**import** json  
**from** tkinter **import** \*  
**from** tkinter **import** messagebox  
**import** random  
**from** DbHelper **import** \*  
**import** time  
  
**class** HomePage:  
 **def** \_\_init\_\_(self,root):  
 self.root=root  
 self.frame = Frame(self.root, height=600, width=600, bg=**"#078ca3"**)  
 self.frame.pack(padx=5,pady=5)  
 self.lab = Label(self.frame, text=**"Type of login\n\nYou can login in admin account if you want to create a new user account\nYou can login in user account if you want to take the quiz"**,bg=**"#078ca3"**,fg=**"white"**,font=(**"Consolas"**, 10))  
 self.lab.grid(row=0, column=1, columnspan=3, padx=30, pady=20)  
 self.admin\_login\_b=Button(self.frame,text=**"Admin login"**,command=**lambda** :self.login(**"admin"**),bg=**"white"**,font=(**"Consolas"**, 10))  
 self.admin\_login\_b.grid(row=1,column=1,padx=20,pady=20)  
 self.user\_login\_b=Button(self.frame,text=**"User login"**,command=**lambda** :self.login(**"user"**),bg=**"white"**,font=(**"Consolas"**, 10))  
 self.user\_login\_b.grid(row=1,column=2,padx=20,pady=20)  
 self.frame.grid\_propagate(0)  
  
 **def** login(self,login\_type):  
 self.frame.destroy()  
 self.frame = Frame(self.root, height=600, width=600, bg=**"#078ca3"**)  
 self.frame.pack(padx=5,pady=5)  
 self.lab=Label(self.frame,width=50,text=**"Enter below details to login"**,bg=**"#078ca3"**,fg=**"white"**,font=(**"Consolas"**, 10))  
 self.lab.grid(row=0,column=1,columnspan=3,padx=10,pady=10)  
 self.l1=Label(self.frame,width=20,text=**"Enter Username: "**,bg=**"#078ca3"**,fg=**"white"**,font=(**"Consolas"**, 10))  
 self.e\_username=Entry(self.frame,width=30,fg=**'black'**,bg=**'white'**)  
 self.l2 = Label(self.frame, width=20, text=**"Enter Password: "**,bg=**"#078ca3"**,fg=**"white"**,font=(**"Consolas"**, 10))  
 self.e\_pwd = Entry(self.frame, width=30, fg=**'black'**, bg=**'white'**,show=**'\*'**)  
 self.l1.grid(row=1,column=1,padx=10,pady=10)  
 self.l2.grid(row=2,column=1,padx=10,pady=10)  
 self.e\_username.grid(row=1,column=2,padx=10,pady=10)  
 self.e\_pwd.grid(row=2,column=2,padx=10,pady=10)  
 self.b1=Button(self.frame,text=**"Submit"**,height=2,width=10,command=**lambda** :self.authenticate(login\_type),bg=**"white"**,font=(**"Consolas"**, 10))  
 self.b1.grid(row=3,column=1,padx=10,sticky=**'e'**,pady=10)  
 self.b2 = Button(self.frame, text=**"Reset"**,height=2,width=10,command=**lambda** : self.reset(),bg=**"white"**,font=(**"Consolas"**, 10))  
 self.b2.grid(row=3, column=2,padx=10,sticky=**'w'**,pady=10)  
 self.frame.grid\_propagate(0)  
  
 **def** authenticate(self,login\_type):  
 user=self.e\_username.get()  
 pwd=self.e\_pwd.get()  
 params=(user,pwd)  
 **if** login\_type==**"admin"**:  
 query=**"Select \* from practice\_admin where Username='%s' and Password='%s'"  
 else**:  
 query=**"Select \* from practice\_user where Username='%s' and Password='%s'"** res=get\_data(query,params)  
 print(res)  
 **if**(res **is None or** len(res)==0):  
 messagebox.showwarning(**'Incorrect credentials'**,**'The username and password entered does not match. Please re-enter'**)  
 self.reset()  
 **elif**(login\_type==**"admin"**):  
 self.admin\_page(user)  
 **else**:  
 self.user\_page(user)  
  
 **def** user\_page(self,username):  
 self.frame.destroy()  
 self.frame = Frame(self.root, height=600, width=600)  
 self.frame.pack(padx=5,pady=5)  
 self.frame.grid\_propagate(0)  
 self.l\_account = Label(self.frame, text=**f"USER ACCOUNT\n"**)  
 self.l\_account.grid(row=0, column=0, pady=40)  
 self.l\_name = Label(self.frame, text=**f"Welcome, {**username**}"**)  
 self.l\_name.grid(row=0, column=1, pady=20,sticky=**'e'**)  
 self.frame=Frame(self.root,height=600,width=600,command=self.Quiz())  
 self.frame.pack()  
 self.frame.grid\_propagate(0)  
 self.frame.destroy()  
  
  
 **def** admin\_page(self,username):  
 self.frame.destroy()  
 self.frame = Frame(self.root, height=600, width=600,bg=**"#078ca3"**)  
 self.frame.pack(padx=5,pady=5)  
 self.frame.grid\_propagate(0)  
 self.l\_account=Label(self.frame,text=**f"ADMIN ACCOUNT\n"**,bg=**"#078ca3"**,fg=**"white"**,font=(**"Consolas"**, 15))  
 self.l\_account.grid(row=0,column=0,pady=20)  
 self.l\_name=Label(self.frame,text=**f"\nWelcome, {**username**}"**,bg=**"#078ca3"**,fg=**"white"**,font=(**"Consolas"**, 12))  
 self.l\_name.grid(row=0,column=1,pady=20)  
 self.lab=Label(self.frame,width=50,text=**"Enter below details to create a new user account"**,bg=**"#078ca3"**,fg=**"white"**,font=(**"Consolas"**, 10))  
 self.lab.grid(row=1,column=0,columnspan=3,padx=10,pady=10)  
 self.l1=Label(self.frame,width=20,text=**"Enter username: "**,bg=**"#078ca3"**,fg=**"white"**,font=(**"Consolas"**, 10))  
 self.e\_username=Entry(self.frame,width=30,fg=**'black'**,bg=**'white'**)  
 self.l2 = Label(self.frame, width=20, text=**"Enter password: "**,bg=**"#078ca3"**,fg=**"white"**,font=(**"Consolas"**, 10))  
 self.e\_pwd = Entry(self.frame, width=30, fg=**'black'**, bg=**'white'**,show=**'\*'**)  
 self.l1.grid(row=2,column=1,padx=10,pady=10)  
 self.l2.grid(row=3,column=1,padx=10,pady=10)  
 self.e\_username.grid(row=2,column=2,padx=10,pady=10)  
 self.e\_pwd.grid(row=3,column=2,padx=10,pady=10)  
 self.b1=Button(self.frame,text=**"Create user"**,height=2,width=12,bg=**"white"**,font=(**"Consolas"**, 10),command=**lambda** :self.create\_user())  
 self.b1.grid(row=4,column=1,columnspan=2,padx=10)  
  
 **def** create\_user(self):  
 user=self.e\_username.get()  
 pwd=self.e\_pwd.get()  
 query=**"Insert into practice\_user(Username,Password) Values('%s','%s')"** params=(user,pwd)  
 execute\_query(query,params)  
 messagebox.showinfo(**'Success!'**,**f'User with username {**user**} created successfully. Redirecting you to login screen'**)  
 self.login(**"user"**)  
  
 **def** reset(self):  
 print(**"Reset called"**)  
 self.e\_username.delete(0,END)  
 self.e\_pwd.delete(0, END)  
 self.l3.destroy()  
 self.l4.destroy()  
  
  
  
 **def** Quiz(self):  
 self.frame.destroy()  
 **global** questions  
 **global** answers\_choice  
  
 *# load questions and answer choices from json file instead of the file* **with** open(**'C:\\Users\\Piyu\\PycharmProjects\\project\\data.json'**, encoding=**"utf8"**) **as** f:  
 data = json.load(f)  
  
 *# convert the dictionary in lists of questions and answers\_choice* questions = [v **for** v **in** data[0].values()]  
 answers\_choice = [v **for** v **in** data[1].values()]  
 **global** answers  
 answers = [1, 1, 3, 1, 3, 1, 2, 1, 3, 3, 2, 1, 3, 2]  
  
 **global** user\_answer  
 user\_answer = []  
 **global** indexes  
 indexes = []  
  
  
 **def** gen():  
 **global** indexes  
 **while** (len(indexes) < 10):  
 x = random.randint(0, 9)  
 **if** x **in** indexes:  
 **continue  
 else**:  
 indexes.append(x)  
  
 **def** showresult(score):  
 lblquestion.destroy()  
 r1.destroy()  
 r2.destroy()  
 r3.destroy()  
 r4.destroy()  
 labelimage = Label(root, background=**"white"**, border=0)  
 labelimage.pack(pady=0)  
 labelresulttext = Label(root, font=(**"Consolas"**, 20), background=**"white"**)  
 labelresulttext.pack(pady=0)  
 **if** score >= 80:  
 img = PhotoImage(file=**"C:\\Users\\Piyu\\Desktop\\Python\\quizstar\\great.png"**)  
 labelimage.configure(image=img,pady=0)  
 labelimage.image = img  
 labelresulttext.configure(text=**f"You are Excellent!!\nYour score is {**score**}"**,pady=0)  
 **elif** (score >= 40 **and** score < 80):  
 img = PhotoImage(file=**"C:\\Users\\Piyu\\Desktop\\Python\\quizstar\\ok.png"**)  
 labelimage.configure(image=img,pady=0)  
 labelimage.image = img  
 labelresulttext.configure(text=**f"You can do better!\nYour score is {**score**}"**,pady=0)  
 **else**:  
 img = PhotoImage(file=**"C:\\Users\\Piyu\\Desktop\\Python\\quizstar\\bad.png"**)  
 labelimage.configure(image=img,pady=0)  
 labelimage.image = img  
 labelresulttext.configure(text=**f"You have to work hard!!\nYour score is {**score**}"**,pady=0)  
  
  
  
 **def** calc():  
 **global** indexes, user\_answer, answers, score  
 x = 0  
 score = 0  
 **for** i **in** indexes:  
 **if** (user\_answer[x] == answers[i]):  
 score += 10  
 x += 1  
 print(score)  
 showresult(score)  
  
  
 **global** ques  
 ques = 1  
  
 **def** selected():  
 **global** radiovar, user\_answer  
 **global** lblquestion, r1, r2, r3, r4  
 **global** ques  
 x = radiovar.get()  
 user\_answer.append(x)  
 radiovar.set(-1)  
 **if** ques < 10:  
 lblquestion.config(text=questions[indexes[ques]])  
 r1[**"text"**] = answers\_choice[indexes[ques]][0]  
 r2[**"text"**] = answers\_choice[indexes[ques]][1]  
 r3[**"text"**] = answers\_choice[indexes[ques]][2]  
 r4[**"text"**] = answers\_choice[indexes[ques]][3]  
 ques += 1  
 **else**:  
 print(indexes)  
 print(user\_answer)  
 calc()  
  
 **def** startquiz():  
 **global** lblquestion, r1, r2, r3, r4  
 lblquestion = Label(root, text=questions[indexes[0]], font=(**"Consolas"**, 16), width=600, justify=**"center"**,  
 wraplength=500, background=**"#078ca3"**,fg=**"white"**)  
 lblquestion.pack(pady=50)  
 **global** radiovar  
 radiovar = IntVar()  
 radiovar.set(-1)  
 r1 = Radiobutton(root, text=answers\_choice[indexes[0]][0], font=(**"Times"**, 12), value=0, variable=radiovar,  
 command=selected, background=**"white"**)  
 r1.pack(pady=2)  
 r2 = Radiobutton(root, text=answers\_choice[indexes[0]][1], font=(**"Times"**, 12), value=1, variable=radiovar,  
 command=selected, background=**"white"**)  
 r2.pack(pady=2)  
 r3 = Radiobutton(root, text=answers\_choice[indexes[0]][2], font=(**"Times"**, 12), value=2, variable=radiovar,  
 command=selected, background=**"white"**)  
 r3.pack(pady=2)  
 r4 = Radiobutton(root, text=answers\_choice[indexes[0]][3], font=(**"Times"**, 12), value=3, variable=radiovar,  
 command=selected, background=**"white"**)  
 r4.pack(pady=2)  
  
 **def** startIsPressed():  
 labeltext.destroy()  
 labelinstruction.destroy()  
 labelrules.destroy()  
 labelimage.destroy()  
 btnStart.destroy()  
 gen()  
 startquiz()  
  
 img1 = PhotoImage(file=**"C:\\Users\\Piyu\\Desktop\\Python\\quizstar\\quiz.png"**)  
 labelimage = Label(root, image=img1, bg=**"white"**)  
 *#labelimage.configure(image=img1)* labelimage.image = img1  
 labelimage.pack(pady=(0, 0))  
  
 labeltext=Label(root,text=**"QUIZ"**,font=(**"Comic sans MS"**,24,**"bold"**),background=**"white"**)  
 labeltext.pack(pady=(20,50))  
  
 labelinstruction=Label(root,text=**"Read the Rules and\nClick Start Once You are raedy"**,background=**"white"**,font=(**"Consolas"**,14),justify=**"center"**)  
 labelinstruction.pack(pady=(10,5))  
  
 labelrules=Label(root,text=**"This quiz contains 10 questions and there is no time limit\nOnce you select a radio button that will be a final choice\nHence think before you select\nYou’ll get 10 point for each correct answer\nAt the end of the quiz, you’ll receive a total score\nThe maximum score is 100\nGood luck!"**,width=100,font=(**"Times"**,14),background=**"#078ca3"**,foreground=**"white"**)  
 labelrules.pack()  
  
 btnStart = Button(root, height=2, width=7, bg=**"lightgray"**, fg=**"black"**, font=(**"Consolas"**, 10), text=**"Start >>"**,command=startIsPressed)  
 btnStart.pack(pady=(10, 10))  
  
  
  
root=Tk()  
root.title(**"QUIZ"**)  
root.geometry(**"600x600"**)  
root.config(background=**"white"**)  
root.resizable(0,0)  
HomePage(root)  
root.mainloop()