Tambola Ticket Generator

```
import tkinter as tk
import random



# --------------------------------
# Size of Ticket
# --------------------------------
row = 3
col = 9



# Column wise ranges
ranges = [
    (1, 9), (10, 19), (20, 29),
    (30, 39), (40, 49), (50, 59),
    (60, 69), (70, 79), (80, 90)
]



# --------------------------------
# Create 0-1 Matrix
# --------------------------------
def make_binary_matrix():

    while True:

        # Make empty matrix
```

```
mat = []

for i in range(row):
    temp = []
    for j in range(col):
        temp.append(0)
    mat.append(temp)

# Put 5 ones in each row
for i in range(row):

    count = 0

    while count < 5:

        j = random.randint(0, 8)

        if mat[i][j] == 0:
            mat[i][j] = 1
            count = count + 1



# Check each column has at least one 1
ok = True

for j in range(col):

    s = 0
```

```
            for i in range(row):
                s = s + mat[i][j]

            if s == 0:
                ok = False
                break


        if ok == True:
            return mat


# --------------------------------
# Fill Numbers
# --------------------------------
def fill_ticket(binary):

    ticket = []

    # Create empty ticket
    for i in range(row):
        temp = []
        for j in range(col):
            temp.append(0)
        ticket.append(temp)
```

```
# Fill column wise
for j in range(col):

    cnt = 0

    # Count how many 1 in column
    for i in range(row):
        if binary[i][j] == 1:
            cnt = cnt + 1



    low = ranges[j][0]
    high = ranges[j][1]



    # Generate random numbers
    nums = random.sample(range(low, high+1), cnt)
    nums.sort()



    k = 0

    for i in range(row):

        if binary[i][j] == 1:

            ticket[i][j] = nums[k]
            k = k + 1
```

```
    return ticket


# --------------------------------
# Generate Ticket
# --------------------------------
def generate():

    binary = make_binary_matrix()

    ticket = fill_ticket(binary)

    show(ticket)


# --------------------------------
# Display Ticket
# --------------------------------
def show(ticket):

    for w in box.winfo_children():
        w.destroy()


    for i in range(row):
```

```
        for j in range(col):

            if ticket[i][j] == 0:
                t = ""
            else:
                t = str(ticket[i][j])


            lab = tk.Label(
                box,
                text=t,
                width=5,
                height=2,
                font=("Arial", 14),
                border=2,
                relief="solid"
            )

            lab.grid(row=i, column=j, padx=2, pady=2)


# --------------------------------
# GUI
# --------------------------------
root = tk.Tk()
root.title("Tambola Ticket")
```

```
btn = tk.Button(
    root,
    text="Generate",
    font=("Arial", 14),
    command=generate
)

btn.pack(pady=10)


box = tk.Frame(root)
box.pack()


root.mainloop()
```