

Python Numeracy Test

Selby CoderDojo

Brief

For this task you are going to create a random numeracy question generator using the mathematical symbols +, -, x

Setup

Open the starter code at this link: <https://trinket.io/python/c8262f653c?showInstructions=true>

Tasks

Generating random numbers

We can generate random numbers in python using the following code

```
number1 = random.randint(1, 12)
```

Generate another random number between 1 and 12 and store it in the variable number2

Getting a symbol

We have already got all the symbols stored in a list at the top of our program. What we need to do now is randomly pick one of them. Luckily, Python has that feature within it. Under the code you last wrote add this line:

```
symbol = random.choice(symbols)
```

Working out what to do

Next is to complete the sum with the correct symbol and find out what the correct answer would be. Add this code below:

```
answer = 0
print(number1, symbol, number2, "= ?")
if symbol == '+':
    answer = number1 + number2
elif symbol == '-':
    answer = number1 - number2
else:
    answer = number1 * number2
```

If, elif, and else are used to make decisions when writing code. The first line means “if the symbol is a plus then the correct answer will be number1 plus number2.

Getting and checking the user’s guess

The user now needs to make a guess so that we can see if they are correct. Add this code below your code:

```
guess = int(input("Enter your answer here: "))
```

This lets the user enter a guess.

Try writing an if rule like in the last task to check if the user’s guess is the same as the answer.

Making ten rounds

To repeat our code ten times we could just copy and paste it 10 times, however this will make our code hard to read. So instead we use a loop. Add this code above all the code you wrote:

```
for round in range(1, 11):
```

Highlight all the code you wrote apart from the line above and then press tab on your keyboard to indent the code. **Test your code to see if it works**

Taking it further

Try adding code so that:

1. The user’s score is kept track of
2. Gives a rank of the users knowledge depending on their score

Super Challenge

Try saving all the user’s score in an external file holding their name and score