

INTRODUCTION

In this project guide we'll learn how to use python to ask questions and check for the right answer. We'll also use an advanced type of list to store our quiz.

```
digilocaladmin@digilocal-HP-255-G7-Notebook-PC:~$  
You are cool at coding  
Press 'c' for a compliment,  
or 'a' to add a compliment,  
or 'd' to delete a compliment  
or 'x' to quit  
> d  
Existing compliments  
awesome  
cool  
great  
Enter compliment to be deleted  
> happy  
That is not in the list  
You are awesome at coding  
Press 'c' for a compliment,  
or 'a' to add a compliment,  
or 'd' to delete a compliment  
or 'x' to quit  
> _
```

Let's get started!

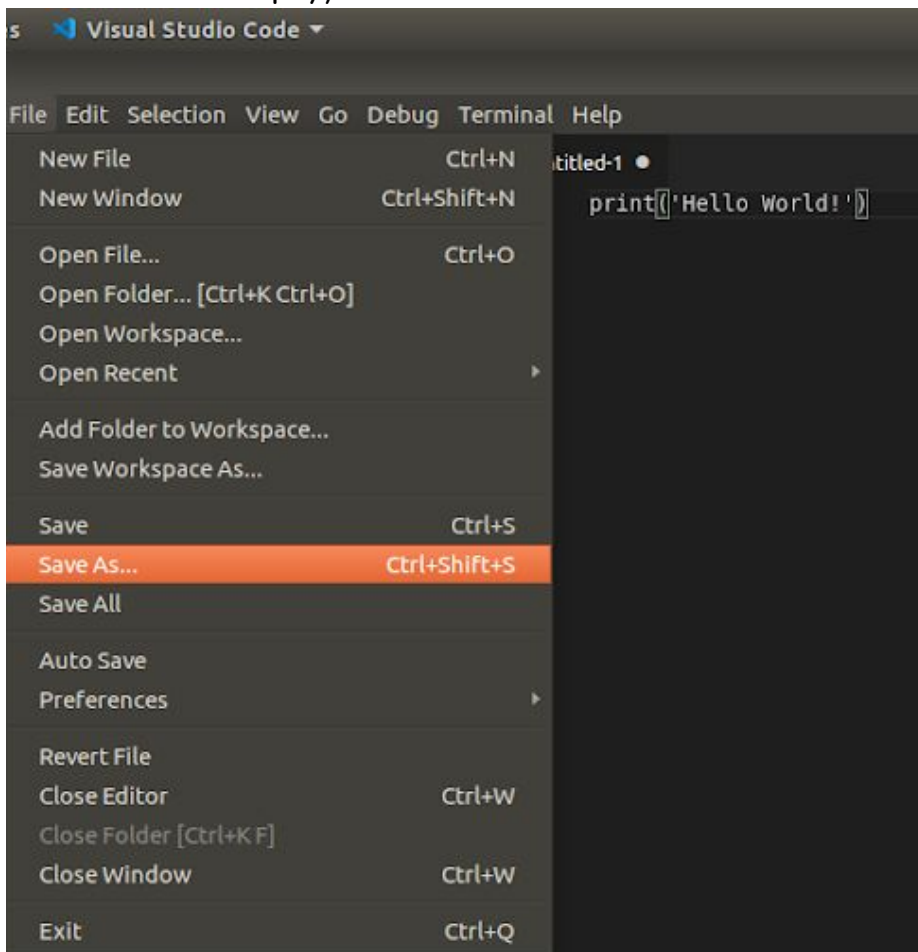
Step One: Getting started

- ✓ Open VS Code from the icon in your side bar.



- ✓ We need a new file to begin editing. Start one from the 'File' menu.

- ✓ Let's tell VS Code we're using python by saving our file (even though it's still empty).



- ✓ Call your programme something like quiz-master.py.



We'll start with an easy question.

```
home > digilocaladmin > Barton-Hill > John > Quiz-master.py
1 print('In programming, what you call the thing you store data in?')
```



Python uses the `input()` command to take an input from the user.

```
1 print('In programming, what do you call the thing you store data in?')
2 answer = input()
```



Now we can check if the user has typed the correct answer.

```
3 if answer == 'variable':
4     print(':-')*10
5 print('Thank you for playing')
```



- Test your code!



We should get the output below.

```

digilocaladmin@digilocal-HP-255-G7-Notebook-PC:~/Barton-Hill/John$
In programming, what you call the thing you store data in?
variable
:-):-):-):-):-):-):-):-):-):-)
Thank you for playing
digilocaladmin@digilocal-HP-255-G7-Notebook-PC:~/Barton-Hill/John$


```

Challenge time!

What if you type the wrong answer?
Or type 'Variable'?

✓ And we need to change our score by one when the player gets the answer right. Add line 6 below.

- ✓ We can add another line to our programme at the end to tell us the player's score.

 Test your code!

```
digilocaladmin@digilocal-HP-255-G7-Notebook-PC:~/Barton-Hill/John$
In programming, what you call the thing you store data in?
variable
:-):-):-):-):-):-):-):-):-):-)
Thank you for playing
You scored: 1
digilocaladmin@digilocal-HP-255-G7-Notebook-PC:~/Barton-Hill/John$
```


Step Three: Lots of questions!

- ✓ We could add another print statement with the next question, and check the answer and change the score. Which would be fine for one or two questions, but what about 10, or 100?
- ✓ For this we're going to use a data type called a dictionary. Each entry in our dictionary has a key, and some data. The key has to be unique within the dictionary. We can just use numbers for each of our questions.
- ✓ The data for each key is a little more complex. We want to store the question, and the right answer. We don't need to change these so we can store them as a tuple (question, answer).
- ✓ Let's create our new dictionary of questions.

```
2 questions = {  
3     1 : ('In programming, what you call the thing you store data in?' , 'variable'),  
4     2 : ('What number do computers start counting from?', '0'),  
5     3 : ('What is the meaning of life?', '42')  
6 }
```

- ✓ We've only put three questions, but you could easily add more, or your own.
- ✓ We need to change our code for asking the questions a little. We can use a for loop to ask each question in turn.
- ✓ Our loop takes the key and stores it in count, and value (the tuple) and stores it in question.

```
7 for count, question in questions.items():
```



Now we can tell the player which question they are on, and ask the question.

```
8     print('Question', count)
9     print(question[0])
```



Remember that our question is a tuple. The first bit of the tuple question[0] is the question, the second bit question[1] is the answer.



Note also that these are indented as they are inside our for loop. If you are editing your earlier code, make sure you indent.



Now we can check the player's answer.

```
10     answer = input()
11     if answer.lower() == question[1]:
```



The rest of our code is the same, but check your indentation matches the example below.

```
11         if answer.lower() == question[1]:
12             print(':~')*10
13             score += 1
14         else:
15             print('You typed in:',answer)
16             print('That was the wrong answer.')
17     print('Thank you for playing')
18     print('You scored:',score)
```



Test your code!

```
digilocaladmin@digilocal-HP-255-G7-Notebook-PC:~/Barton-Hill/John$  
Question 1  
In programming, what you call the thing you store data in?  
Variable  
:-):-):-):-):-):-):-):-:-)  
Question 2  
What number do computers start counting from?  
0  
:-):-):-):-):-):-):-):-:-)  
Question 3  
What is the meaning of life?  
42  
:-):-):-):-):-):-):-):-:-)  
Thank you for playing  
You scored: 3  
digilocaladmin@digilocal-HP-255-G7-Notebook-PC:~/Barton-Hill/John$
```

Step Four: Random questions

- ✓ Each time we run our programme, the questions come in the same order. Let's mix things up. First we'll need to import random at the start of our code

```
1 import random
```

- ✓ Now, instead of going through our dictionary in order, lets just loop through for as many questions as the player would like. We'll create a new variable called playing and set it to True.

```
1 import random  
2 score = 0  
3 playing = True
```

- ✓ Our questions are fine, we don't need to change them.
- ✓ We do need to change our for loop, into a while playing loop.

```
9 while True:
```



```
10 question = random.randint(1, len(questions))
```



```
11 print(questions[question][0])
```



```
12     answer = input()
13     if answer.lower() == questions[question][1]:
14         print(':~)*10)
15         score += 1
```



```

digilocaladmin@digilocal-HP-255-G7-Notebook-PC:~/Barton-Hill/John$
What number do computers start counting from?
0
:-):-):-):-):-):-):-):-):-):-)
In programming, what you call the thing you store data in?
box
You typed in: box
That was the wrong answer.
What is the meaning of life?
42
:-):-):-):-):-):-):-):-):-):-)
What is the meaning of life?
36
You typed in: 36
That was the wrong answer.
In programming, what you call the thing you store data in?

```



Unfortunately we haven't told our programme how or when to stop. Let's add that now.

```
19     again = input('Enter (q) for another question, or (x) to exit')
20     if again.lower() == 'q':
21         playing = False
```



Test your code!
A few times.

Challenge time!

Can you more questions?

Could you make a multiple choice quiz?
(Hint, you'll need to store the question, each possible answer, and which one is the right answer)