Lab3_ITDSIU21095

October 12, 2022

1 1

[1]:
```
x1 = int(input('x1='))
x2 = int(input('x2='))
y1 = int(input('y1='))
y2 = int(input('y2='))

def calc_slope(x1,y1,x2,y2):
    delta_x = x2 - x1
    delta_y = y2 - y1
    slope = (delta_y)/ (delta_x)
    return slope

print('slope is:', calc_slope(x1,y1,x2,y2))
```

```
x1=5
x2=3
y1=7
y2=4
slope is: 1.5
```

2 2

[2]:
```
def average(score1, *args):
    tong = 0
    total = 0
    for i in args:
        tong += i
        total += 1
        args = (tong + score1) / (total +1)
    return args
print(f'average is {average(66,77,33,42,64)}')
```

```
average is 56.4
```

3 3

[3]:
```
def average(*args):
    tong = 0
    total = 0
    for i in args:
        tong += i
        total += 1
        args = (tong) / (total)
    return args
print(f'average is {average(66,77,33,42,64)}')
```

```
average is 56.4
```

4 4

[4]:
```
import datetime
def date_and_time():
    date_and_time= datetime.datetime.today()
    return date_and_time
print(datetime.datetime.today())
```

```
2022-10-12 10:58:59.468628
```

5 5

[5]:
```
from math import pi
def radians(degrees):
    for degrees in range(1,181):
        degree = degrees
        rad = degrees * pi/180
    return rad
print('degree is', radians(degrees=67))
```

```
degree is 3.141592653589793
```

6 6

[ ]:
```
import random
while True:
   a = random.randrange(1, 10)
   b = random.randrange(1, 10)
   print(f'how much is {a} times {b}?')
   ans = int(input('enter ur answer: '))
   if ans == a * b:
      print('very good')
   elif ans != a * b:
```

```
      print('No, please try again')
      while True:
         print(f'how much is {a} times {b}?')
         ans = int(input('enter ur answer: '))
         if ans == a * b:
            print('very good')
         elif ans != a * b:
            print('No, please try again')
         break
```

```
how much is 4 times 1?
enter ur answer: 4
very good
how much is 6 times 4?
enter ur answer: 24
very good
how much is 3 times 4?
enter ur answer: 7
No, please try again
how much is 3 times 4?
enter ur answer: 12
very good
how much is 1 times 2?
```

7 7

[ ]:
```
import random
right = ['Very good!', 'Nice work!','Keep up the good work!']
wrong = ['No. Please try again.', 'Wrong. Try once more.', 'No. Keep trying.']
while True:
   a = random.randrange(1, 10)
   b = random.randrange(1, 10)
   print(f'how much is {a} times {b}?')
   ans = int(input('enter ur answer: '))
   if ans == a * b:
      print(random.choice(right))
   elif ans != a * b:
      print(random.choice(wrong))
      while True:
         print(f'how much is {a} times {b}?')
         ans = int(input('enter ur answer: '))
         if ans == a * b:
            print(random.choice(right))
         elif ans != a * b:
            print(random.choice(wrong))
         break
```

```
how much is 7 times 2?
```

```
enter ur answer: 14
Keep up the good work!
how much is 6 times 5?
enter ur answer: 30
Very good!
how much is 4 times 9?
enter ur answer: 34
No. Keep trying.
how much is 4 times 9?
```

8 8

[2]:
```python
import random

x = random.randint(1,10)
y = random.randint(1,10)

def game():
    print(f'How much is {x} times {y}?: ')
    res = int(input('Enter the result: '))

    while res == (x * y):
        n = input('Correct!\nDo you want to play again? (yes/no): ')
        while n == 'yes':
            a = random.randint(1,10)
            b = random.randint(1,10)
            print(f'How much is {a} times {b}?: ')
            res = int(input('Enter the result: '))
            if res == (a * b):
                n = input('Correct!\nDo you want to play again? (yes/no): ')
            else:
                break
        if n == 'no':
            print('The game is stopped.')
            break
        if (res != (x * y)):
            break
    return 'You have made a mistake. The game is over.'
print(game())
```

```
How much is 3 times 10?:
Enter the result: 30
Correct!
Do you want to play again? (yes/no): yes
How much is 8 times 3?:
Enter the result: 53
You have made a mistake. The game is over.
```

9 9

[3]:
```
import random

x = random.randint(1,10)
y = random.randint(1,10)

def game():
    print(f'How much is {x} times {y}?: ')
    res = int(input('Enter the result: '))
    correct = 0
    while res == (x * y):
        correct += 1
        n = input('Correct!\nDo you want to play again? (yes/no): ')
        while n == 'yes':
            a = random.randint(1,10)
            b = random.randint(1,10)
            print(f'How much is {a} times {b}?: ')
            res = int(input('Enter the result: '))
            if res == (a * b):
                correct += 1
                n = input('Correct!\nDo you want to play again? (yes/no): ')
            else:
                break
        if n == 'no':
            print('The game is stopped.')
            print(f'The total number of correct exercises is: {correct}')
            break
        if (res != (x * y)):
            break
    return f'You have made a mistake. The game is over.\nThe total number of␣
 ↪correct exercises is: {correct}.'

print(game())
```

```
How much is 1 times 6?:
Enter the result: 6
Correct!
Do you want to play again? (yes/no): yes
How much is 9 times 8?:
Enter the result: 65
You have made a mistake. The game is over.
The total number of correct exercises is: 1.
```