LOYOLA ACADEMY

DEGREE & PG COLLEGE

OLD ALWAL, SECUNDERABAD - 500 010,
TELANGANA, INDIA

An Autonomous Institution Affiliated to Osmania University

Re-accredited with ‘A’ Grade (III Cycle) by NAAC A

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Practical Record

CERTIFICATE

This is to certify that this is a Bonafide record work done in Python Scripting practical during II year IV semester of the academic year 2024-2025

Name:

UID No:

Class:

Signature of Internal **Signature of HoD**

Signature of External **Signature of Principal**

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1) Programs on regular expressions

```
import re

s='Welcome to cyber security 2nd year'

match =re.search(r'cyber',s)

print('Start index:',match.start())

print('End index:',match.end())
```

OUTPUT:-

```
Start index: 11

End index: 16
```

2) To find all the characters in the string that fall within the range of 'a' to 'm' using find all the methods

```
import re

string="The quick brown fox jumps over the lazy dog"

pattern="[a-m]"

result=re.findall(pattern,string) print(result)
```

OUTPUT:-

```
['h', 'e', 'i', 'c', 'k', 'b', 'f', 'j', 'm', 'e', 'h', 'e', 'l', 'a', 'd', 'g']
```

3) To check if a list of strings are matched or unmatched

```
import re

regex=r'The'

strings=['The quick brown fox', 'The lazy dog','A quick brown fox'] for

string in strings:

if        re.match(regex,string):

print(f'matched:{string}')

else:

print(f'Not matched:{string}')
```

OUTPUT:-

```
matched:The quick brown fox matched:The

lazy dog

Not matched:A quick brown fox
```

4) To check if the string ends with "World!"

```
import re string="Hello

World!"

pattern=r"World!$"

match=re.search(pattern,string) if

match:

print("Match found!") else:

print("Match not found.")
```

OUTPUT:-

```
Match found!
```

5) To search for the pattern "brown.fox" within the string.

```
import re

string="The quick brown fox jumps over the lazy dog."

pattern=r"brown.fox"

match=re.search(pattern,string) if

match:

print("Match found!") else:

print("Match not found.")
```

OUTPUT:-

```
Match not found.
```

6) python programming using numbers in pyhton

```
a=4

b=4.5

c=2j

print       (type(a))

print       (type(b))

print (type(c))
```

Output:

```
<class 'int'>

<class 'float'>

<class 'complex'>
```

7) using arithematic opertaions on int type

```
res=5+3 print

(res) res=5-3

print (res)

res=5*3 print

(res) res=15/4

print (res)

res=15//4 print

(res) res=15%4

print (res)

res=2**3 print

(res) res=abs(-

10) print (res)

res=round(3.14159,2)

print (res)
```

Output:

```
8        3

2        8

15       10

3.75     3.14

3
```

8) Using arithematic opertaions on complex type

```
res=(3+4j)+(1+2j)

print (res)

res=(5+6j)-(2+3j)

print (res)

res=(2+3j)*(1+4j)

print (res)

res=(8+6j)/(2+3j)

print (res)

res=(1+1j)**2 print

(res) res=abs(3+4j)

print (res)

res=(3+4j).conjugate()

print (res) real=(3+4j).real

imag=(3+4j).imag print

(real)

print (imag)
```

Output:

```
(4+6j)                                              2j          4.0

(3+3j)                                              5.0

(-10+11j)                                           (3-4j)

(2.6153846153846154-0.9230769230769231j)            3.0
```

9) Using built in functions

```
a=2

print(float(a)

b=5.6

print(int(b))

c=‘3’

print(type(int(c)) d=’5.6’

print(type(float(d)) e=5

print(complex(e)) f=6.5

print(complex(f))
```

Output:

```
2.0

5

<class ‘int’>

<class ‘float’>
(5+0j)

(6.5+0j)
```

10) Generating random integers

```
    import random

    x=random.randint(1,100)

print x
```

Output:

```
32
```

11) Using arithmetic operations

```
a=1.6

b=5 c=a+b

print(c)
```

Output:

```
6.6
```

12) Generating floating point integer

```
import random

x=random.uniform(1,100) print(x)
```

Output:

```
92.43244874215033
```

13) Nan, inf and -inf functions

```
import      math

n=math.nan

print(n)



x=float(‘inf’)

x=float(‘-inf’)

print(x) print(y)
```

Output:

```
nan inf

-inf
```

Programs on Array module

14) Create an array in python

```
import array as arr
a=arr.array('i',[1,2,3])
print(a[0])
a.append(5)
print(a)
```

Output:

```
1
array('i', [1, 2, 3, 5])
```

15) Adding elements to an array

```
import array as arr

a=arr.array('i',[1,2,3])

print("integers array before instertion :",*a) a.insert(1,4)

print("integer array before instertion:",*a)
```

Output:

```
integers array before instertion : 1 2 3

integer array before instertion: 1 4 2 3
```

16) Accesing array items

```
    import array as arr
    a=arr.array('i',[1,2,3,4,5,6]
    print(a[0])
print(a[3])
b= arr.array('d',[2.5,3.2,3.3])
print(b[1])
print(b[2])
```

Output:

```
1
4
3.2
3.3
```

17) Removing elements from array

```
import array arr=array.array('i',[1,2,3,1,5])

arr.remove(1)

print(arr)

arr.pop(2)

print(arr)
```

Output:

```
array('i', [2, 3, 1, 5])

array('i', [2, 3, 5])
```

18) Slicing an array

```
    import array as arr

    l=[1,2,3,4,5,6,7,8,9,10]

a=arr.array('i',l) sliced_array=a[3:8]

print(sliced_array) sliced_array=a[5:]

print(sliced_array) sliced_array=a[:]

print(sliced_array)
```

Output:

```
array('i', [4, 5, 6, 7, 8])

array('i', [6, 7, 8, 9, 10])

array('i', [1, 2, 3, 4, 5, 6, 7, 8, 9, 10])
```

19) Searching element in an array

```
import array

arr=array.array('i',[1,2,3,1,2,5])

print(arr.index(2))  print(arr.index(1))
```

Output:

```
1

0
```

20) Updating elements in an array

```
import array

arr=array.array('i',[1,2,3,1,2,5])

arr[2]=6

print(arr)

arr[4]=8

print(arr)
```

Output:

```
array('i', [1, 2, 6, 1, 2, 5])

array('i', [1, 2, 6, 1, 8, 5])
```

21) Counting elements in array

```
    import array

    arr=array.array('i',[1,2,3,4,2,5,2])

    count=arr.count(2)

print("Numbers of ocuurance of 2:",count)
```

Output:

```
Numbers of ocuurance of 2: 3
```

22) Reversing elements in an array

```
import array arr=array.array('i',[1,2,3,4,5])

arr.reverse()

print("reversed array:",*arr)
```

Output:

```
reversed array: 5 4 3 2 1
```

23) Extend elements from array

```
    import array as arr

    a=arr.array('i',[1,2,3,4,5])

a.extend([6,7,8,9,10])

print(a)
```

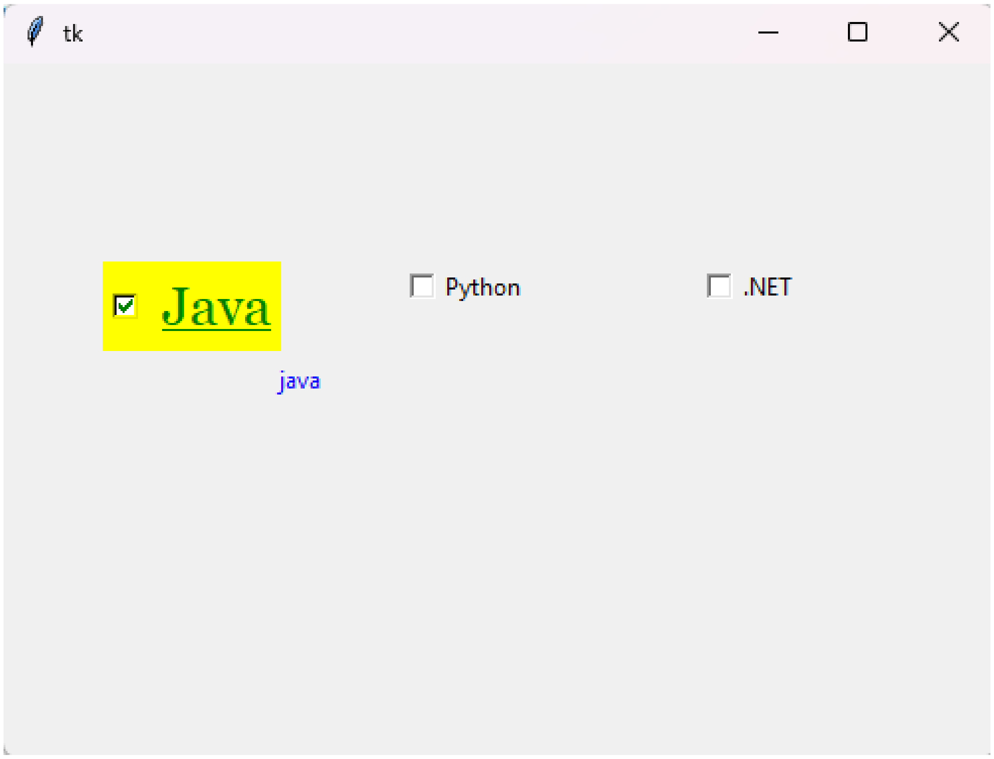
Output:

```
array('i', [1, 2, 3, 4, 5, 6, 7, 8, 9, 10])
```

24)Program to display checkbox

```
from tkinter import * class

Mycheck:

    def __init__(self, root):

        self.f =  Frame(root, height=350, width=500)

        self.f.propagate(0)

        self.f.pack()

        self.var1 = IntVar()

        self.var2 = IntVar()

        self.var3 = IntVar()

      self.c1 = Checkbutton(self.f , bg='yellow' , fg = 'green' , font=('Georgia' , 20, 'underline'),
text='Java', variable= self.var1, command=self.display)

        self.c2 = Checkbutton(self.f , text='Python', variable= self.var2, command=self.display)

        self.c3 = Checkbutton(self.f , text='.NET', variable= self.var3, command=self.display)

        self.c1.place(x=50, y=100)

        self.c2.place(x=200, y=100)

        self.c3.place(x=350, y=100)

    def display(self):

        x = self.var1.get()

        y = self.var2.get()

        z = self.var3.get()

        str = ''

        if x==1:

            str += 'java'

        if y==1:
            str+= 'python'
        if z==1:
            str+= '.NET'
    lbl = Label(text=str, fg='blue').place(x=50, y=150, width=200, height=20) root =
Tk()
mb = Mycheck(root) root.mainloop()
```

Output:

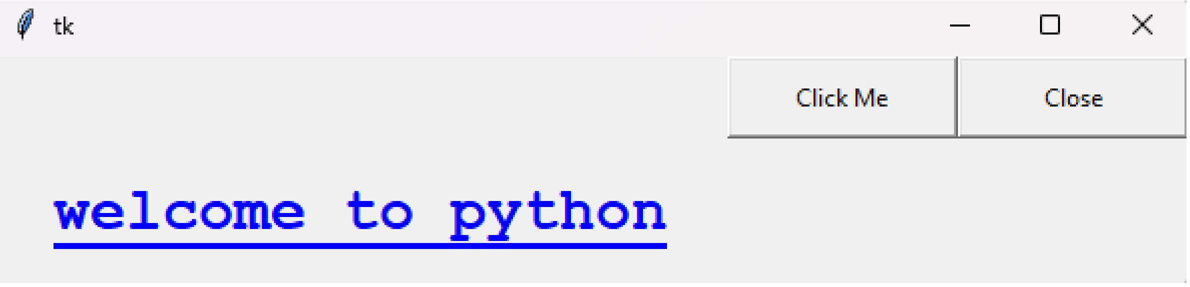


java

25) Program to display Label

```
from tkinter import * class

MyButtons:

    def __init__(self, root):

        self.f = Frame(root, height=350, width=500)

        self.f.propagate(0)

        self.f.pack()

        self.b1 = Button(self.f, text='Click Me', width=15, height=2, command=self.buttonClick)

        self.b2 = Button(self.f, text='Close', width=15, height=2, command=quit)

        self.b1.grid(row=0, column=1)

        self.b2.grid(row=0, column=2)

    def buttonClick(self):

   self.lbl = Label(self.f, text="welcome to python" , width=20, height=2, font=('Courier', -30,
'bold underline '),fg='blue')

   self.lbl.grid(row=2, column=0) root

= Tk()

mb=MyButtons(root)

root.mainloop()
```

Output:

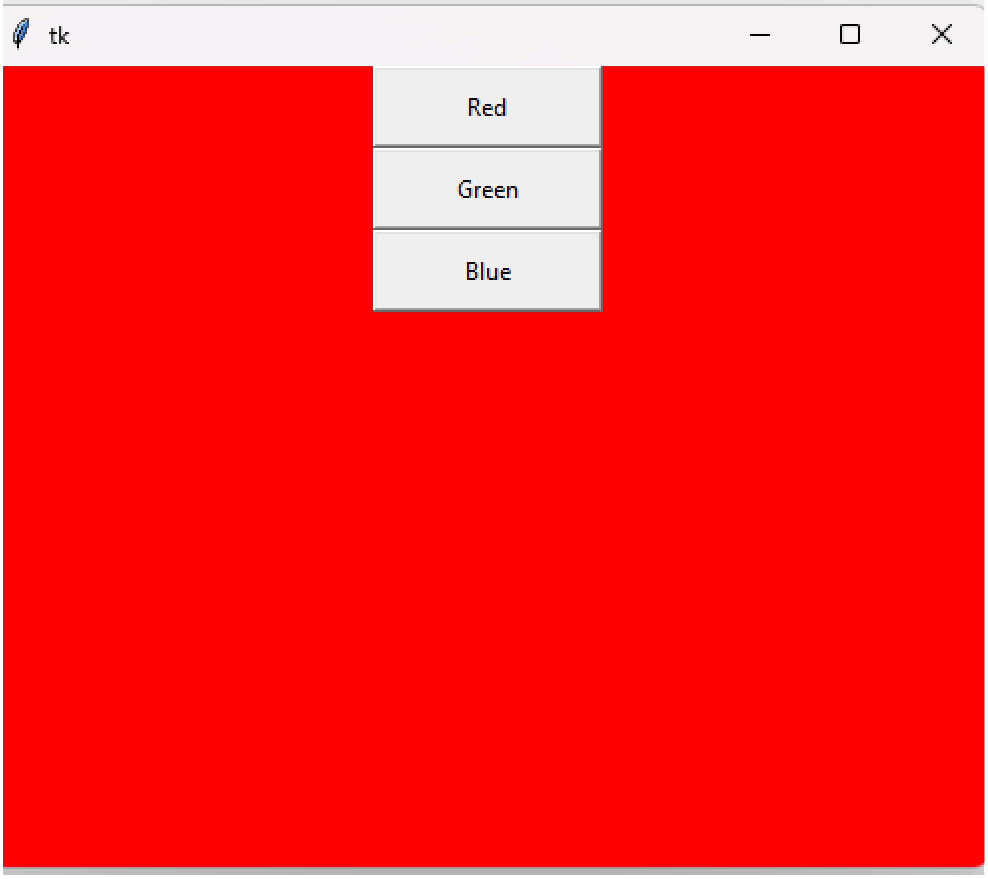


welcome to python

26) Program to display buttons

```
from tkinter import * class

MyButton:

        def __init__(self,root):

           self.f = Frame(root, height=400 , width=500)

           self.f.propagate(0)

           self.f.pack()

      self.b1 = Button(self.f, text='Red' , width=15 , height=2,command=lambda: self.buttonClick(1))

      self.b2 = Button(self.f , text='Green' , width=15, height=2,command=lambda:
self.buttonClick(2))

      self.b3 = Button(self.f , text='Blue' , width=15, height=2,command=lambda:
self.buttonClick(3))

           self.b1.pack()

           self.b2.pack()

           self.b3.pack()

              def buttonClick(self,num):

           if num==1:

              self.f["bg"]= 'red'

           if num==2:

              self.f["bg"]= 'green'

           if num==3:

          self.f["bg"]= 'blue'

root=Tk() mb=MyButton(root)

root.mainloop()
```

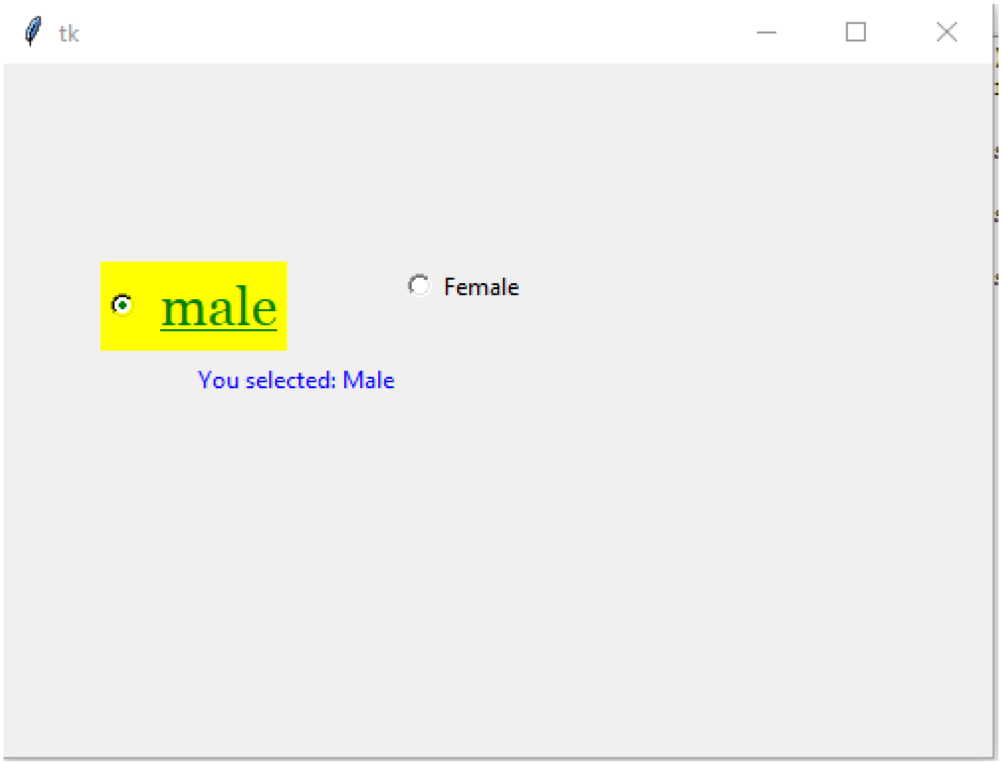
Output:



27) Program to display radiobuttons

```
from tkinter import * class
Myradio:
    def __init__(self , root):
      self.f = Frame(root, height=350, width=500)
      self.f.propagate(0)
      self.f.pack()
      self.var = IntVar()
      self.r1 = Radiobutton(self.f, bg='yellow', fg= 'green' ,
              font=('georgia' , 20, 'underline') , text='male', variable=self.var, value=1,
command=self.display)
   self.r2 = Radiobutton(self.f, text='Female' , variable=self.var, value=2, command=self.display)
      self.r1.place(x=50, y=100)
      self.r2.place(x=200, y=100)
    def display(self):
      x = self.var.get()
      str = "
      if x==1:
        str += 'You selected: Male '
      if x==2:
        str += 'You selected: Female '
   lbl= Label(text=str, fg='blue').place(x=50, y=150, width=200, height=20) root =
Tk()
mb= Myradio(root) root.mainloop()
```

Output:

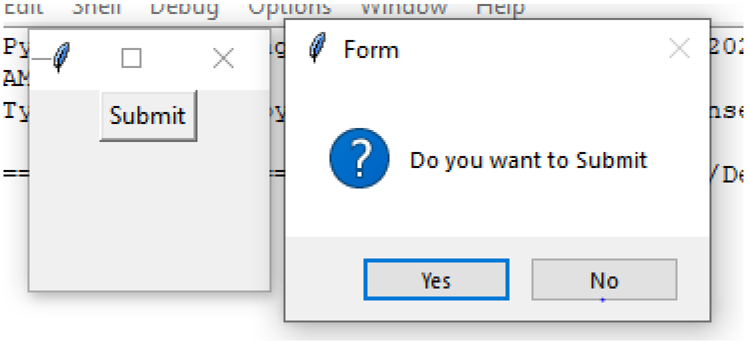


You selected: Male

28) Program to display Dialouge box:

```
from tkinter import *

from tkinter import messagebox

main = Tk()

def Submit():

    messagebox.askquestion("Form", "Do you want to Submit")

main.geometry("100x100")

B1 = Button(main, text="Submit", command=Submit)

B1.pack()

main.mainloop()
```

Output:



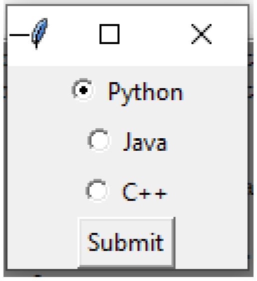
Form

Do you want to Submit

29) Program to display Radio Button 2 :

```
import tkinter as tk

from tkinter import messagebox def

show_choice():

    choice = language.get()

    if choice:

        messagebox.showinfo("Choice", f"You chose: {choice}") else:

   messagebox.showwarning("Choice", "Please select a language.") root =

tk.Tk()

root.title("Language Choice")

language = tk.StringVar()

for lang in ["Python", "Java", "C++"]:

  tk.Radiobutton(root, text=lang, variable=language, value=lang).pack()

tk.Button(root, text="Submit", command=show_choice).pack()

root.mainloop()
```

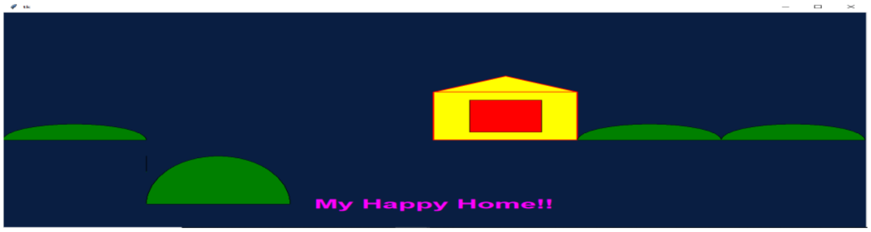
Output :



30) Program to display creation of home

```
from tkinter import *

root=Tk()

c=Canvas(root, bg="#091e42", height=700, width=1200)

c.create_polygon(600,250,700,200,800,250,800,400,600,400,width=2, fill="yellow", outline="red")

c.create_line(600,250,800, 250, width=2, fill="red")

c.create_rectangle(650,275,750,375, fill="red")

x1,y1=0,350

x2,y2=200,450

for i in range(3):

        c.create_arc(x1,y1,x2,y2, start=0, extent=180, fill="green")

        x1+=200

        y1+=200

c.create_arc(800,350,1000,450, start=0, extent=180, fill="green") c.create_arc(1000,350,1200,450,

start=0, extent=180, fill="green")

id=c.create_text(600,600, text="My Happy Home!!", font=('Helvetica', 30, 'bold'), fill="magenta")

c.pack()

root.mainloop
```

Output:

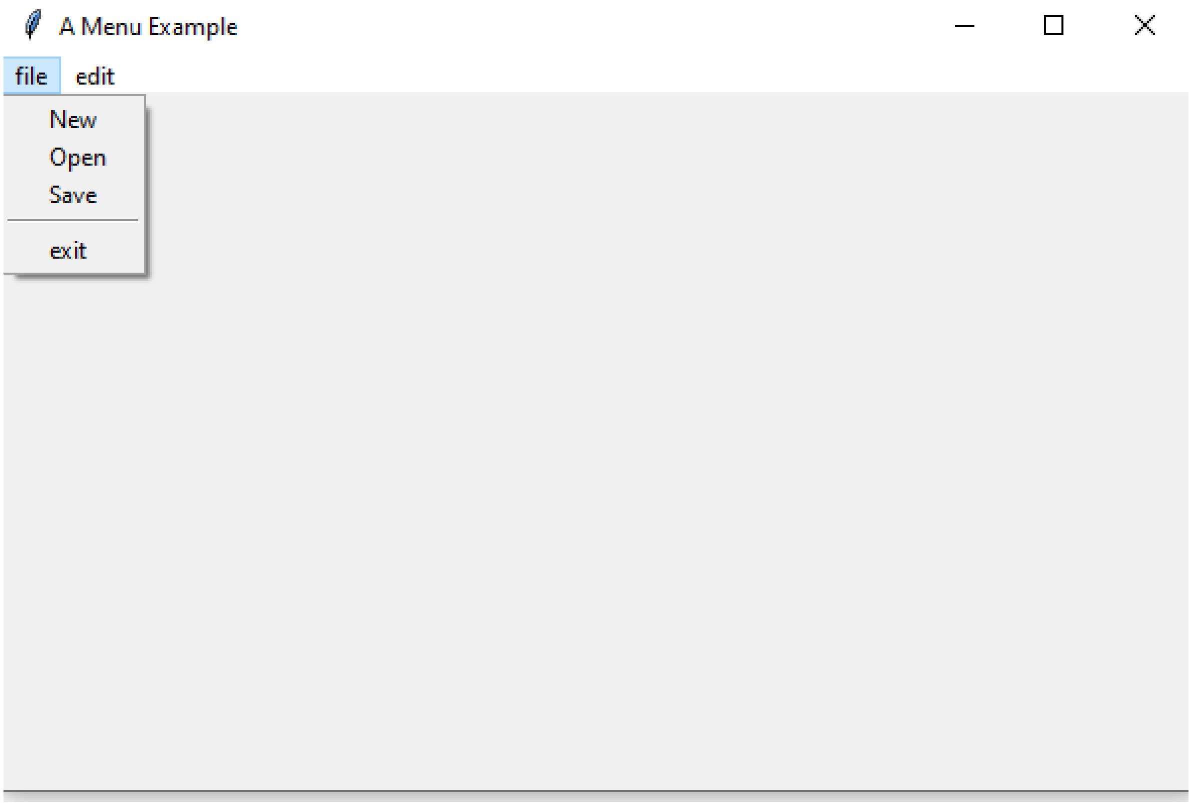


My Happy Home!!

31) Program to display menu

```
from tkinter import *

class MyMenuDemo:

    def __init__(self, root):

        self.menubar = Menu(root)

        root.config(menu=self.menubar)

        self.filemenu= Menu(root, tearoff=0)

        self.filemenu.add_command(label="New", command=self.donothing)

        self.filemenu.add_command(label="Open", command=self.donothing)

        self.filemenu.add_command(label="Save", command=self.donothing)

        self.filemenu.add_separator()

        self.filemenu.add_command(label="exit", command=root.destroy)

        self.menubar.add_cascade(label="file", menu=self.filemenu)

        self.editmenu = Menu(root, tearoff=0)

        self.editmenu.add_command(label='cut', command=self.donothing)

        self.editmenu.add_command(label='copy', command=self.donothing)

        self.editmenu.add_command(label='paste', command=self.donothing)

        self.menubar.add_cascade(label="edit", menu=self.editmenu)

    def donothing(self):

       pass

root = Tk()

root.title("A Menu Example") obj=

MyMenuDemo(root)

root.geometry('600x350')

root.mainloop()
```

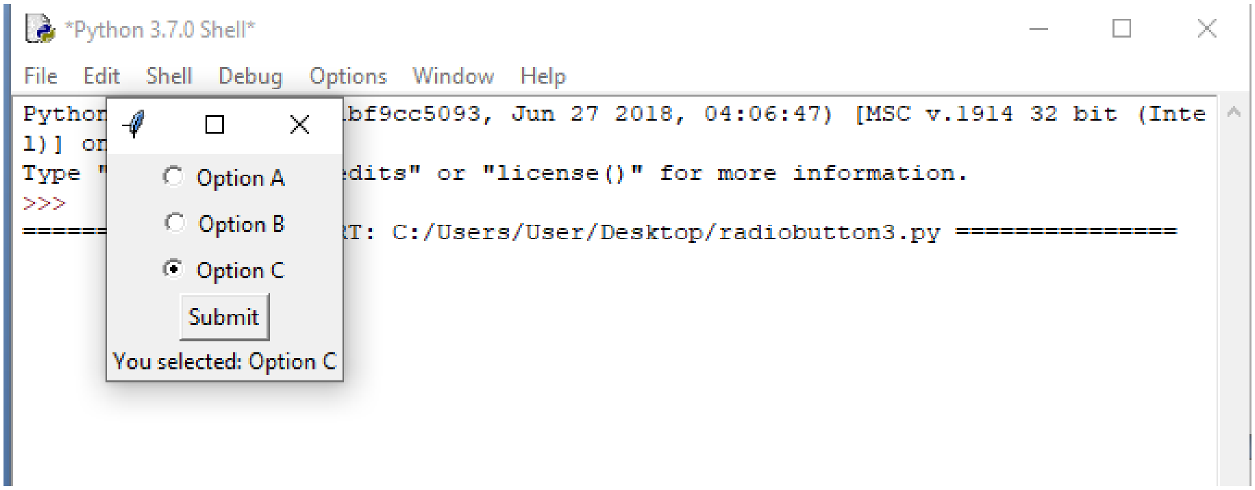
Output:



32) Write a program using radio buttons in python and application should contain submit button after selecting the radio buttons

```
import tkinter as tk
def submit_selection():
    if choice.get() == 1:
        selected_option = "Option A"
    elif choice.get() == 2:
        selected_option = "Option B"
    elif choice.get() == 3:
        selected_option = "Option C"
    else:
        selected_option = "No option selected"
    result_label.config(text=f"You selected: {selected_option}")
window = tk.Tk()
window.title("Radio Button Example")
choice = tk.IntVar()
radio_button1 = tk.Radiobutton(window, text="Option A", variable=choice, value=1)
radio_button2 = tk.Radiobutton(window, text="Option B", variable=choice, value=2)
radio_button3 = tk.Radiobutton(window, text="Option C", variable=choice, value=3)
radio_button1.pack()
radio_button2.pack()
radio_button3.pack()
submit_button = tk.Button(window, text="Submit", command=submit_selection)
submit_button.pack()
result_label = tk.Label(window, text="")
result_label.pack()
window.mainloop()
```

Output:



```
Pythor          bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
1)] or
Type "          edits" or "license()" for more information.
>>>
======          T: C:/Users/User/Desktop/radiobutton3.py ===============
```

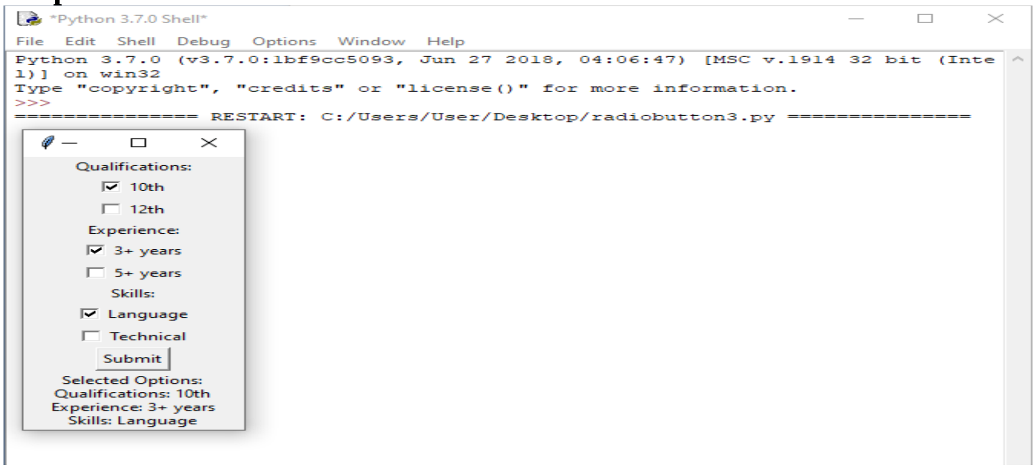
You selected: Option C

33)Write a program using check box in python to display any 3 categories after selecting the options click on submit button

```
import tkinter as tk
def submit_selections():
    selected_qualifications = []
    if qualification_10th.get():
        selected_qualifications.append("10th")
    if qualification_12th.get():
        selected_qualifications.append("12th")
    selected_experiences = []
    if experience_3plus.get():
        selected_experiences.append("3+ years")
    if experience_5plus.get():
        selected_experiences.append("5+ years")
    selected_skills = []
    if skills_language.get():
        selected_skills.append("Language")
    if skills_technical.get():
        selected_skills.append("Technical")
    result_text = "Selected Options:\n"
    if selected_qualifications:
        result_text += "Qualifications: " + ", ".join(selected_qualifications) + "\n"
    if selected_experiences:
        result_text += "Experience: " + ", ".join(selected_experiences) + "\n"
    if selected_skills:
     result_text += "Skills: " + ", ".join(selected_skills)
    result_label.config(text=result_text)
window = tk.Tk()
window.title("Checkbox Example")
qualification_frame = tk.Frame(window)
qualification_frame.pack()
qualification_label = tk.Label(qualification_frame, text="Qualifications:")
qualification_label.pack()
qualification_10th = tk.IntVar()
qualification_12th = tk.IntVar()
qualification_checkbox_10th = tk.Checkbutton(qualification_frame, text="10th",
variable=qualification_10th)
qualification_checkbox_12th = tk.Checkbutton(qualification_frame, text="12th",
variable=qualification_12th)
qualification_checkbox_10th.pack()
qualification_checkbox_12th.pack()
experience_frame = tk.Frame(window)
experience_frame.pack()
experience_label = tk.Label(experience_frame, text="Experience:")
experience_label.pack()
experience_3plus = tk.IntVar()
experience_5plus = tk.IntVar()
experience_checkbox_3plus = tk.Checkbutton(experience_frame, text="3+ years",
variable=experience_3plus)
experience_checkbox_5plus = tk.Checkbutton(experience_frame, text="5+ years",
variable=experience_5plus)
```

```
experience_checkbox_3plus.pack()
experience_checkbox_5plus.pack()
skills_frame = tk.Frame(window)
skills_frame.pack()
skills_label = tk.Label(skills_frame, text="Skills:")
skills_label.pack()
skills_language = tk.IntVar()
skills_technical = tk.IntVar()
skills_checkbox_language = tk.Checkbutton(skills_frame, text="Language",
variable=skills_language)
skills_checkbox_technical = tk.Checkbutton(skills_frame, text="Technical",
variable=skills_technical)
skills_checkbox_language.pack()
skills_checkbox_technical.pack()
submit_button = tk.Button(window, text="Submit", command=submit_selections)
submit_button.pack()
result_label = tk.Label(window, text="")
result_label.pack()
window.mainloop()
```

Output:



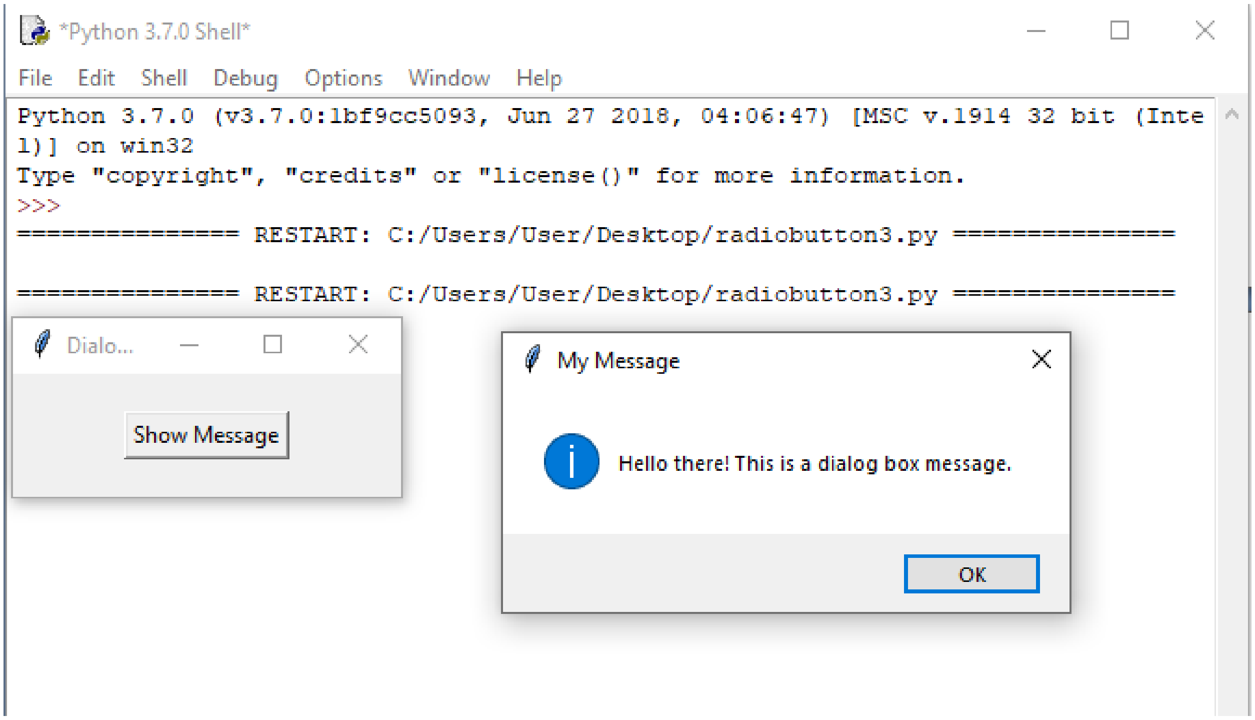
```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
1)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=============== RESTART: C:/Users/User/Desktop/radiobutton3.py ===============
```

Qualifications:
☑ 10th
☐ 12th
Experience:
☑ 3+ years
☐ 5+ years
Skills:
☑ Language
☐ Technical
Submit
Selected Options:
Qualifications: 10th
Experience: 3+ years
Skills: Language

34)write a program on your own to display the message using the dialog box

```
import tkinter as tk
from tkinter import messagebox
def show_message():
   messagebox.showinfo("My Message", "Hello there! This is a dialog box message.")
window = tk.Tk()
window.title("Dialog Box Example")
message_button = tk.Button(window, text="Show Message", command=show_message)
message_button.pack(pady=20)
window.mainloop()
```

Output:



```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
l)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=============== RESTART: C:/Users/User/Desktop/radiobutton3.py ===============

=============== RESTART: C:/Users/User/Desktop/radiobutton3.py ===============
```

Hello there! This is a dialog box message.

35) Program using arrays to display the students grades

```
def display_grades(names, grades):
    print("\nStudent Grades:")
    print("-------------------")
    for i in range(len(names)):
        print(f"{names[i]}: {grades[i]}")

def main():
        student_names = ['Alice', 'Bob', 'Charlie', 'Diana', 'Eve']

      student_grades = ['A', 'B', 'C', 'A', 'B']

        display_grades(student_names, student_grades)

if __name__ == "__main__":
    main()
```

OUTPUT:

```
Student Grades:
-------------------
Alice: A
Bob: B
Charlie: C
Diana: A
Eve: B
```

36) Program using arrays to find whether the student has passed or failed

```
def check_pass_or_fail(names, grades):
    print("\nStudent Status:")
    print("-------------------")

    for i in range(len(names)):
               if grades[i] in ['A', 'B', 'C']:
            status = 'Passed'
        else:
            status = 'Failed'

        print(f"{names[i]}: {status}")

def main():
        student_names = ['Alice', 'Bob', 'Charlie', 'Diana', 'Eve']

        student_grades = ['A', 'D', 'C', 'B', 'F']  # Example grades

       check_pass_or_fail(student_names, student_grades)

if __name__ == "__main__":
    main()
```

OUTPUT:

```
Student Status:
-------------------
Alice: Passed
Bob: Failed
Charlie: Passed
Diana: Passed
Eve: Failed
```

37) Program using arrays to display the number of Books, Publisher name and Year of Publication

```
def display_book_details(book_titles, publishers, years):
    print("\nBook Details:")
    print("------------------------------")
    for i in range(len(book_titles)):
        print(f"Book: {book_titles[i]}")
        print(f"Publisher: {publishers[i]}")
        print(f"Year of Publication: {years[i]}")
        print("------------------------------")

def main():

       book_titles = ['The Great Gatsby', '1984', 'To Kill a Mockingbird']
    publishers = ['Scribner', 'Secker & Warburg', 'J.B. Lippincott & Co.']
    years = [1925, 1949, 1960]

      display_book_details(book_titles, publishers, years)

if __name__ == "__main__":
    main()
```

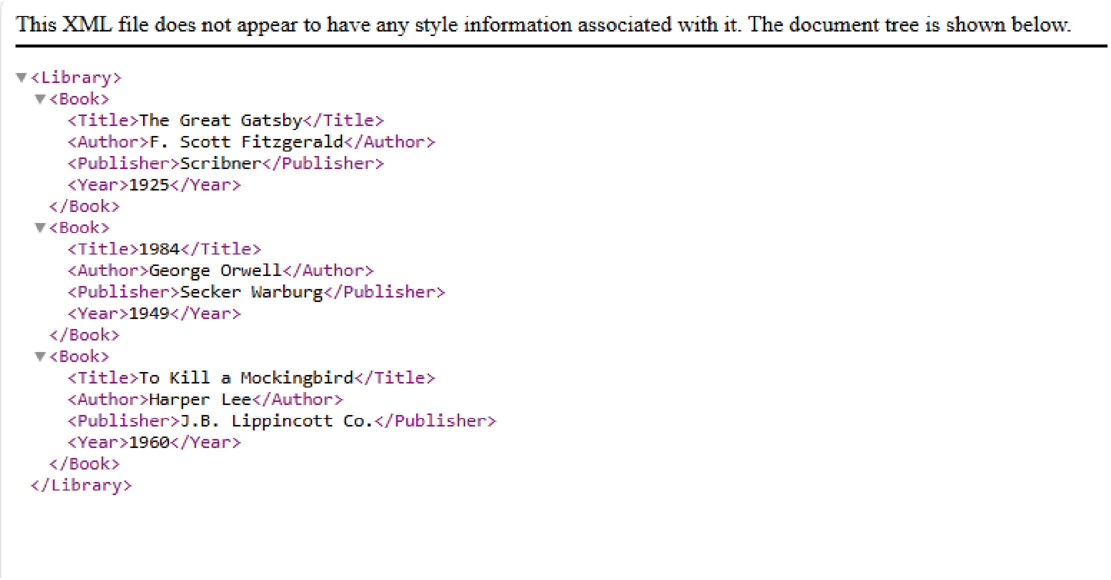
OUTPUT:

```
Book Details:
------------------------------
Book: The Great Gatsby
Publisher: Scribner
Year of Publication: 1925
------------------------------
Book: 1984
Publisher: Secker & Warburg
Year of Publication: 1949
------------------------------
Book: To Kill a Mockingbird
Publisher: J.B. Lippincott & Co.
Year of Publication: 1960
------------------------------
```

38) XML program to create the library information

```
<?xml version="1.0" encoding="UTF-8"?>
<Library>
   <Book>
      <Title>The Great Gatsby</Title>
      <Author>F. Scott Fitzgerald</Author>
      <Publisher>Scribner</Publisher>
      <Year>1925</Year>
   </Book>
   <Book>
      <Title>1984</Title>
      <Author>George Orwell</Author>
      <Publisher>Secker & Warburg</Publisher>
      <Year>1949</Year>
   </Book>
   <Book>
      <Title>To Kill a Mockingbird</Title>
      <Author>Harper Lee</Author>
      <Publisher>J.B. Lippincott & Co.</Publisher>
      <Year>1960</Year>
   </Book>
</Library>
```

OUTPUT:



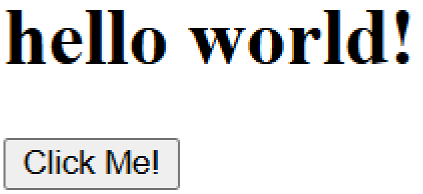
This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
▼<Library>
  ▼<Book>
     <Title>The Great Gatsby</Title>
     <Author>F. Scott Fitzgerald</Author>
     <Publisher>Scribner</Publisher>
     <Year>1925</Year>
   </Book>
  ▼<Book>
     <Title>1984</Title>
     <Author>George Orwell</Author>
     <Publisher>Secker Warburg</Publisher>
     <Year>1949</Year>
   </Book>
  ▼<Book>
     <Title>To Kill a Mockingbird</Title>
     <Author>Harper Lee</Author>
     <Publisher>J.B. Lippincott Co.</Publisher>
     <Year>1960</Year>
   </Book>
 </Library>
```

39) Program to demonstrate DOM

```
<!DOCTYPE html>
<html>
<body>
<h1 id="demo">this is a heading</h1>
<button type="button"
 onclick="document.getElementById('demo' ).innerHTML='hello world!' ">Click Me!
</button>
</body>
</html>
```

Output:

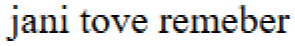


hello world!

40) Program to save the xml file as html file

```
<?xml version="1.0" encoding="UTF-8"?>
<note>
<from>jani</from>
<to>tove</to>
<message>remeber</message>
</note>
```

Output:



```
jani tove remeber
```