#Importing all modules

from tkinter import \*

import tkinter.messagebox

import time

import random

global points

global Ball

global z

z=0

#Initial theme definition

theme\_bg='Black'

theme\_fg='White'

theme\_ob='Gray'

#Function: Closing all windows at a time

def close\_window():

Start.destroy()

Play\_.destroy()

Settings\_.destroy()

Try\_Again.destroy()

#Creating all the windows

#1 Creating the Start page

Start = Tk()

Start.title('Start Page')

Start.geometry('600x400+383+184')

Start.resizable(0,0)

Start.configure(bg=theme\_bg)

Start.protocol('WM\_DELETE\_WINDOW',close\_window)

#2 Creating the Game page

Play\_ = Tk()

Play\_.title('Play')

Play\_.geometry('600x400+383+184')

Play\_.resizable(0,0)

Play\_.configure(bg=theme\_bg)

Play\_.withdraw()

Play\_.protocol('WM\_DELETE\_WINDOW',close\_window)

#3 Creating the Settings page

Settings\_ = Tk()

Settings\_.title('Settings')

Settings\_.geometry('600x400+383+184')

Settings\_.resizable(0,0)

Settings\_.configure(bg=theme\_bg)

Settings\_.withdraw()

Settings\_.protocol('WM\_DELETE\_WINDOW',close\_window)

#4 Creating the Try Again page

Try\_Again = Tk()

Try\_Again.title('Try Again')

Try\_Again.geometry('400x220+483+290')

Try\_Again.resizable(0,0)

Try\_Again.configure(bg=theme\_bg)

Try\_Again.withdraw()

Try\_Again.protocol('WM\_DELETE\_WINDOW',close\_window)

#Creating contents of Play window

#1 Creating the canvas for the game (@Play)

game\_canvas=Canvas(Play\_,height=400,width=600,bg=theme\_bg)

game\_canvas.pack()

#2 Creating the three paths (@Play)

Path=game\_canvas.create\_polygon(300,100,0,400,600,400,fill=theme\_fg,tags='Path')

Path\_lineL=game\_canvas.create\_line(300,100,200,400,fill=theme\_bg,width=5)

Path\_lineR=game\_canvas.create\_line(300,100,400,400,fill=theme\_bg,width=5)

#3Creating the Ball (@Play)

Ball=game\_canvas.create\_oval(260,290,340,370,fill=theme\_bg)

#The Obstacles are created as class later on (line: 255)

#Windows linking functions

def click1(to\_do):

if to\_do=='Play':

try:

Start.withdraw()

Play\_.deiconify()

Try\_Again.withdraw()

except:

pass

pos\_b=1

Theme\_change()

Theme\_change()

Theme\_change()

global points

points=0

x=random.randint(0,2)

global z

if z==0:

start\_game\_1(x)

else:

start\_game\_2(x)

elif to\_do=='Settings':

Start.withdraw()

Settings\_.deiconify()

elif to\_do=='How':

tkinter.messagebox.showinfo('How to Play','''Use the left and right arrow keys to direct the ball,

dodging maximum no. of obstacles.

All the best!!!''')

elif to\_do=='Start':

try:

Settings\_.withdraw()

except:

Play\_.withdraw()

Start.deiconify()

elif to\_do=='TryAgain1':

Try\_Again.deiconify()

elif to\_do=='TryAgain2':

Try\_Again.withdraw()

Play\_.withdraw()

Start.deiconify()

#Creating links to game and settings page

#1 Play button (@Start)

Play=Button(Start,text='PLAY',font='Elephant 20 bold',height=1,width=5,command=lambda: click1('Play'),fg=theme\_bg,bg=theme\_fg)

Play.place(x=250,y=165)

#2 Settings button (@Start)

Logo\_settings=PhotoImage(file='settings logo.gif')

Settings=Button(Start,image=Logo\_settings,command=lambda: click1('Settings'),fg=theme\_bg,bg=theme\_fg)

Settings.pack(anchor=NE)

#3 How to play button (@Start)

How=Button(Start,text='How to Play',font='Elephant 15',height=1,width=10,command=lambda: click1('How'),fg=theme\_bg,bg=theme\_fg)

How.place(x=228,y=250)

#4 Back to Start button (@Settings)

Back1=Button(Settings\_,text='<',command=lambda: click1('Start'),font='none 15 bold',width=3,fg=theme\_bg,bg=theme\_fg)

Back1.pack(anchor=NW)

#5 Back to Start button (@Try Again)

Back2=Button(Try\_Again,text='Home',command=lambda: click1('TryAgain2'),font='Elephant 12',width=10,height=1,bg=theme\_fg,fg=theme\_bg)

Back2.place(x=70,y=150)

#6 Close Game - Exit button (@Try Again)

Close=Button(Try\_Again,text='Exit',command=lambda: close\_window(),font='Elephant 12',width=10,height=1,bg=theme\_fg,fg=theme\_bg)

Close.place(x=210,y=150)

#7 Try Again button (@Try Again)

Try\_Again\_button=Button(Try\_Again,text='Try Again',command=lambda: click1('Play'),font='Elephant 14',width=10,height=1,fg=theme\_bg,bg=theme\_fg)

Try\_Again\_button.place(x=130,y=85)

#Settings page controls

#Theme changing button (@Settings\_)

Themes=['Theme 1','Theme 2','Theme 3']

Theme\_colors={0:['Black','White','Gray'],1:['White','Black','Gray'],2:['Red','Blue','Yellow']}

theme\_=StringVar(Settings\_)

theme\_.set('Theme 1')

def Theme\_change():

global x

x=theme\_.get()

x=Themes.index(x)

x+=1

x%=3

curr\_theme=x

x=Themes[x]

theme\_.set(x)

curr\_bg=Theme\_colors[curr\_theme][0]

curr\_fg=Theme\_colors[curr\_theme][1]

theme\_ob=Theme\_colors[curr\_theme][2]

Start.configure(bg=curr\_bg)

Play\_.configure(bg=curr\_bg)

Settings\_.configure(bg=curr\_bg)

Try\_Again.configure(bg=curr\_bg)

Play.configure(bg=curr\_fg,fg=curr\_bg)

Try\_Again\_button.configure(bg=theme\_fg,fg=theme\_bg)

How.configure(bg=curr\_fg,fg=curr\_bg)

Back1.configure(bg=curr\_fg,fg=curr\_bg)

Back2.configure(bg=curr\_fg,fg=curr\_bg)

Close.configure(bg=curr\_fg,fg=curr\_bg)

Try\_Again\_button.configure(bg=theme\_fg,fg=theme\_bg)

theme\_label1.configure(bg=curr\_bg,fg=curr\_fg)

theme\_label2.configure(bg=curr\_fg,fg=curr\_bg)

theme\_change.configure(bg=curr\_fg,fg=curr\_bg)

volume\_label1.configure(bg=curr\_bg,fg=curr\_fg)

volume\_label2.configure(bg=curr\_fg,fg=curr\_bg)

volume\_change.configure(bg=curr\_fg,fg=curr\_bg)

difficulty\_label1.configure(bg=curr\_bg,fg=curr\_fg)

difficulty\_label2.configure(bg=curr\_fg,fg=curr\_bg)

difficulty\_change.configure(bg=curr\_fg,fg=curr\_bg)

about.configure(bg=curr\_bg,fg=curr\_fg)

Points\_display1.configure(bg=curr\_bg,fg=curr\_fg)

Points\_display2.configure(bg=curr\_bg,fg=curr\_fg)

game\_canvas.configure(bg=curr\_bg)

game\_canvas.delete('all')

Path=game\_canvas.create\_polygon(300,100,0,400,600,400,fill=curr\_fg)

Path\_lineL=game\_canvas.create\_line(300,100,200,400,fill=curr\_bg,width=5)

Path\_lineR=game\_canvas.create\_line(300,100,400,400,fill=curr\_bg,width=5)

global Ball

Ball=game\_canvas.create\_oval(260,290,340,370,fill=curr\_bg)

global pos\_b

pos\_b=1

def MoveBall\_L(event):

global pos\_b

if pos\_b>0:

pos\_b-=1

game\_canvas.move(Ball,-150,0)

else:

pass

def MoveBall\_R(event):

global pos\_b

if pos\_b<2:

pos\_b+=1

game\_canvas.move(Ball,150,0)

else:

pass

game\_canvas.bind\_all('<Left>',MoveBall\_L)

game\_canvas.bind\_all('<Right>',MoveBall\_R)

theme\_label1=Label(Settings\_,text='Theme :',font='Elephant 18',bg=theme\_bg,fg=theme\_fg)

theme\_label1.place(x=159,y=80)

theme\_label2=Label(Settings\_,textvariable=theme\_,font='Elephant 15',width=10,bg=theme\_fg,fg=theme\_bg)

theme\_label2.place(x=300,y=82)

theme\_change=Button(Settings\_,text='>',command=Theme\_change,font='none 13 bold',bg=theme\_fg,fg=theme\_bg)

theme\_change.place(x=448,y=82)

#Volume checkbox (@Settings\_)

Volumes=['Off','On']

volume\_=StringVar(Settings\_)

volume\_.set('Off')

def Volume\_change():

global y

y=volume\_.get()

y=Volumes.index(y)

y+=1

y%=2

y=Volumes[y]

volume\_.set(y)

volume\_label1=Label(Settings\_,text='Sounds :',font='Elephant 18',bg=theme\_bg,fg=theme\_fg)

volume\_label1.place(x=159,y=140)

volume\_label2=Label(Settings\_,textvariable=volume\_,font='Elephant 15',width=10,bg=theme\_fg,fg=theme\_bg)

volume\_label2.place(x=300,y=142)

volume\_change=Button(Settings\_,text='>',command=Volume\_change,font='none 13 bold',bg=theme\_fg,fg=theme\_bg)

volume\_change.place(x=448,y=142)

#Difficulty changing button (@Settings\_)

Difficulties=['Easy','Hard']

difficulty\_=StringVar(Settings\_)

difficulty\_.set('Easy')

def Difficulty\_change():

global z

z=difficulty\_.get()

z=Difficulties.index(z)

z+=1

z%=2

check=z

z=Difficulties[z]

difficulty\_.set(z)

z=check

difficulty\_label1=Label(Settings\_,text='Difficulty :',font='Elephant 18',bg=theme\_bg,fg=theme\_fg)

difficulty\_label1.place(x=159,y=200)

difficulty\_label2=Label(Settings\_,textvariable=difficulty\_,font='Elephant 15',width=10,bg=theme\_fg,fg=theme\_bg)

difficulty\_label2.place(x=300,y=202)

difficulty\_change=Button(Settings\_,text='>',command=Difficulty\_change,font='none 13 bold',bg=theme\_fg,fg=theme\_bg)

difficulty\_change.place(x=448,y=202)

#About the game

about=Label(Settings\_,bg=theme\_bg,fg=theme\_fg,font='Elephant 10',text='''Game built using Python, tkinter, time and random.

Game built by Harshavardhan P.

Credits: Srinidhi (PSBBMS), stackoverflow.com, geeksforgeeks.com,

'Python Programming lessons Complete' YouTube.''')

about.place(x=80,y=280)

#Displaying the points scored

Points\_display1=Label(Try\_Again,bg=theme\_bg,fg=theme\_fg,font='Elephant 20',text='Score :')

Points\_display1.place(x=100,y=30)

points\_scored=StringVar(Try\_Again)

points\_scored.set('0')

Points\_display2=Label(Try\_Again,bg=theme\_bg,fg=theme\_fg,font='Elephant 20',textvariable=points\_scored,width=4)

Points\_display2.place(x=230,y=30)

#Setting the Points Scored

def points\_set(points\_):

points\_scored.set(points\_)

#Start of game building

global pos\_b

pos\_b=1

#Controlling the Ball (@Play)

def MoveBall\_L(event):

global pos\_b

if pos\_b>0:

pos\_b-=1

game\_canvas.move(Ball,-150,0)

else:

pass

def MoveBall\_R(event):

global pos\_b

if pos\_b<2:

pos\_b+=1

game\_canvas.move(Ball,150,0)

else:

pass

#Creating obstacles

class Obstacle:

def \_\_init\_\_(self,lane):

try:

self.lane=lane

self.psn=1

self.id=game\_canvas.create\_rectangle(299,99,301,101,fill='Gray')

except:

pass

#Points scorer

def destroy(self):

self.id=None

global points

points+=1

#Movement of lane 0

def lane0(self):

try:

x0,y0,x1,y1=game\_canvas.coords(self.id)

if self.psn%3==0:

x1-=2

y1+=2

if self.psn%4==0:

pass

else:

y0+=2

x0-=2

game\_canvas.coords(self.id,x0,y0,x1,y1)

game\_canvas.update()

self.psn+=1

except:

pass

#Movement of lane 1

def lane1(self):

try:

x0,y0,x1,y1=game\_canvas.coords(self.id)

if self.psn%3==0:

x1+=2

x0-=2

y1+=2

if self.psn%4==0:

pass

else:

y0+=2

game\_canvas.coords(self.id,x0,y0,x1,y1)

game\_canvas.update()

self.psn+=1

except:

pass

#Movement of lane 2

def lane2(self):

try:

x0,y0,x1,y1=game\_canvas.coords(self.id)

if self.psn%3==0:

x0+=2

y1+=2

if self.psn%4==0:

pass

else:

y0+=2

x1+=2

game\_canvas.coords(self.id,x0,y0,x1,y1)

game\_canvas.update()

self.psn+=1

except:

pass

game\_canvas.focus\_set()

game\_canvas.bind\_all('<Left>',MoveBall\_L)

game\_canvas.bind\_all('<Right>',MoveBall\_R)

#Each obstacle takes 402 cycles to reach out

#so each of them can be dropped on 399st cycle

#Game running loop cum function (Easy)

def start\_game\_1(LaneO):

Obs0=Obstacle(LaneO)

for i in range(50):

if Obs0.lane==0:

Obs0.lane0()

elif Obs0.lane==1:

Obs0.lane1()

else:

Obs0.lane2()

time.sleep(0.01)

Obs1=Obs0

LaneN=random.randint(0,2)

if LaneN==LaneO:

LaneN=random.randint(0,2)

Obs0=Obstacle(LaneN)

for i in range(50):

if Obs1.lane==0:

Obs1.lane0()

elif Obs1.lane==1:

Obs1.lane1()

else:

Obs1.lane2()

if Obs0.lane==0:

Obs0.lane0()

elif Obs0.lane==1:

Obs0.lane1()

else:

Obs0.lane2()

time.sleep(0.01)

Obs2=Obs1

Obs1=Obs0

Obs0=None

Obs3=None

Obs2\_count=0

LaneO=LaneN

while True:

if Obs0==None:

LaneN=random.randint(0,2)

if LaneN==LaneO:

LaneN=random.randint(0,2)

Obs0=Obstacle(LaneN)

LaneO=LaneN

if Obs0.lane==0:

Obs0.lane0()

elif Obs0.lane==1:

Obs0.lane1()

else:

Obs0.lane2()

if Obs1.lane==0:

Obs1.lane0()

elif Obs1.lane==1:

Obs1.lane1()

else:

Obs1.lane2()

if Obs2.lane==0:

Obs2.lane0()

elif Obs2.lane==1:

Obs2.lane1()

else:

Obs2.lane2()

Obs2\_count+=1

try:

x0o,y0o,x1o,y1o=game\_canvas.coords(Obs2.id)

x0b,y0b,x1b,y1b=game\_canvas.coords(Ball)

if 370>=y1o>=329:

if Obs2.lane==pos\_b:

time.sleep(2)

click1('TryAgain1')

global points

points\_set(points)

break

if Obs2\_count==50:

Obs0,Obs1,Obs2,Obs3=None,Obs0,Obs1,Obs2

Obs2\_count=0

Obs3\_count=0

if Obs3!=None:

Obs3\_count+=1

if Obs3.lane==0:

Obs3.lane0()

elif Obs3.lane==1:

Obs3.lane1()

else:

Obs3.lane2()

if Obs3\_count==50:

Obs3=None

points+=1

time.sleep(0.001)

except:

pass

#Creating coins

class Coins:

def \_\_init\_\_(self,lane):

try:

self.lane=lane

self.psn=1

self.id=game\_canvas.create\_oval(299,99,301,101,fill='Gold')

except:

pass

#Points scorer

def destroy(self):

self.id=None

global points

points+=1

#Movement of lane 0

def lane0(self):

try:

x0,y0,x1,y1=game\_canvas.coords(self.id)

x1-=1

y1+=2

if self.psn%4==0:

pass

else:

y0+=2

if self.psn%2==0:

x0-=3

game\_canvas.coords(self.id,x0,y0,x1,y1)

game\_canvas.update()

self.psn+=1

except:

pass

#Movement of lane 1

def lane1(self):

try:

x0,y0,x1,y1=game\_canvas.coords(self.id)

if self.psn%4==0:

x1+=1

x0-=1

y1+=2

if self.psn%4==0:

pass

else:

y0+=2

game\_canvas.coords(self.id,x0,y0,x1,y1)

game\_canvas.update()

self.psn+=1

except:

pass

#Movement of lane 2

def lane2(self):

try:

x0,y0,x1,y1=game\_canvas.coords(self.id)

x0+=1

y1+=2

if self.psn%4==0:

pass

else:

y0+=2

if self.psn%2==0:

x1+=3

game\_canvas.coords(self.id,x0,y0,x1,y1)

game\_canvas.update()

self.psn+=1

except:

pass

#Game running loop cum function (Hard)

def start\_game\_2(LaneO):

score\_miss=0

Obs0=Coins(LaneO)

for i in range(50):

if Obs0.lane==0:

Obs0.lane0()

elif Obs0.lane==1:

Obs0.lane1()

else:

Obs0.lane2()

time.sleep(0.01)

Obs1=Obs0

LaneN=random.randint(0,2)

if LaneN==LaneO:

LaneN=random.randint(0,2)

Obs0=Coins(LaneN)

for i in range(50):

if Obs1.lane==0:

Obs1.lane0()

elif Obs1.lane==1:

Obs1.lane1()

else:

Obs1.lane2()

if Obs0.lane==0:

Obs0.lane0()

elif Obs0.lane==1:

Obs0.lane1()

else:

Obs0.lane2()

time.sleep(0.01)

Obs2=Obs1

Obs1=Obs0

Obs0=None

Obs3=None

Obs2\_count=0

LaneO=LaneN

while True:

if Obs0==None:

score\_miss=0

LaneN=random.randint(0,2)

if LaneN==LaneO:

LaneN=random.randint(0,2)

Obs0=Coins(LaneN)

LaneO=LaneN

if Obs0.lane==0:

Obs0.lane0()

elif Obs0.lane==1:

Obs0.lane1()

else:

Obs0.lane2()

if Obs1.lane==0:

Obs1.lane0()

elif Obs1.lane==1:

Obs1.lane1()

else:

Obs1.lane2()

if Obs2.lane==0:

Obs2.lane0()

elif Obs2.lane==1:

Obs2.lane1()

else:

Obs2.lane2()

Obs2\_count+=1

try:

x0o,y0o,x1o,y1o=game\_canvas.coords(Obs2.id)

x0b,y0b,x1b,y1b=game\_canvas.coords(Ball)

if 370>=y1o>=310:

if Obs2.lane==pos\_b:

score\_miss+=1

if y1o>370 and score\_miss==0:

time.sleep(2)

click1('TryAgain1')

global points

points\_set(points)

break

if Obs2\_count==50:

Obs0,Obs1,Obs2,Obs3=None,Obs0,Obs1,Obs2

Obs2\_count=0

Obs3\_count=0

if Obs3!=None:

Obs3\_count+=1

if Obs3.lane==0:

Obs3.lane0()

elif Obs3.lane==1:

Obs3.lane1()

else:

Obs3.lane2()

if Obs3\_count==50:

Obs3=None

points+=1

time.sleep(0.001)

except:

pass

#Mainloop statements

Start.mainloop()

Play\_.mainloop()

#End of Source Code

#Thank You