1. Calculate the product and sum of two numbers(num1=20,num2=30)

```
Questions >  productsum.py > ...
  1   #Calculate the product and sum of two numbers(num1=20,num2=30)
  2   def calc(x,y):
  3       a=x+y
  4       b=x*y
  5       print("Prodct of 20 and 30 is ",b)
  6       print("Sum of 20 and 30 is ",a)
  7
  8   calc(20,30)
  9
```

```
PS D:\Python Training> & "C:/Program Files/Python311/python.exe" "d:/Python Training/Questions/productsum.py"
Prodct of 20 and 30 is  600
Sum of 20 and 30 is  50
PS D:\Python Training>
```

2. Calculate average of 30,100,2000

```
Questions >  average.py > ...
  1   #Calculate average of 30,100,2000
  2   li=[30,100,2000]
  3   def average(li):
  4       x=sum(li)
  5       y=len(li)
  6       z=x/y
  7       return z
  8   avg=average(li)
  9   print("Average of 30,100,2000 is",avg)
```

```
PS D:\Python Training> & "C:/Program Files/Python311/python.exe" "d:/Python Training/Questions/average.py"
Average of 30,100,2000 is 710.0
PS D:\Python Training>
```

3. Multiplication table

```
Questions > 🐍 multable.py > ...
  1    #Print multiplication table from 1 to 10
  2
  3    num=[1,2,3,4,5,6,7,8,9,10]
  4
  5    for i in num:
  6        for j in range(1,11):
  7            print(i*j,end=" ")
  8            if j==10:
  9                print("\n")
 10
 11
 12
```

```
PS D:\Python Training> & "C:/Program Files/Python311/python.exe" "d:/Python Training/Questions/multable.py"
1 2 3 4 5 6 7 8 9 10

2 4 6 8 10 12 14 16 18 20

3 6 9 12 15 18 21 24 27 30

4 8 12 16 20 24 28 32 36 40

5 10 15 20 25 30 35 40 45 50

6 12 18 24 30 36 42 48 54 60

7 14 21 28 35 42 49 56 63 70

8 16 24 32 40 48 56 64 72 80

9 18 27 36 45 54 63 72 81 90

10 20 30 40 50 60 70 80 90 100
```

4. Simple calculator

```
1    #calculator
2
3    def addition(x,y):
4        return x+y
5    def subtraction(x,y):
6        return x-y
7
8    def multiplication(x,y):
9        return x*y
10
11   def divison(x,y):
12       return x/y
13
14
15   print("Choose one operation:\n 1. Add\n 2.Subtraction\n 3.Multiply\n 4.Divison")
16   option=int(input("Select option form 1, 2, 3, 4 :"))
17   num1=int(input("Enter first number:"))
18   num2=int(input("Enter second number:"))
19
20   if option==1:
21       print(num1,"+",num2,"=",addition(num1,num2))
22
23   elif option==2:
24       print(num1,"-",num2,"=",subtraction(num1,num2))
25
26   elif option==3:
27       print(num1,"*",num2,"=",multiplication(num1,num2))
28
29   elif option==4:
30       print(num1,"/",num2,"=",divison(num1,num2))
31
32   else:
33       print("invalid option!")
34
```

```
PS D:\Python Training> & "C:/Program Files/Python311/python.exe" "d:/Python Training/Questions/calculator.py"
Choose one operation:
 1. Add
 2.Subtraction
 3.Multiply
 4.Divison
Select option form 1, 2, 3, 4 :3
Enter first number:22
Enter second number:45
22 * 45 = 990
PS D:\Python Training> 
```

5. Patterns

```python
1    #pattern1
2    r = 5
3    for i in range(r):
4        for j in range(r-i-1):
5            print(" ",end="")
6
7        for k in range(2*i+1):
8            print("*", end="")
9        print()
10
11   print("\n")
12   #pattern2------------------------------------------
13   def pattern(r):
14       for i in range(r-1):
15           for j in range(r-i-1):
16               print(" ",end="")
17           for k in range(2*i+1):
18               print("*", end="")
19           print()
20
21       for i in range(r):
22           for j in range(i):
23               print(" ",end="")
24           for k in range(2*(r-i)-1):
25               print("*", end="")
26           print()
27
28   r=5
29   pattern(r)
30   print("\n")
```

```python
31   #pattern3------------------------------------------
32   r=5
33
34   for i in range(r):
35       for j in range(i+1):
36           print("* ", end="")
37       print("\n")
38   print("\n")
39   #pattern4------------------------------------------
40   r=5
41
42   for i in range(r):
43       for j in range(i+1):
44           print(j+1, end=" ")
45       print("\n")
46   print("\n")
47   #pattern 5------------------------------------------
48   r = 5
49   for i in range(r):
50       for j in range(r-i-1):
51           print(' ', end=' ')
52       for k in range(2 * i + 1):
53           print(k + 1, end=' ')
54       print()
55   print("\n")
56   #pattern6------------------------------------------
57   r = 5
58   for i in range(r):
59       for j in range(1, r - i):
60           print(" ", end=" ")
61       for k in range(1, i + 2):
62           print(k, end=" ")
63       print()
```

```
PS D:\Python Training> & "C:/Program Files/Python311/python.exe" "d:/Python Training/Questions/patterns.py"
       *
      ***
     *****
    *******
   *********

        *
       ***
      *****
     *******
    *********
     *******
      *****
       ***
        *


 *

 * *

 * * *

 * * * *

 * * * * *
```

```
1

1 2

1 2 3

1 2 3 4

1 2 3 4 5


        1
      1 2 3
    1 2 3 4 5
   1 2 3 4 5 6 7
 1 2 3 4 5 6 7 8 9


        1
      1 2
    1 2 3
   1 2 3 4
 1 2 3 4 5
PS D:\Python Training>
```