"""

Author: Alexander Jakobsen

P-project 181 Teknologtamagotchin

2017-01-17

This programme lets the user control a tamagotchi. Depending on the user input, the tamagotchis size may change.

"""

from tkinter.ttk import \*

from tkinter import \*

class TamagotchiWindow: #the window containing the tamagotchi

def \_\_init\_\_(self, master):#sets up the contents of the window

self.master = master

self.master.title("TeknologTamagotchi")

self.tamagotchi = TamagotchiState()

self.\_\_currentSize = 0

self.studyButton = Button(self.master, text = "Study", width = "6", command = self.studyCommand)

self.sleepButton = Button(self.master, text = "Sleep", width = "6", command = self.sleepCommand)

self.examButton = Button(self.master, text = "Exam", width = "6", command = self.examCommand)

self.partyButton = Button(self.master, text = "Party", width = "6", command = self.partyCommand)

self.infoBox = Label(self.master, font=("Palatino Linotype", 9), text = "Welcome to your very own Teknologtamagotchi!")

self.tamagotchiBox = Canvas(self.master,width=500, height=500)

self.pet = self.tamagotchiBox.create\_oval(0, 0, 0, 0, fill="black")

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

self.sleepButton.grid(row=1, column=1)

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

self.partyButton.grid(row=2, column=1)

self.infoBox.grid(row=3, column=0, columnspan=2)

self.tamagotchiBox.grid(row=0, column=0, columnspan=2)

def studyCommand(self): #makes your tamagotchi study

self.\_\_currentSize = self.tamagotchi.getSize()

self.tamagotchi.updateSequenceList(0)

self.updateInfo()

def sleepCommand(self):#makes your tamagotchi sleep

self.\_\_currentSize = self.tamagotchi.getSize()

self.tamagotchi.updateSequenceList(1)

self.updateInfo()

def examCommand(self):#makes your tamagotchi exam

self.\_\_currentSize = self.tamagotchi.getSize()

self.tamagotchi.updateSequenceList(2)

self.updateInfo()

def partyCommand(self):#makes your tamagotchi party

self.\_\_currentSize = self.tamagotchi.getSize()

self.tamagotchi.updateSequenceList(3)

self.updateInfo()

def updateInfo(self): #updates the infobox and resizes your tamagotchi

if self.tamagotchi.getSize() > self.\_\_currentSize:

self.infoBox.config(text= "Yaay! Your Tamagotchi grew to " + str(self.tamagotchi.getSize()) + "!")

self.\_\_currentSize = self.tamagotchi.getSize()

elif self.tamagotchi.getSize() < self.\_\_currentSize:

self.infoBox.config(text= "Naaw! Your Tamagotchi shrunk to " + str(self.tamagotchi.getSize()) + "!")

self.\_\_currentSize = self.tamagotchi.getSize()

elif self.tamagotchi.getSize() == self.\_\_currentSize/2:

self.infoBox.config(text= "Noo! Your Tamagotchi got bored and halved it's size to " + str(self.tamagotchi.getSize()) + "!")

self.\_\_currentSize = self.tamagotchi.getSize()

elif self.tamagotchi.getSize() < 1:

self.infoBox.config(text= "Noo! Your Tamagotchi is almost gone. Try something else!")

self.\_\_currentSize = self.tamagotchi.getSize()

self.tamagotchiBox.coords(self.pet,200-self.\_\_currentSize, 200-self.\_\_currentSize, 300+self.\_\_currentSize, 300+self.\_\_currentSize )

class TamagotchiState(): #a class where your tamagotchi's size is calculated

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

self.\_\_size = 100

self.\_\_currentSequence = list()

def updateSequenceList(self, action):#adds your tamagotchis last action to a list

self.\_\_currentSequence.append(action)

self.checkSequence()

def checkSequence(self):#controls the last 3 entries of the list changes the size of your tamagotchi accordingly

seqList = self.\_\_currentSequence

try:

if seqList[-3] == 1 and seqList[-2] == 2 and seqList[-1] == 3:

self.\_\_size += 25

elif seqList[-3] == 3 and seqList[-2] == 1 and seqList[-1] == 2:

self.\_\_size -= 25

elif seqList[-3] == 0 and seqList[-2] == 1 and seqList[-1] == 2:

self.\_\_size += 25

elif seqList[-3] == 0 and seqList[-2] == 2 and seqList[-1] == 1:

self.\_\_size += 25

elif seqList[-3] == 0 and seqList[-2] == 3 and seqList[-1] == 2:

self.\_\_size -= 25

elif seqList[-3] == 3 and seqList[-2] == 1 and seqList[-1] == 3:

self.\_\_size -= 25

elif seqList[-3] == seqList[-1] and seqList[-1] == seqList[-2]:

self.\_\_size = self.\_\_size/2

else: None

except IndexError: None

def getSize(self):

return self.\_\_size

def main():

root = Tk()

app = TamagotchiWindow(root)

root.mainloop()

main()