IP Project

Quiz Application on Tkinter

Made By:

Arshita	11-F	
Sania Gupta	11-E	
Bhramari	11-E	

ACKNOWLEDMENT

In the completion of this project successfully, many people have best owned upon their blessings and heart pledged support, this time I am utilizing to thank all the people who have been concerned with this project.

We would like to express our special thanks of gratitude to our Principal Ms. Shali Jacob ma'am and IP teacher Ms. Neha Bhatt ma'am who gave us the opportunity to do this wonderful project, which enhanced our knowledge.

We would like to thank our parents and friends for their help and support. Despite of their busy schedule they helped us a lot with this project.

Lastly, we would like to say that we are blessed to have all of them.

Thanking you…

PREFACE

This project is regarding exploring python-based quiz program. The completion of this project was in itself a unique and challenging task for us.

But being able to have a practical knowledge of developing a program is a lifetime experience.

This project involved a lot of patience and eager for exploring python software.

We faced a lot of failures in programming our “Quizz”, even then we continued to explore and make this project a success.

We are pleased to present this project. Proper care has been taken while organising the project so that it can be comprehended

Source Code

```
import tkinter
from tkinter import*
import json
import random
global questions, answer_choice,answers
with open('quiz.json', encoding="utf8") as f:
   data = json.load(f)
questions = [v for v in data[0].values()]
answers_choice = [v for v in data[1].values()]
answers = [1,0,2,0,3,2,0,0,3,1,1,3,0,2,2,0,2,0,3,1]
global user
with open('info.json',) as json_file:
   users = json.load(json_file)
user_answer = []
MCQ= []
def gen():
   global MCQ
   while(len(MCQ) < 10):
      x = random.randint(0,19)
      if x in MCQ:
         continue
      else:
         MCQ.append(x)
def Checkbutton_Is_pressed():
   global MCQ, Correctlabeltext, root,Checkbutton
   correct_ans=tkinter.Tk()
   correct_ans.title("Correct Answers")
   correct_ans.geometry("700x600")
   correct_ans.config(background="cyan")
   t={0: "Which is the only planet not named after Greek gods or goddesses? - b)Earth",
     1 :"Which planet has supersonic winds - a)Neptune",
     2 :"Which is the oldest planet in the solar planet - c)Jupiter",
     3 :"Which planet rotates on its side - a)Uranus",
     4 :"What is the name of the largest moon of Jupiter - d)Ganymede",
     5:"Which planet is known as the Morning star - c)Venus",
     6:"Which star is the Alpha Usra Minoris- a)Polaris",
     7:"Who was the third astronaut to walk on the moon- a)Charles P.Coronad",
     8:"How many stars make up the Big dipper - d)8",
     9:"Vesta is which type of celestial body - b)Asteroid",
     10:"What is a highly magnetized rotating neuron star - a)Pulsar",
     11:"How many constellations are there - d)88",
     12:"Where is the coldest place in the universe - a) Boomerang Nebula",
     13:"What are the largest stars in the universe - c)Red Gaint",
      14:"How many moons are there in the solar system - c)200",
      15:"Uranus has been only been visited by what spacecraft - a)Voyager 2",
      16:"How long is one day on venus - c)116 days on earth",
      17:"Which is the biggest volcano on Mars - a) Olympus Mons",
      18:"Which is the first artificial satellite - d)Sputnik",
      19: "Who was the first man to enter space - b)Yuri Gagarin }
    a=[]
    for i in range(len(MCQ)):
        for k in t:
            if MCQ[i]==k:
                Correctlabeltext=Label(correct_ans,text=t[k],background="snow",width="80",).pack(pady=(10,10))
def showresult(score):
    global lblQuestion,r1,r2,r3,r4 ,root,labelresulttext,Checkbutton,Total_score
    lblQuestion.destroy()
    r1.destroy()
    r2.destroy()
    r3.destroy()
    r4.destroy()
    Total_score=StringVar()
    Total_score=score
    labelresulttext = Label(root,font = ("Bell MT",20),background = "light yellow",width="40",height="3",
            wraplength=400,)
    labelresulttext.pack(pady=(20,0))
    labelscore=Label(root,text=Total_score,font=("Bell MT",20),width="40",height="3",background="light
            yellow",).pack()
    if score >= 40:
        labelresulttext.configure(text="You Are Excellent!!\nYour score is")
    elif (score >= 25 and score < 40):
        labelresulttext.configure(text="You Can Be Better !!\nYour score is")
    else:
        labelresulttext.configure(text="You Should Work Hard !!\nYour score is")
 Checkbutton=Button(root,text="Correct\nAnswer",background="gold",activebackground="green2",width="8",
          height="4",command=Checkbutton_Is_pressed,).pack(pady=(20,2))
def calc():
    global MCQ,user_answer,answers
    global Total_score
    x = 0
    score=0
    for i in MCQ:
        if user_answer[x] == answers[i]:
            score = score + 5
        x += 1
    showresult(score)
    Total_score=StringVar()
    Total_score=score
```

```
ques=1
def selected():
    global radiovar,user_answer,MCQ, lblQuestion,r1,r2,r3,r4,ques
    x = radiovar.get()
    user_answer.append(x)
    radiovar.set(-1)
    if ques < 10:
        lblQuestion.config(text= questions[MCQ[ques]])
        r1['text'] = answers_choice[MCQ[ques]][0]
        r2['text'] = answers_choice[MCQ[ques]][1]
        r3['text'] = answers_choice[MCQ[ques]][2]
        r4['text'] = answers_choice[MCQ[ques]][3]
        ques += 1
    else:
        calc()
def startquiz():
    global root, lblQuestion,r1,r2,r3,r4
    lblQuestion = Label(root,text = questions[MCQ[0]],font = ("Consolas", 16), width = "500", justify = "center",
        wraplength = "400", background = "snow",)
    lblQuestion.pack(pady=(100,30))
    global radiovar
    radiovar = IntVar()
    radiovar.set(-1)
    r1 = Radiobutton(root,text = answers_choice[MCQ[0]][0],font = ("Times", 12), value = 0, width="20",
        variable = radiovar,command = selected, background = "IndianRed1", )
    r1.pack(pady=5)
    r2 = Radiobutton( root,text = answers_choice[MCQ[0]][1],font = ("Times", 12), value = 1, width="20",
        variable = radiovarcommand = selected,background = "green2", )
    r2.pack(pady=5)
    r3 = Radiobutton(root, text = answers_choice[MCQ[0]][2], font = ("Times", 12), value = 2,width="20",
        variable = radiovar, command = selected, background = "DarkOrchid1", )
    r3.pack(pady=5)
    r4 = Radiobutton(root, text = answers_choice[MCQ[0]][3],font = ("Times", 12),value = 3, width="20",
        variable = radiovar, command = selected, background = "yellow", )
    r4.pack(pady=5)
def startIspressed():
   global root,labeltext,canvas,img,btnStart,lblInstruction,lblRules
    labeltext.destroy()
    canvas.destroy()
    lblInstruction.destroy()
    lblRules.destroy()
    btnStart.destroy()
    gen()
    startquiz()
def main_screenQuiz():
    main_screen.destroy()
    global root
    root=tkinter.Tk()
    root.title("Quizz")
    root.geometry("700x600")
    root.config(background="cyan")
    root.resizable(0,0)
    global labeltext,canvas,img,btnStart,lblInstruction,lblRules
    labeltext = Label(root, text = "Quizz",font = ("Comic sans MS",45,"bold"),background = "cyan",)
    labeltext.pack(pady=(0,30))
    canvas=Canvas(root,width=310,height=190)
    canvas.pack()
    img= PhotoImage(file="C:/Users/Kamlesh kumar/Desktop/Arshita/class 11/Quiz.gif")
    canvas.create_image(20,20,anchor=NW,image=img,)
    btnStart = Button(root, text="Start >>", font=("Algerian Regular",10), command = startIspressed,
          background="gold",height="2",)
    btnStart.pack(pady=(2,2))
    lblInstruction = Label( root, text = "Rules", background = "snow",font = ("Consolas",14), justify = "center",)
    lblInstruction.pack(pady=(10,1)
    lblRules = Label( root,text = "This quiz contains 10 questions\nYou cannot recorrect the question you answered
       before\nhence think     before you select\n You will get +5 for each correct answers", width = "100",font =
       ("Times",12),background = "lavender", foreground = "Navy",)
    lblRules.pack()
    root.mainloop()
def login():
    global login_screen
    login_screen=Toplevel(main_screen)
    login_screen.title("Login")
    login_screen.geometry("300x250")
    login_screen.config(background="LightSkyBlue1")
    Label(login_screen,text="Please enter details below to login",font=("Bell MT",12),bg="light
salmon",width="35",height="2",).pack()
    global username_verify
    global password_verify
    username_verify=StringVar()
    password_verify=StringVar()
    Label(login_screen, text="Username",background="LightSkyBlue1",).pack()
    username_login_entry=Entry(login_screen,textvariable=username_verify)
    username_login_entry.pack()
    Label(login_screen, text="Password",background="LightSkyBlue1",).pack()
password_login_entry=Entry(login_screen,textvariable=password_verify,show="*",).pack()

Button(login_screen,text="Login",activebackground="green2",width="10",height="1",command=loginIspressed,).pack(
pady=(5,2))
def loginIspressed():
    global login_screen
    global user
    username1=username_verify.get()
    password1=password_verify.get()
    if password1  in users and users[password1]==username1:
        Label(login_screen,text="Successfully logged in,\n Click on Let's Go to start the quiz",fg="blue2",).pack()
        Button(login_screen,text="Let's Go",background="yellow", width="6",height="2",
                                                        command =    main_screenQuiz,)  .pack()
    else:
        Label(login_screen,text="User doesn't exist or wrong password").pack()
def register():
    global username,password,username_entry,password_entry,register_screen
    register_screen=Toplevel(main_screen)
    register_screen.title("Register")
    register_screen.geometry("300x250")
    register_screen.config(background="LightSkyBlue1")
    username=StringVar()
    password=StringVar()
    Label(register_screen,text="Please enter details below",font=("Bell MT",12),bg="lightsalmon",
            width="35",height="2",).pack(pady=(1,1))
    username_lable=Label(register_screen,text="Username * ",background="LightSkyBlue1",).pack()
    username_entry=Entry(register_screen,textvariable=username,).pack()
    password_lable=Label(register_screen,text="Password * ",background="LightSkyBlue1",).pack()
    password_entry=Entry(register_screen,textvariable=password,show="*",).pack()
    Button(register_screen,text="Register",activebackground="green2",width="10",height="1",
         command=registerIspressed,).pack(pady=(4,2))
def registerIspressed():
    global register_screen,user
    username_info=username.get()
    password_info=password.get()
    for i in range (1):
       if password_info not in users:
           users[password_info]=username_info
           with open("user.json","w") as fp:
               json.dump(users,fp)
           Label(register_screen,text="Registration success",fg="blue2",).pack()
           Button(register_screen,text="Let's
Go",activebackground="green2",background="yellow",width="6",height="2",command=main_screenQuiz,).pack()
       else:
           Label(register_screen,text="Sorry the password you have\n entered is already in use\nSo, please enter anoter
password",).pack()
def main_account_screen():
    global main_screen
    main_screen = tkinter.Tk()
    main_screen.geometry("300x250")
    main_screen.title("Account Login")
    main_screen.config(background="cornflower blue")
    Label(text="Choose Login Or Register",font=("Bell MT",12),bg="light salmon",width="35",height="2",).pack()
    LButton=Button(text="Login",activebackground="green2", height="2", width="25",
      command=login,).pack(pady=(10,2))
    RButton=Button(text="Register",activebackground="green2", height="2", width="25",command=register,).pack()
    main_screen.mainloop()
main_account_screen()
```

Source code(quiz.json):

This file contains Questions and its option in the form of dictionary nested in a list

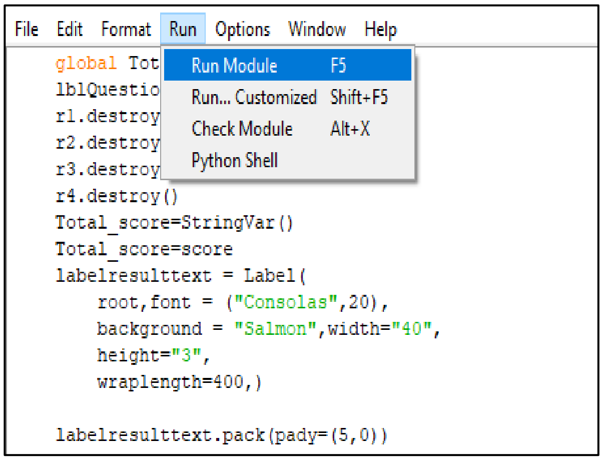
```
[{    "1": "Which is the only planet not named after Greek gods or goddesess?",

      "2": "Which planet has supersonic winds",

      "3": "Which is the oldest planet in the solar planet?",

      "4": "Which planet rotates on its side?",

      "5": "What is the name of the largest moon of Jupiter?",

      "6": "Which planet is known as the Morning star?",

      "7": "Which star is the Alpha Usra Minoris?",

      "8": "Who was the third astronaut to walk on the moon?",

      "9": "How many stars make up the Big dipper?",

      "10": "Vesta is which type of celestial body?",

      "11": "What is a highly magnetized rotating neuron star?",

      "12": "How many constellations are there?",

      "13": "Where is the coldest place in the universe?",

      "14": "Which is the largest star in the universe?",

      "15": "How many moons are there in the solar system?",

      "16": "Uranus has been only been visited by what spacecraft?",

      "17": "How long is one day on venus?",

      "18": "Which is the biggest volcano on Mars?",

      "19": "Which is the first artificial satelite?",

      "20": "Who was the first man to enter space? },

  { "1": [ "a)Saturn", "b)Earth","c)Neptune","d)Mercury" ],
      "2": [ "a)Neptune","b)Saturn", "c)Jupiter","d)Mars  ],
      "3": ["a)Neptune","b)Uranus", "c)Jupiter", "d)Saturn" ],
      "4": [ "a)Uranus",  "b)Saturn","c)Venus","d)Mars”  ],
      "5": [ "a)Europa", "b)Lo","c)Callisto", "d)Ganymede”   ],
      "6": [ "a)Mars",  "b)Earth","c)Venus", "d)Jupiter” ],
      "7": [ "a)Polaris", "b)Sirius", "c)Altair", "d)Rigel”  ],
      "8": ["a)Charles P.Conorad", "b)Micheal Colin", "c)Niel Arm Strong", "d)Buz Aldrin” ],
      "9": ["a)7","b)10","c)9","d)8"  ],
      "10": ["a)Meteroid", "b)Astroid", "c)Star","d)Planet”],
      "11": [ "a)Neutral Star", "b)Pulsar","c)Magnetars","d)Neutron Star"  ],
      "12": [ "a)86",  "b)89", "c)90","d)88”  ],
      "13": ["a)Boomerang Nebula","b)Lunar South Pole", "c)Cat Eyes Nebula","d)Ring Nebula”  ],
      "14": ["a)Blue Gaint","b)Super Gaint","c)Red Gaint","d)Double Gaint” ],
      "15": ["a)201", "b)198","c)200","d)202" ],
      "16": ["a)Voyager-2","b)Cartosat-2","c)RISAT-2", "d)HySIS”  ],
      "17": ["a)301 days on Earth","b)245 days on Earth","c)116 days on Earth", "d)243 days on Earth”  ],
      "18": ["a)Olumpus Mons","b)Ascraeus Mons","c)Pavonis Mons", "d)Arsia Mons”  ],
      "19": ["a)GSAT-17", "b)Microsat","c)IRNSS-1H","d)Sputnik”  ],
      "20": ["a)John Glenn", "b)Yuri Gagarin","c)Jim Lovwl”,"d)Guion Bluford”  ] }]
```

Source code(info.json):

```
{"12345": "user1", "23456": "user2", "67890": "user3"}
```

Note: Please save the picture attached with the folder in C drive in a Gif format

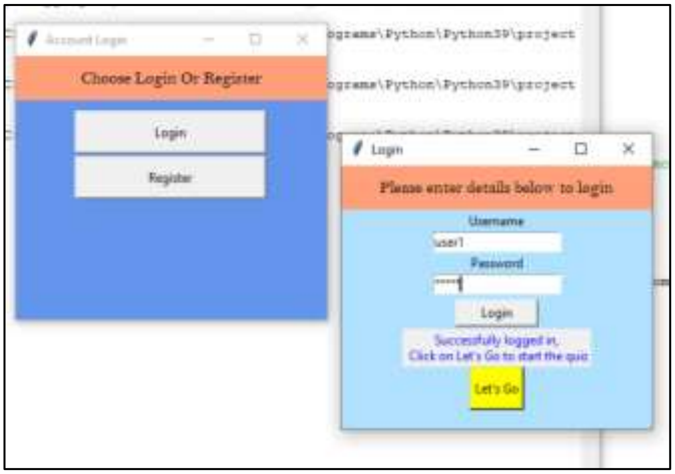
SNAPSHOTS(with guidelines)



```
    global Tot
    lblQuestio
    r1.destroy
    r2.destroy
    r3.destroy
    r4.destroy()
    Total_score=StringVar()
    Total_score=score
    labelresulttext = Label(
        root,font = ("Consolas",20),
        background = "Salmon",width="40",
        height="3",
        wraplength=400,)

    labelresulttext.pack(pady=(5,0))
```

To Run the program,
Click on Run Module

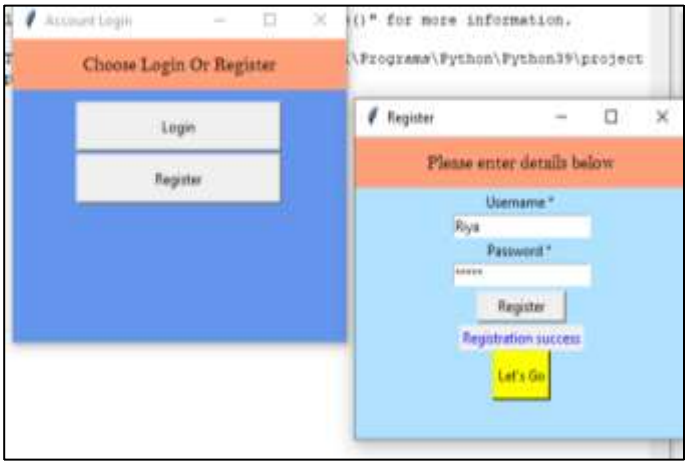
You need to login or register yourself to play the QUIZZ !!!



```
ograms\Python\Python39\project
ograms\Python\Python39\project
```

Username: user1
Password: *****

Successfully logged in,
Click on Let's Go to start the quiz

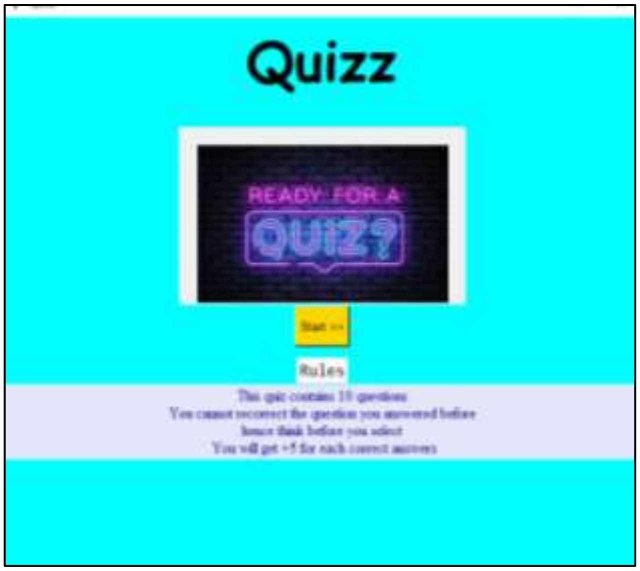


```
()" for more information.
\Programs\Python\Python39\project
```

Username *: Riya
Password *: *****

Registration success

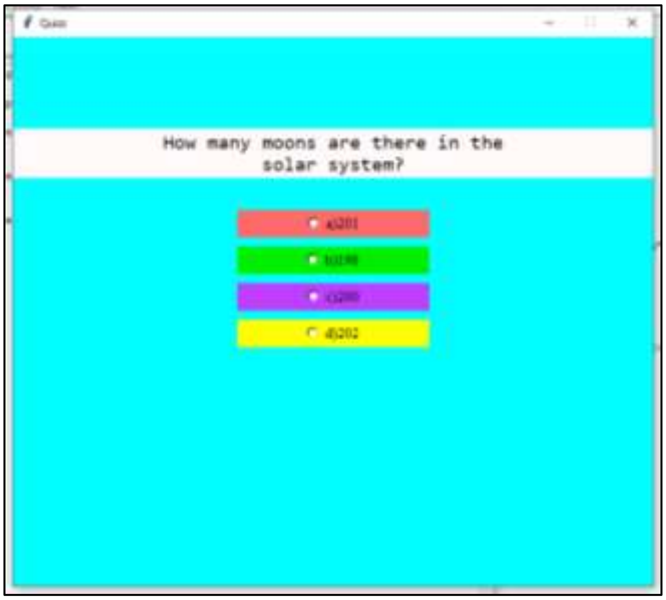
Once you have entered the correct username and its password, you will receive a message as REGISTRATION SUCCESS



This quiz contains 10 questions
You cannot recorrect the question you answered before
hence think before you select
You will get +5 for each correct answers

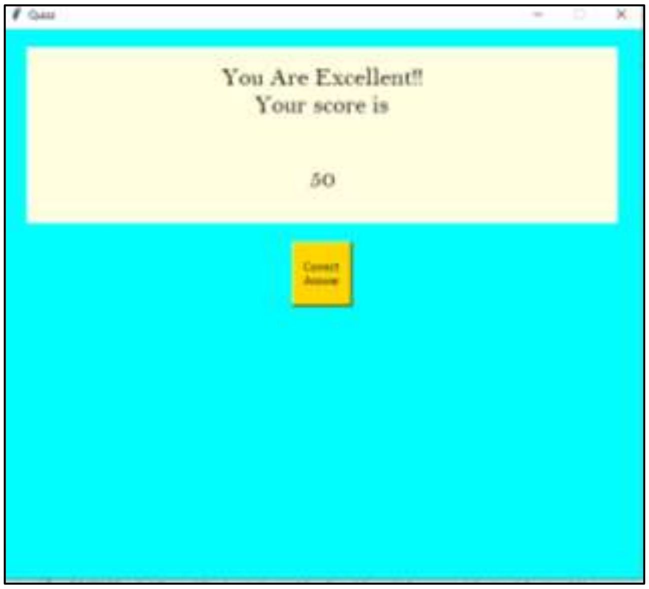
Read the rules, press the yellow-coloured button named START.

Be patient and get ready to test your general knowledge.



How many moons are there in the solar system?

○ a)201
○ b)198
○ c)200
○ d)202

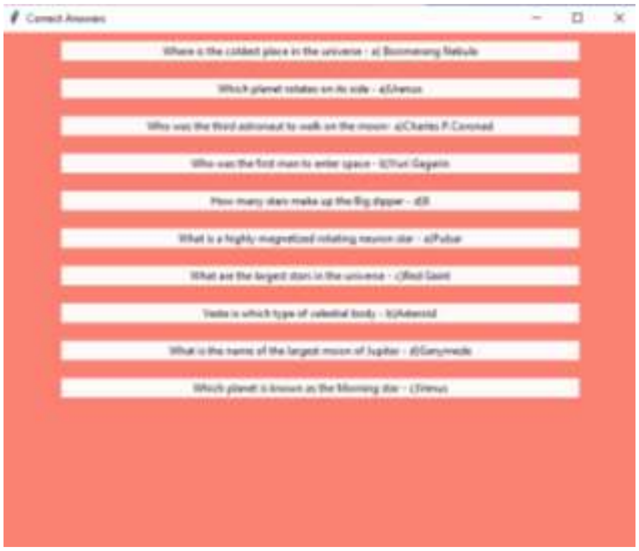


You Are Excellent!!
Your score is

50

At the end, you can see your performance in terms of score.

Click on the correct answer button, and know where you went wrong.



Where is the coldest place in the universe - a) Boomerang Nebula

Which planet rotates on its side - a)Uranus

Who was the third astronaut to walk on the moon - a)Charles P. Conrad

Who was the first man to enter space - b)Yuri Gagarin

How many stars make up the Big dipper - d)8

What is a highly magnetized rotating neuron star - a)Pulsar

What are the largest stars in the universe - c)Red Giant

Vesta is which type of celestial body - b)Asteroid

What is the name of the largest moon of Jupiter - d)Ganymede

Which planet is known as the Morning star - c)Venus

Bibliography-

- https://www.youtube.com/watch?v=ES8GDaBbgEI
- https://www.tutorialspoint.com/python/python_gui_programming.htm
- https://pythonexamples.org/python-tkinter-login-form/
- https://www.javatpoint.com/how-to-read-json-file-in-python

Thank You