Kabul University

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Fundamental of python programming

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Title of the code: game of the tic tac toe

Introduction:

this code is about the game of tic tac toe. In this game two players play one game who have more focus and have attention they will win the match. At is simple and more powerful game. Our code is simple and easier for beginners' who want to know about functions, data types, libraries and some other things that we used in this code.

Users can do:

- Many times, this game we created many user defined functions for some loops in this code.
- Users can you use and replace the format of the game every time when they want.

Description:

- We are use some of the if, elif and else statements which are most popular.
- In this short code we use a lot of the functions, loops and other things.
- We defined so many variables are there in our code.
- In this code we used more data types.
- Result of the code you can see in the 1st image.

```
# tiny_ttt_tk.py import
tkinter as tk


W=300 CELL=W//3
board=[None]*9
turn='X'

def idx_from_xy(x,y): return (y//CELL)*3 + (x//CELL)
def check():

wins=[(0,1,2),(3,4,5),(6,7,8),(0,3,6),(1,4,7),(2,5,8)
,(0,4,8),(2,4,6)]     for a,b,c in wins:          if
board[a] and board[a]==board[b]==board[c]:
return board[a]
    return 'Tie' if all(board) else None
 def click(e):
global turn
    i=idx_from_xy(e.x,e.y)
```

```
    if board[i] or lbl['text'].startswith('Winner'):
return
    board[i]=turn     draw_cell(i)     res=check()
if res:          lbl['text']=("Winner: "+res) if
res!='Tie' else "Tie!"     else:
        turn = 'O' if turn=='X' else 'X'
lbl['text']="Turn: "+turn
 def draw_cell(i):
r=i//3; c=i%3
x=c*CELL; y=r*CELL
if board[i]=='X':
        canvas.create_line(x+10,y+10,x+CELL-
10,y+CELL-10,width=4,fill='blue')
        canvas.create_line(x+10,y+CELL-10,x+CELL-
10,y+10,width=4,fill='blue')
else:
        canvas.create_oval(x+10,y+10,x+CELL-
10,y+CELL-10,width=4,outline='red')
 def
reset():
    global board,turn
board=[None]*9
turn='X'
    canvas.delete("all")
draw_grid()
    lbl['text']="Turn: X"
 def draw_grid():
for i in range(1,3):
         canvas.create_line(i*CELL,0,i*CELL,W,width=3)
     canvas.create_line(0,i*CELL,W,i*CELL,width=3)

root=tk.Tk(); root.title("Tic-Tac-Toe")
canvas=tk.Canvas(root,width=W,height=W,bg='white');
```

```
canvas.pack()
canvas.bind("<Button-1>", click)
draw_grid()
frm=tk.Frame(root); frm.pack(fill='x')
lbl=tk.Label(frm,text="Turn: X");
lbl.pack(side='left',padx=10)
btn=tk.Button(frm,text="Reset",command=reset);
btn.pack(side='right',padx=10)
root.mainloop()
```