```
##importing mmodules
from tkinter import *
import base64

#initialize window
root = Tk()
root.geometry('500x300')
root.resizable(0,0)

#title of the window
root.title("SANJIVANI - Message Encode and
Decode")

#label
Label(root, text ='ENCODE DECODE', font =
'algerian 20 bold italic').pack()
Label(root, text ='Group 2', font = 'aharoni 20
bold').pack(side =BOTTOM)

#define variables
Text = StringVar()
private_key = StringVar()
mode = StringVar()
Result = StringVar()
```

```
#######define function#####
#function to encode
def Encode(key,message):
    enc=[]
    for i in range(len(message)):
        key_c = key[i % len(key)]
        enc.append(chr((ord(message[i]) +
ord(key_c)) % 256))

    return
base64.urlsafe_b64encode("".join(enc).encode())
.decode()

#function to decode
def Decode(key,message):
    dec=[]
    message =
base64.urlsafe_b64decode(message).decode()
    for i in range(len(message)):
        key_c = key[i % len(key)]
        dec.append(chr((256 + ord(message[i])-
ord(key_c)) % 256))

    return "".join(dec)
```

```
#function to set mode
def Mode():
    if(mode.get() == 'e'):
        Result.set(Encode(private_key.get(),
Text.get()))
    elif(mode.get() == 'd'):
        Result.set(Decode(private_key.get(),
Text.get()))
    else:
        Result.set('Invalid Mode')

#Function to exit window
def Exit():
    root.destroy()

#Function to reset
def Reset():
    Text.set("")
    private_key.set("")
    mode.set("")
    Result.set("")

######################## Label and Button
###############
```

```
#Message
Label(root, font= 'arial 12 bold',
text='MESSAGE').place(x= 60,y=60)
Entry(root, font = 'arial 10', textvariable = Text, bg
= 'ghost white').place(x=290, y = 60)

#key
Label(root, font = 'arial 12 bold', text
='KEY').place(x=60, y = 90)
Entry(root, font = 'arial 10', textvariable =
private_key , bg ='ghost white').place(x=290, y =
90)

#mode
Label(root, font = 'arial 12 bold', text ='MODE(e-
encode, d-decode)').place(x=60, y = 120)
Entry(root, font = 'arial 10', textvariable = mode ,
bg= 'ghost white').place(x=290, y = 120)

#result
Entry(root, font = 'arial 10 bold', textvariable =
Result, bg ='ghost white').place(x=290, y = 150)

######result button
Button(root, font = 'arial 10 bold', text = 'RESULT'
,padx =2,bg ='gray' ,command =
```

```
Mode).place(x=60, y = 150)

#reset button
Button(root, font = 'arial 10 bold' ,text ='RESET'
,width =6, command = Reset,bg = 'Green',
padx=2).place(x=80, y = 190)

#exit button
Button(root, font = 'arial 10 bold',text= 'EXIT' ,
width = 6, command = Exit,bg = 'Orange', padx=2,
pady=2).place(x=180, y = 190)
root.mainloop()
```