A Course based Project Report on

Building a Quiz Game Using Python

Submitted in the partial fulfilment of the requirements for the award of degree of

BACHELOR OF TECHNOLOGY in

CYBER SECURITY

Submitted by

V.LAXMAN REDDY – 21071A6263

DEPARTMENT OF CYBER SECURITY

VNR Vignana Jyothi Institute of Engineering & Technology

(Autonomous Institute, Accredited by NAAC with 'A++' grade and NBA)

Bachupally, Nizampet (S.O.) Hyderabad- 500 090

February 2023

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PROJECT GUIDE

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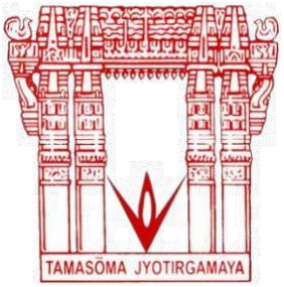

CERTIFICATE

This is to certify that the course based project work entitled "**Building a Quiz games uing python**, being submitted by **V.LAXMAN REDDY(21071A6263)** in partial fulfilment for the award of Degree of **BACHELOR OF TECHNOLOGY** in **CYBER SECURITY** during the academic year 2022-23 is a record of bona-fide work carried out by them under our guidance and supervision. The results embodied in this report have not been submitted by the students to any other University or Institution for the award of any degree or diploma.

Project Guide

LALITHA,
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Head of Department

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DECLARATION

I hereby declare that the project entitled "Building a Quiz Game Using Python" submitted for the B. Tech Degree is my original work and the project has not formed the basis for the award of any degree, associate ship, fellowship or any other similar titles.

Signature of the Student:

V.Laxman Reddy

(21071A6263)

Place:

Date:

ACKNOWLEDGEMENT

We express our deep sense of gratitude to our beloved Chairman, Shri. D.Suresh Babu, VNR Vignana Jyothi Institute of Engineering &Technology for the valuable guidance and for permitting us to carry out this project.

With immense pleasure, we record our deep sense of gratitude to our beloved Principal, Dr.C.D.Naidu for permitting us to carry out this project.

We express our deep sense of gratitude to Dr. Rajashekar, Associate Professor and Head, Department of Cyber security, VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad for the valuable guidance and suggestions, keen interest and through encouragement extended throughout period of project work.

We take immense pleasure to express our deep sense of gratitude to our beloved Guide Lalitha, Professor in Cyber security, VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad, for his valuable suggestions and rare insights, for constant source of encouragement and inspiration throughout my project work.

We express our thanks to all those who contributed for the successful completion of our project work.

1. V.Laxman Reddy(21071A6263)

AIM:

To create a quiz game.

INTRODUCTION:

The logic of Quiz Game using Python:

The Quiz game asks the player questions about some specific topic. They have three-four choices to answer each question. Each correct answer will score a point. At the end of the game, the program will reveal the player's final score.

Concepts of Functions, dictionaries, lists, flow control conditionals, loops are used in order to implement the above logic.

- Initial set-up: Any python ide/idle.
- Here we have used google colab .
- After learning a little more about Python and conducting a tad of troubleshooting, we have successfully ● operated our Python — powered quiz.

Steps involved in implementing the game:

Step1: Defining a function with a name new game, This quiz game uses a function; a block of code with a name that performs a specific task. A function allows you to use the same code several times, without having to type everything each time. Python has a lot of built-in functions, but it also allows you to create your functions.

Every time this function is invoked, a new game will be started and questions will be displayed one by one and takes input given by the user as a choice.

It has a list initialized called ‘guesses’ which stores the choice entered by the user, and a integer variable ‘correct_guesses’ to have a count on score and display it at the end.There is also another variable initialized to display the question number for

```
def new_game():
 guesses = []
 correct_guesses = 0
 question_num = 1
 for key in questions:
   print("------------------------")
   print(key)
   for i in options[question_num-1]:
     print(i)
   guess = input("Enter (A, B, C, or D): ")
   guess = guess.upper()
   guesses.append(guess)
   correct_guesses += check_answer(questions.get(key), guess)
   question_num += 1
 display_score(correct_guesses, guesses)
```

every question in the dictionary created to store the questions.

For every question from the dictionary, input is taken and appended to the ‘guesses’ list, which is initialized before and verified if the answer is correct using ‘check_answer’ function and score is incremented accordingly if the answer entered is right or wrong.

Finally, after displaying all the questions, score will be displayed at the end using the function ‘display_score’.

Step2: Defining a function ‘check_answer’, this function evaluates the input given by the player and gives the judgement if it is right or wrong.

Based on the judgement, this function will return 1 to increment the score if it is correct and 0 to not add anything to the score, if the choice of the player is wrong.

It has 2 arguments, one is the right answer according to which the judgement is supposed to be given, and the other argument is the input given by the player according to which the evaluation takes place.

The function definition is as follows.

```
def check_answer(answer, guess):
 if answer == guess:
   print("CORRECT!")
   return 1
 else:
   print("WRONG!")
   return 0
```

The return type is the integer which results in incrementing the score, it has a conditional if-else block which returns 1, in case of correct answer and zero in case of wrong answer.

Step 3: defining a function with display_score, which displays all the right answers for the given questions and then the guesses made by the player, in the for loop. And the end, the score will be displayed in the form of percentage.

Hence this part of the code plays the role of declaring the score of the player.

The function definition of the ‘display_score’ function goes as follows:

```
def display_score(correct_guesses, guesses):
 print("------------------------")
 print("RESULTS")
 print("------------------------")
 print("Answers: ", end="")
 for i in questions:
   print(questions.get(i), end="")
 print()

 print("Guesses: ", end="")
 for i in guesses:
   print(i, end="")
 print()
 score = int((correct_guesses/len(questions))*100)
 print("Your score is: "+str(score)+"%")
```

Step 4: Defining the function ‘play_again’. This function takes input from the player either ‘yes’ or ‘no’, to play the game again or quit the game.

```
def play_again():
 response = input("Do you want to play again? (yes or no): ")
 response = response.upper()
 if response == "YES":
   return True
 else:
   return False
```

The function first takes input response from the player, which is string indicating ‘yes’ or ‘no’,and then there is a if-else conditional block which returns true to a while loop to start the new game, or false to the while loop, to quit the game according to the player input, ‘yes’ or ‘no’.

Until and unless the player mentions to quit the game, the while loop keeps executing the ‘new_game’ function and starts the new game.

```
new_game()
while play_again():
    new_game()
print("Thanks for playing")
```

The above block of the code, keeps deciding to start a new game or quit the game.

Step 5): initializing the questions dictionary, which contains questions as key and right option as value in the dictionary, the

key-value pair of the question and right option helps in evaluation and functioning of the quiz display and display the final score.

Based on the number of questions the user wants to display, the dictionary is defined and along with the questions, options are added and a key-value pair of question answers is generated.

The below displayed code illustrates the questions that we have considered and how they are stored in the dictionary as a key-value pair of question and right answer.

```
questions = {
"Who created Python?: ": "A",
"What year was Python created?: ": "B",
"Python is tributed to which comedy group?: ": "C",
"Is the Earth round?: ": "A"
}
```

Step 6): Initializing the options list that you want to display to the user. This list consists of all the options that a question provides to the player.

The below snippet of code demonstrates storing the options/choices that the user wants to display to the player. It goes as follows:

```
options = [["A. Guido van Rossum", "B. Elon Musk", "C. Bill Gates", "D. Mark  Zuckerburg"],
          ["A. 1989", "B. 1991", "C. 2000", "D. 2016"],
          ["A. Lonely Island", "B. Smosh", "C. Monty Python", "D. SNL"],
          ["A. True","B. False", "C. sometimes", "D. What's Earth?"]]
```

The user will be given the above options to choose which will be executed through the 'new_game' function which takes responsibility of entire displaying the questions,options and taking input from the players which are given as answers.

The program should continue to check if there are any questions to ask and if the player has exhausted all his chances. The score is

stored in a variable during the game. Once all the questions have been answered, the game ends.

This quiz game uses a function; a block of code with a name that performs a specific task. A function allows you to use the same code several times, without having to type everything each time. Python has a lot of built-in functions, but it also allows you to create your functions.

SOURCE CODE:

```
def new_game():
 guesses = []
 correct_guesses = 0
 question_num = 1 for
 key in questions:
 print("--------------
 ----------")
 print(key) for i in
 options[question_num-
 1]:
     print(i) guess = input("Enter (A, B, C, or D): ") guess
   = guess.upper() guesses.append(guess) correct_guesses +=
   check_answer(questions.get(key), guess) question_num += 1
 display_score(correct_guesses, guesses)
def check_answer(answer, guess): if answer
== guess: print("CORRECT!") return 1 else:
print("WRONG!") return 0 def
display_score(correct_guesses, guesses):
 print("-------------------------
 ") print("RESULTS") print("-------
 -----------------")
 print("Answers: ", end="") for i
 in questions:
 print(questions.get(i), end="") print()

 print("Guesses: ",
 end="") for i in guesses:
 print(i, end="")
 print() score =
 int((correct_guesses/len(questions))*100)
 print("Your score is: "+str(score)+"%")
def play_again():
```

```
 response = input("Do you want to play again? (yes or no): ")
 response = response.upper() if response == "YES":
   return True
 else:
   return False
questions = {
"Who created Python?: ": "A",
"What year was Python created?: ": "B",
"Python is tributed to which comedy group?: ": "C",
"Is the Earth round?: ": "A"
} options = [["A. Guido van Rossum", "B. Elon Musk", "C. Bill Gates",
"D. Mark  Zuckerburg"],
          ["A. 1989", "B. 1991", "C. 2000", "D. 2016"],
          ["A. Lonely Island", "B. Smosh", "C. Monty Python", "D.
SNL"],
          ["A. True","B. False", "C. sometimes", "D. What's Earth?"]]
new_game() while
play_again():
    new_game()
print("Thanks for playing")
```

Outputs:

```
-------------------------
Who created Python?:
A. Guido van Rossum
B. Elon Musk
C. Bill Gates
D. Mark  Zuckerburg
Enter (A, B, C, or D): a
CORRECT!
-------------------------
What year was Python created?:
A. 1989
B. 1991
C. 2000
D. 2016
Enter (A, B, C, or D): c
WRONG!
-------------------------
Python is tributed to which comedy group?:
A. Lonely Island
B. Smosh
C. Monty Python
D. SNL
Enter (A, B, C, or D): c
CORRECT!
-------------------------
Is the Earth round?:
A. True
B. False
C. sometimes
D. What's Earth?
Enter (A, B, C, or D): a
CORRECT!
-------------------------
RESULTS
-------------------------
Answers: ABCA
Guesses: ACCA
Your score is: 75%
Do you want to play again? (yes or no): no
Thanks for playing
```