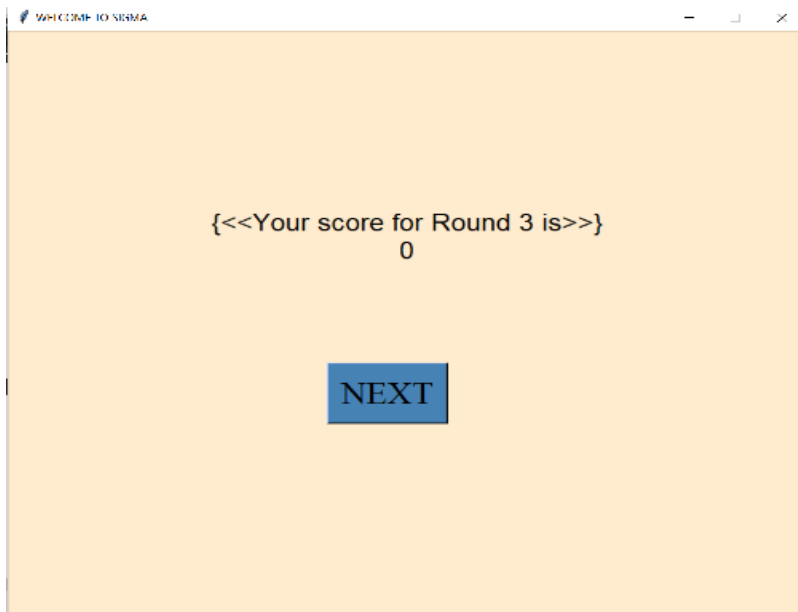
**Your Answer**

NEXT

The number of pairs of  
integers  $(m,n)$  satisfying  $m^2+n^2+m*n=1$  is

**Your Answer**

NEXT



# LIMITATIONS

- The background image for the first page should be saved for the successful running of the code.
- The records of the users are not stored as Database Management System has not been used.
- Slow compilation due to complex coding.

# **BIBLIOGRAPHY**

## **BOOKS REFERRED :**

- Computer Science for class XII by Sumita Arora

## **SITES VISITED :**

- [Stackoverflow.com](https://stackoverflow.com)
- [Geeksforgeeks.org](https://www.geeksforgeeks.org)