Quiz Game

A PROJECT REPORT

Submitted by

Roll no	Name
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45	Ritika Balaji Kurapati

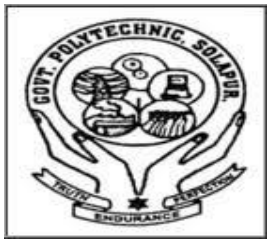
IN PARTIAL FULFILLMENT OF THE SIXTH SEMESTER

In

COMPUTER TECHNOLOGY

Under The Guidance of

Mr. Nilesh Bhalerao



GOVERNMENT POLYTECHNIC, SOLAPUR

MAHARASHTRA STATE OF TECHNICAL EDUCATION, MUMBAI

Summer – 2020

CERTIFICATE

MAHRASHTRA STATE BOARD OF TECHNICAL EDUCATION MUMBAI

GOVERNMENT POLYTECHNIC, SOLAPUR

This is to certify that the following students:

Roll no	Name
33	Shraddha Kumar Jannu
45	Ritika Balaji Kurapati

of Sixth Semester of Diploma In Computer Technology of Institute Government Polytechnic , Solapur (Code : 0015) have complete the micro- project work satisfactorily under supervision and guidance in subject ***Programming With Python(22616)*** *for the academic year 2019 – 2020 as prescribed in the curriculum.*

Mr. Nilesh Bhalerao	Mr. Arun Tarange	Mr. M.Chittlange
(Guided By)	(H.O.D.)	(Principle)

ACKNOWLEDGMENT

We wish to express our profound and sincere gratitude to our guide PROF Mr. Nilesh Bhalerao sir a who guided us into the intricacies of this micro- project non-chalantly with matchless magnanimity. We are indebted to her constant encouragement, co-operation and help. It was his enthusiastic support that helped us in overcoming the various obstacles in this project .

We would also like to express our thankfulness to our beloved Principal, H.O.D., and other faculty members of our Third Year Department for extending their support and motivation.

Thank you …..!!!!

ABSTRACT

Python is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991, Python's design philosophy emphasizes code readability with its notable use of significant whitespace.

Tkinter is a Python binding to the Tk GUI toolkit. It is the standard Python interface to the Tk GUI toolkit, and is Python's de facto standard GUI. Tkinter is included with standard Linux, Microsoft Windows and Mac OS X installs of Python.

Python when consolidated with Tkinter gives a quick and simple approach to make GUI applications. Tkinter gives an intense question situated interface to the Tk GUI toolbox.

Making GUI application utilizing Tkinter is simple assignment. We should simply play out the accompanying strides:

- Import the Tkinter module
- Create the GUI application principle window
- Add the least one of the previously mentioned gadgets to the GUI application
- Enter the header circle to make a move against every occasion activated by the client

PART A – Micro-Project Proposal

Quiz Game using Tkinter

1.0 Brief Introduction

A quiz is a form of game or mind sport, in which the players (as individuals or in teams) attempt to answer questions correctly. It is a game to test the knowledge about a certain subject. In some countries, a quiz is also a brief assessment used in education and similar fields to measure growth in knowledge, abilities, and/or skills.

To implement this we used different functionalities of Python like Tkinter \ module which us used for graphics part i.e we used labels, radiobuttons and button to display the questions and options to the user. We also used list to store the no. of questions options and that particular answers. To get questions randomly we used random function. To use random function we need to import random module in our program.

In this application we also provided the different levels for user. There are total 3 levels that are Normal, Medium and Hard. If user cracks the Normal level then he/she can play the next level otherwise the respected level will displayed again and again.

- The objective of the project is to play an game with the GUI support.
- This is how we use graphics in Python.
- Tkinter is the python interface to the Tk GUI toolbox dispatched with Python.
- Python when combined with Tkinter provides a fast and easy way to create GUI applications.
- Tkinter provides a powerful object-oriented interface to the Tk GUI toolkit.
- random.shuffle() functions randomly reorders the elements in a list.

2.0 Aim of the Micro-Project

This Micro-Project aims at:

1. To play a game using graphics in python that enhances general knowledge
2. Using Tkinter module we implemented the graphics part

3.0 Intended Course Outcomes

a) Implemented program for given problem.
b) Learned Tkinter Module and its functionalities
c) Learned and implemented different controls of Tkinter like, Label, Button, Entry and Radiobuttons.
d) Learned random module and messagebox module and their different methods.
e) Understood how to develop own games in python.

4.0 Literature Review

A Quiz is a form of game or mind sport, in which the players(as individuals or teams) attempt to answer questions correctly. It is a game to test the knowledge about a certain subject. In some countries, a quiz is also a brief assessment used in education and similar fields to measure growth in knowledge, abilities and/or skills.

Quizzes may be held on a variety of subjects which could be anything or subject-specific. The format of the quiz can also vary. Popularly known competition quiz are Pub quizzes, Quiz bowl, Music for the Mission and many more.

Neil O'Brien conducted the first documented, formal quiz in 1967 at Christ the King Church Parish Hall in Kolkata. On 12 April 1972, Bournvita Quiz Contest, for high school students, become the first quiz show to be broadcast on radio in India. Hamid Sayani and Ameen where the first quizmasters from this contest. The first Quiz show to become nationally popular was Quiz Time which had its first season in 1985. Quizmaster 'Siddhartha Basu' labeled as the 'Grandfather of the quiz game in India'. Further many quiz shows were broadcasted on television and radio. Later in 2000, Kaun Banega Crorepati quiz reignited nationwide interest in quizzing, becoming one of the most popular quiz shows of all time.

Later, Institutes, High schools and primary schools also had arranged quiz competitions in their premises based on various interest to enhance the knowledge, skills, abilities, interest of students in various fields. In this digital generation, many quiz applications, web based applications are developed.

5.0 Proposed Methodology

- Python

  Python is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991, Python's design philosophy emphasizes code readability with its notable use of significant whitespace

- List

  The list is fundamentally adaptable information sort accessible in Python which can be composed as a list of comma isolated values between square brackets. Significance thing about a list us that things in a lust require not be of similar type.

- Tkinter

  Python offers multiple options for developing GUI (Graphical User Interface). Out of all the GUI methods, tkinter is the most commonly used method. It is a standard Python interface to the Tk GUI toolkit shipped with Python. Python with tkinter is the fastest and easiest way to create the GUI applications. Creating a GUI using tkinter is an easy task.

  Tkinter is the standard GUI library for Python. Python when combined with Tkinter provides a fast and easy way to create GUI applications. Tkinter provides a powerful object-oriented interface to the Tk GUI toolkit.

- random module

  Functions in the random module depend on a pseudo-random number generator function random(), which generates a random float number between 0.0 and 1.0.

1. random.random(): Generates a random float number between 0.0 to 1.0. The function doesn't. need any arguments
2. random.randint(): Returns a random integer between the specified integers.
3. random.randrange(): Returns a randomly selected element from the range created by the start, stop and step arguments. The value of start is 0 by default. Similarly, the value of step is 1 by default.
4. random.choice(): Returns a randomly selected element from a non-empty sequence. An empty sequence as argument raises an IndexError.
5. random.shuffle(): This functions randomly reorders the elements in a list.

6.0 Resources Required

S. No.	Name of Resource/material	Specifications	Qty	Remarks
1	Laptop	4GB Ram 2GB graphics card	1	
2	Python IDLE	Version 3.8	1	

7.0 Action Plan

S. No.	Details of activity	Planned Start date	Planned Finish date	Name of Responsible Team Members
1	• Learned the Tkinter library • Checked various graphics components • Processed on the components	26/2/2020	6/2/2020	Shraddha Jannu Ritika Kurapati
2	• Learned how to use random module • Implemented the actual program • Learned the Tkinter for GUI . • Used different controls to design GUI • Implemented button click, radiobutton click by using python Tkinter library • Integrated all the three levels of game	6/2/2020	10/3/2020	Shraddha Jannu Ritika Kurapati

PART B – Micro-Project Report

Quiz Game using Tkinter

1.0 Rationale

A quiz is a form of game or mind sport, in which the players (as individuals or in teams) attempt to answer questions correctly. It is a game to test the knowledge about a certain subject. In some countries, a quiz is also a brief assessment used in education and similar fields to measure growth in knowledge, abilities, and/or skills.

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- The objective of the project is to play an game with the GUI support.
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- Python when combined with Tkinter provides a fast and easy way to create GUI applications.
- Tkinter provides a powerful object-oriented interface to the Tk GUI toolkit.
- random.shuffle() functions randomly reorders the elements in a list.

2.0 Course Outcomes Addressed

a) Learned the Tkinter library in python
b) Understood and implemented Tkinter controls like Label, Button, Radio Button and Entry field.
c) Implemented messagebox using messagebox module and learned methods of messagebox module.
d) Understood the concept of random module and used methods of random module.
e) Understood list data type and their methods.

3.0 Literature Review

A Quiz is a form of game or mind sport, in which the players(as individuals or teams) attempt to answer questions correctly. It is a game to test the knowledge about a certain subject. In some countries, a quiz is also a brief assessment used in education and similar fields to measure growth in knowledge, abilities and/or skills.

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Later, Institutes, High schools and primary schools also had arranged quiz competitions in their premises based on various interest to enhance the knowledge, skills, abilities, interest of students in various fields. In this digital generation, many quiz applications, web based applications are developed.

4.0 Actual Methodology Followed

1. Learned Tkinter library.

2. Learned List and random module of python.
3. Created a list of questions, options and that related answer.
4. For the Normal round selected the simple questions and given the condition that user have to score more than 3 marks the play the next level
5. Similarly created for other two levels i.e Medium and Hard and calculated the score.

5.0 Algorithm

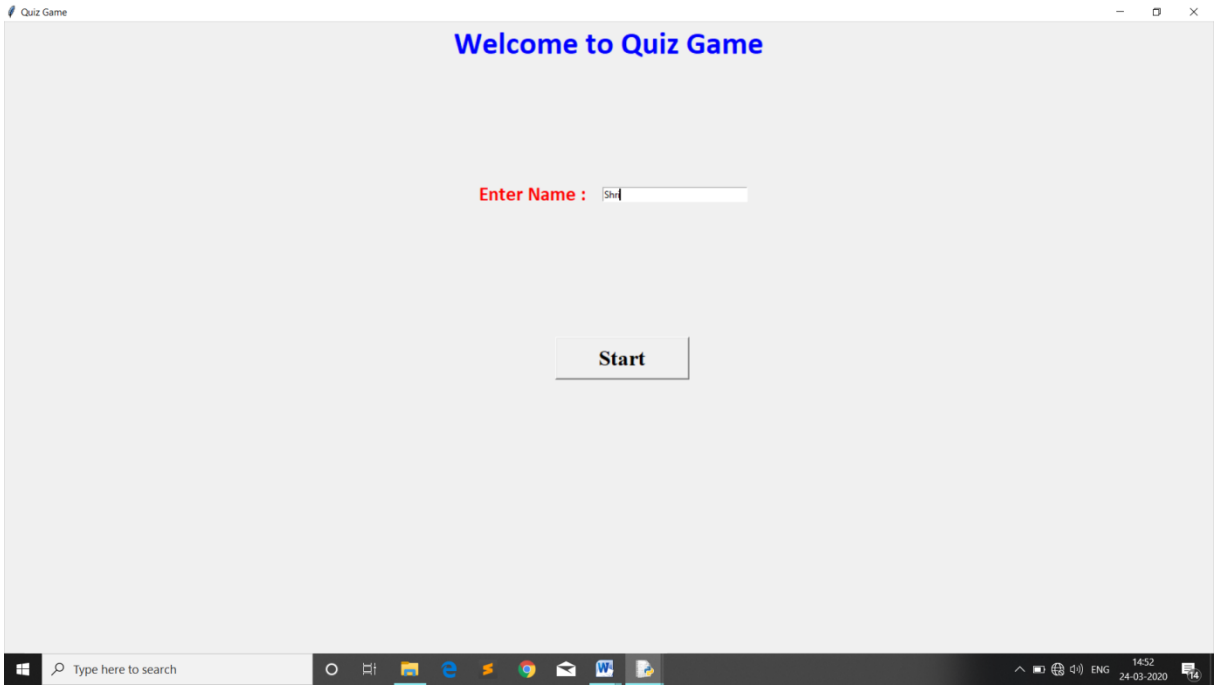
1. Start
2. Import tkinter module to design GUI, import messagebox to display score in dialog box and import random module to retrieve questions randomly.
3. Create object of Tk() class i.e root and set title, position of frame.
4. Create object of Label to display title as 'Welcome to Quiz Game.'
5. Create a textfield to input name of player and a button to start the game.
6. Call function start_game() on button click as:
   btn=Button(top,text="Submit",font=("Calibri",15,"bold"),command=level1_cal, width=15)
7. Define start_game() function and create a new frame to place questions.
8. Define two list as 'que' that contains questions, 'opt' that contains options.
9. Declare variables j and k and assign them 10 to each. This variables acts as iterate variables.
10. Write a for loop to retrieve randomly any 5 questions that has to been given to player using the choice() function of random module.
    for i in range(0,5)
11. Write while loop for the purpose to place the questions and options properly on the screen.
12. Declare variable 'index' to store index of randomly selected question from list 'que'. Declare a variable 'a' to get options from list 'opt' of corresponding selected question as shown below,
    r = random.choice(que)
    index = que.index(r)
    a = opt[index]
13. Define a Label to display randomly selected question and define its position as x=300, y=70+j.
14. Define three Radiobuttons to display options of associated question and define its positions as x=300, y=100+k.
15. Call function check() to check whether selected answer is correct or not.
16. In check() function, declare list as 'ans' that contains correct answers and check this answers against to selected answers. For correct answer increment score variable
17. Terminate while loop when j<=650.

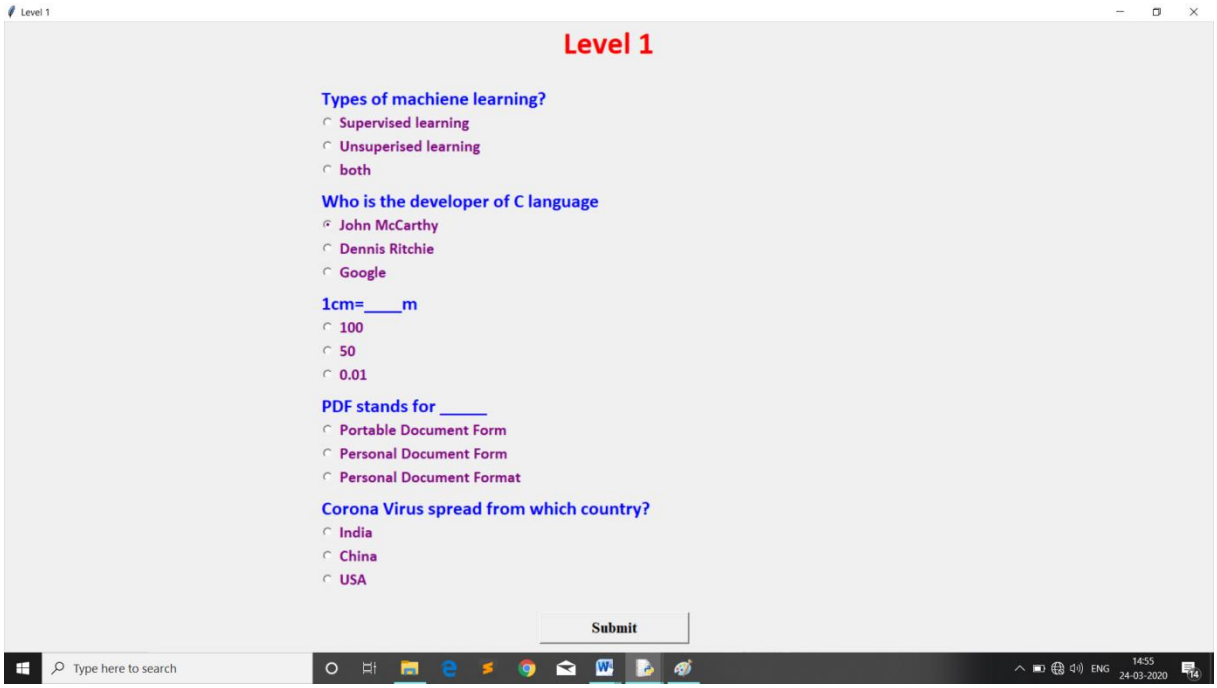
18. Define a button to submit all the selected answers and define its position as x=680, y=700.
19. Call function cal() on button click to check selected answers.
20. In cal() function check whether score is greater than 3 or not. If score is greater than 3 display a messagebox that asks player “Do you want to play next level”, if yes repeat step 7 else display total score of player in messagebox.
21. Finally display certificate of player name.
22. Stop.

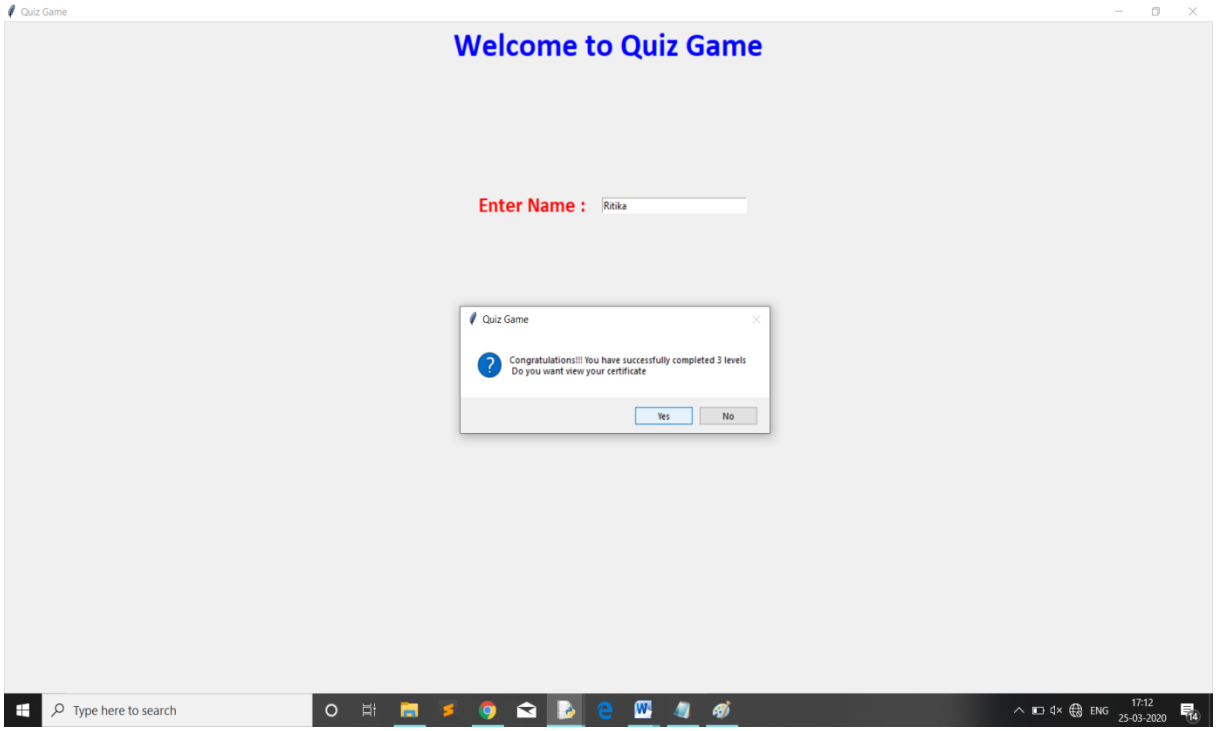
5.0 Actual Resources Used

S. No.	Name of Resource/material	Specifications	Qty	Remarks
1	Computer	Windows 10 RAM=4GB	1	
2	Python	Version 3.0+	1	

6.0 Outputs of the Micro-Project




Level 1
Level 1
Types of machiene learning?
Supervised learning
Unsuperised learning
both
Who is the developer of C language
John McCarthy
Dennis Ritchie
Google
1cm=____m
100
50
0.01
PDF stands for _____
Portable Document Form
Personal Document Form
Personal Document Format
Corona Virus spread from which country?
India
China
USA
Submit
Type here to search
ENG
14:55
24-03-2020


Quiz Game
Welcome to Quiz Game
Enter Name :
Ritika
Quiz Game
Congratulations!!! You have successfully completed 3 levels
Do you want view your certificate
Yes
No
Type here to search
ENG
17:12
25-03-2020

Code

```
from tkinter import *
import tkinter.messagebox
import random

#function for level1
def start_game():
    top=Toplevel()
    top.title("Level 1")
    top.geometry("800x800")
    l1_head=Label(top,text="Level 1",fg="red",font=("calibri",30,"bold"))
    l1_head.pack()
    #List of questions
    que = ["PDF stands for _____",
           "USB stands for _____",
           "Frist AI Programming language is ____",
```

```
        "Who is the developer of C language",
        "Types of machiene learning?",
        "1cm=____m",
        "What is the formula speed ?",
        "Father of Indian Navy____",
        "Corona Virus spread from which country?",
        "Second largest peak in world____"]

    # list of options
    opt = [["Portable Document Form", "Personal Document Form", "Personal Document
Format"],
        ["Universal Serial Bus", "Uniform Source Byte", "Universal Serial Byte"],
        ["IPL", "LISP", "C"],
        ["John McCarthy ", "Dennis Ritchie", "Google"],
        ["Supervised learning ", "Unsuperised learning ", "both"],
        ["100", "50", "0.01"],
        ["distance / time", "power * time", "time * distance"],
        ["Shahu Maharaj", "Sambhaji Raje", "Shivaji Maharaj"],
        ["India", "China", "USA"],
        ["k2", "Annapurna", "Nanda Devi"]]
    k=10
    j=10
    # loop to retrieve randomly question from list
    for i in range(0, 5):
        while j <= 650:
            r = random.choice(que)
            index = que.index(r)
            a = opt[index]
            l2 = Label(top, text=r, fg="blue", font=("calibri", 18, "bold"))
            l2.pack()
            l2.place(x=400, y=70 + j)
            j += 130
            r1 = Radiobutton(top, text=a[0], fg="purple", font=("calibri", 15, "bold"), variable=v,
value=a[0],command=check)
```

```
        r2 = Radiobutton(top, text=a[1], fg="purple", font=("calibri", 15, "bold"), variable=v,
value=a[1],command=check)
        r3 = Radiobutton(top, text=a[2], fg="purple", font=("calibri", 15, "bold"), variable=v,
value=a[2],command=check)
        r1.pack()
        r2.pack()
        r3.pack()

        r1.place(x=400, y=100 + k)
        r2.place(x=400, y=130 + k)
        r3.place(x=400, y=160 + k)
        k += 130

    btn=Button(top,text="Submit",font=("times new roman",15,"bold"),command=level1_cal,
width=15)
    btn.pack()
    btn.place(x=680,y=750)

#function to calculate score for level1
def level1_cal():
    l=str(len(level1_score))
    msg="Congratulations!! You have scored "+l
    tkinter.messagebox.showinfo('Quiz Game',msg)
    if len(level1_score)>3:
        demo=tkinter.messagebox.askquestion('Quiz Game','Do you want to continue with next
level')
        if demo=='yes':
            level2()
        else:
            print("You like to quit")
level1_score=[]
#function to check correct answers for level1
def check():
    ans=["Portable Document Form",
```

```
        "Universal Serial Bus",
        "LISP",
        "Dennis Ritchie",
        "both",
        "0.01",
        "distance / time",
        "Shivaji Maharaj",
        "China",
        "k2"]
    answer=v.get()
    if answer in ans:
        level1_score.append(answer)

#Function to display certificate
def certificate():
    canvas=Canvas(width=300,height=300, bg='white')
    canvas.pack(expand=YES,fill=BOTH)
    canvas.create_rectangle(150,80,1400,700,width=3, fill='white')

    title=Label(canvas,text="Certificate of Achievement",fg="blue",font=("Edwardian Script
ITC",55), bg='white')
    title.pack()
    title.place(x=500,y=120)

    l4=Label(canvas,text="Is hereby granted to",fg="red",font=("calibri",30), bg='white')
    l4.pack()
    l4.place(x=600,y=240)

    nm=txt_name.get()
    label_name=Label(canvas,text=nm,fg="blue",font=("calibri",35,"underline"), bg='white')
    label_name.pack()
    label_name.place(x=720,y=330)
```

```
    des1=Label(canvas,text="For Outstanding performance in",fg="red",font=("calibri",30),
bg='white')
    des1.pack()
    des1.place(x=520,y=420)

    des2=Label(canvas,text="Quiz Game",fg="red",font=("calibri",30), bg='white')
    des2.pack()
    des2.place(x=680,y=520)

#creates a frame to place controls
root=Tk()
root.title("Quiz Game")
root.resizable(width=TRUE,height=TRUE)
root.geometry("800x800")
head=Label(root,text="Welcome to Quiz Game",fg="blue",font=("calibri",30,"bold"))
head.pack()
name=Label(root,text="Enter Name : ",fg="red",font=("calibri",19,"bold"))
name.pack()
name.place(x=600,y=200)
txt_name=Entry(root,width=30)
txt_name.pack()
txt_name.place(x=760,y=210)
v = StringVar()
v.set(3)

# button to start the game
btn_start=Button(root,text="Start",font=("times new
roman",20,"bold"),width=10,command=start_game)
btn_start.pack()
btn_start.place(x=700,y=400)
root.mainloop()
```

7.0 Skill Developed / learning out of this Micro-Project

Learned the trending Tkinter python library. Learned how to use Tkinter in our program Using list we stored multiple questions in it and displayed it randomly using random module. To display questions and options on the screen we used label and radio button component of Tkinter library and to submit it we used button.

Non-technical Skills

Increased The communication skills

Understood the team work

Leadership

Initiative

Group Discussion

Increased Knowledge

8.0 Applications of this Micro-Project

1. Security

Python code itself is meant to be readable, even tokenized (. pyc) files could be reverse engineered but it's a lot harder. If you don't want anyone to read your code or reverse engineer your . pyc files, you can encrypt them; and your application can decrypt them and execute them.

2. Photo filters

For Python, the Open-CV and PIL packages allow you to apply several digital filters. Applying a digital filter involves taking the convolution of an image with a kernel (a small matrix). Mean Filter. The mean filter is used to blur an image in order to remove noise.

3. Biometric applications

To Perform Python Biometric Fingerprint Authentication in your Python Web Biometric Application you need to first retrieve the Biometric Fingerprint Data that you archived into your MySQL Database during the Python Web Biometric Fingerprint Enrollment stage then match your existing Biometric Fingerprint

9.0 Area of Future Improvement

We can improve this application by adding extra levels to it. We can also add some more extra difficult questions. Because of randomly displayed question user can check their knowledge in different fields i.e like in politics, avout states, general knowledge and maths so on.

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