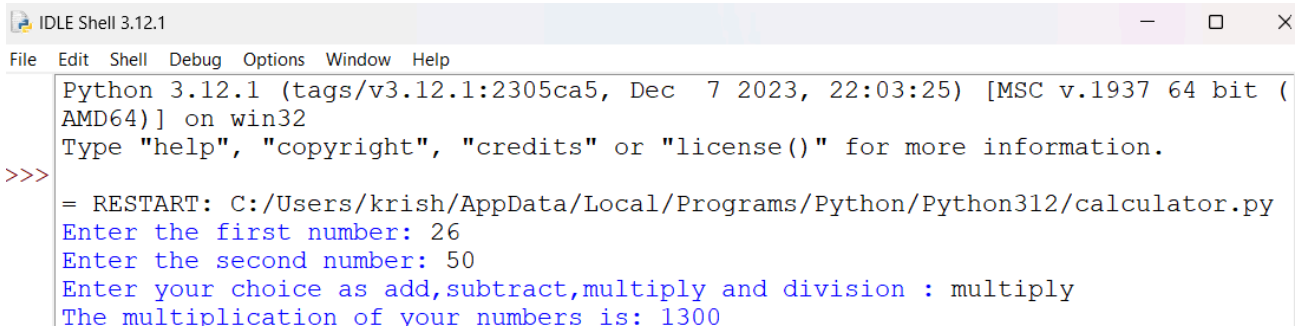
Question 1: Make a basic calculator using if else

```
a = int(input("Enter the first number: "))
b = int(input("Enter the second number: "))
choice = input("Enter your choice as add,subtract,multiply and division : ")
if (choice == 'add'):
    c = a + b
    print("The addition of your numbers is:", c)
elif (choice == 'subtract'):
    c = a - b
    print("The subtraction of your numbers is:", c)
elif (choice == 'multiply'):
    c = a * b
    print("The multiplication of your numbers is:", c)
elif (choice == 'division'):
    c = a // b
    print("The division of your numbers is:", c)
else:
    print("Invalid Choice")
```

Output :



QUESTION 2: Make code for checking the eligibility criteria for voting

```
name = input("Enter your name: ")
age = int(input("Enter your age: "))
Aadharid = int(input("Enter your aadhar number: "))
if (age >= 18):
    print("You are eligible for vote.")
    choice = input("Enter your party to vote among BJP , Congress , RJD , TMC and NOTA: ")
    if(choice == "BJP"):
        print("BJP")
    elif(Choice == "Congress"):
        print("Congress")
    elif(Choice == "RJD"):
        print("RJD")
    elif(Choice=="TMC"):
```

```
        print("TMC")
    else:
        print("Nota")
else:
    print("You are not eligible for vote.")
```

OUTPUT :

```
= RESTART: C:/Users/krish/AppData/Local/Programs/Python/Python312/calculator.py
Enter your name: Krish Pathak
Enter your age: 19
Enter your aadhar number: 378546288269
You are eligible for vote.
Enter your party to vote among BJP , Congress , RJD , TMC and NOTA: BJP
BJP
```

QUESTION 3: Make a code for number system.

```
sp = int(input("Enter the starting point: "))
ep = int(input("Enter the ending point: "))
up = int(input("Enter the updation: "))

choice1 = input("Enter your choice for printing the numbers in forward or in reverse : ")
choice2 = input("Enter your choice for printing numbers in column or in row: ")

if choice1 == "forward":
    if choice2 == "row":
        for i in range(sp, ep, up):
            print(i, end=", ")
    elif choice2 == "column":
        for i in range(sp, ep, up):
            print(i)
    else:
        print("Second choice is not correct. Enter a valid choice.")
elif choice1 == "reverse":
    if choice2 == "row":
        for i in range(ep, sp, -up):
            print(i, end=", ")
    elif choice2 == "column":
        for i in range(ep, sp, -up):
            print(i)
    else:
        print("Second choice is not correct. Enter a valid choice.")
else:
    print("Your both choices are wrong.")
```

Output:

```
= RESTART: C:/Users/krish/AppData/Local/Programs/Python/Python312/calculator.py
Enter the starting point: 1
Enter the ending point: 50
Enter the updation: 2
Enter your choice for forward printing or reverse printing: reverse
Enter your choice for row printing or column printing: row
50, 48, 46, 44, 42, 40, 38, 36, 34, 32, 30, 28, 26, 24, 22, 20, 18, 16, 14, 12,
10, 8, 6, 4, 2,
```

QUESTION 4: write a python program which accept the name from the user and marks of 5 subjects . Calculate the percentage grade on the basis of their percentage. if, user enters any subject marks more than 100 or less than 0 print "wrong input". if, user enter string in place of marks, print "wrong input". Print the percentage only when the marks are above 0 and below 100 otherwise stop the code.

```
name = input("Enter your name: ")

try:
    sub1 = float(input("Enter marks for subject 1: "))
    sub2 = float(input("Enter marks for subject 2: "))
    sub3 = float(input("Enter marks for subject 3: "))
    sub4 = float(input("Enter marks for subject 4: "))
    sub5 = float(input("Enter marks for subject 5: "))

    total = sub1 + sub2 + sub3 + sub4 + sub5
    percentage = (total) / 5

    if (0 <= sub1 <= 100 and 0 <= sub2 <= 100 and 0 <= sub3 <= 100 and 0 <= sub4 <= 100 and 0 <= sub5
<= 100):

        print(f"\n{name}, your percentage is: {percentage}%")
        if(percentage >= 90):
            print("Your grade = A")
        elif(percentage >= 85):
            print("Your grade = B+")
        elif(percentage >= 80):
            print("Your grade = B")
        elif(percentage >= 75):
            print("Your grade = C+")
        elif(percentage >= 70):
            print("Your grade = C")
        elif(percentage >= 65):
            print("Your grade = D+")
        elif(percentage >= 50):
            print("Your grade = D")
        elif(percentage < 50):
```

```
            print("Your grade = F")
    else:
        print("Wrong input,Your marks should be in the range of 0 to 100")

except ValueError:
    print("Wrong input. Please enter valid marks.")
```

Output :

```
============================== RESTART: C:/Users/krish/AppData/Local/Programs/Python/Python312/calculator.py ==============================
Enter your name: Krish Pathak
Enter marks for subject 1: 98
Enter marks for subject 2: 89
Enter marks for subject 3: 91
Enter marks for subject 4: 97
Enter marks for subject 5: 96

Krish Pathak, your percentage is: 94.2%
Your grade = A
```

QUESTION 5: Write a program to make a game of roll the dice.

```
import random as r
i=1
s1=s2= 0
while (i < 7):
    c = r.randint(1, 6)
    y = int(input("Enter a number between 1 to 6: "))
    choice = input("If you quit,type 'yes' otherwise type 'no': ")
    s1 += c
    s2 += y
    if (choice == 'no'):
        continue
    elif (choice == "yes"):
        break
    else:
        print("Wrong choice")
        break

print("\n")
print("Your score is:", s2)
print("The computer's score is:", s1)
print("\n")
if (s1 > s2):
    print("computer has won with a score of:", s1)
else:
    print("You have won with a score of:", s2)
```

OUTPUT :

```
============================== RESTART: C:/Users/krish/AppData/Local/Programs/Python/Python312/calculator.py ==============================
Enter a number between 1 to 6: 6
If you quit,type 'yes' otherwise type 'no': no
Enter a number between 1 to 6: 5
If you quit,type 'yes' otherwise type 'no': yes


Your score is: 11
The computer's score is: 8


You have won with a score of: 11
```

QUESTION 6: Write a program to make a game of rock,paper and scissor.

```
import random as r
while (True):
    a = r.choice(['rock', 'paper', 'scissor'])
    b = input("Enter your choice for 'rock, paper, scissor': ")
    if ((a=='rock' and b=='paper') or (a=='paper' and b=='scissor') or (a=='scissor' and b=='rock')):
        print("You won")
        print("Computer's choice was:", a)
    elif (b == a):
        print("Match draw")
        print("Computer's choice was:", a)
    else:
        print("You Lose")
        print("Computer's choice was:", a)
    print("\n")
    print("Enter yes for continue and no for exist")
    choice = input("Enter your choice: ")
    if (choice == 'yes'):
        continue
    else:
        break
```

Output :

```
============================== RESTART: C:/Users/krish/AppData/Local/Programs/Python/Python312/calculator.py ==============================
Enter your choice for 'rock, paper, scissor': scissor
You won
Computer's choice was: paper


Enter yes for continue and no for exist
Enter your choice: yes
Enter your choice for 'rock, paper, scissor': rock
You Lose
Computer's choice was: paper


Enter yes for continue and no for exist
Enter your choice: no
```

QUESTION 7: Write a code for a number guessing game.

```
import random as r
n = int(input("Enter a range: "))
a= r.randrange(1, n)
b = int(input("Enter Your number: "))
```

```
if (b == 0):
    print("Game Over, player quit the game")
elif (b == a):
    print("Congratulations! you are right,the random number was:", a)
else:
    print("Better luck next time")
```

Output :

```
========== RESTART: C:/Users/krish/AppData/Local/Programs/Python/Python312/calculator.py ==========
Enter a range: 9
Enter Your number: 6
Better luck next time
```

QUESTION 8: Make an inventory using python dictionaries.

```
inventory={}
while True:
    print("Enter your choice to add or remove or check availability or exit:")
    ch=input("Add | Remove | Check | Exit :")
    if ch=='Add' or ch=='add':
        key=input("Enter product name:")
        value=int(input("Enter quantity:"))
        if key in inventory:
            inventory [key]+=value
        else:
            inventory [key]=value
    elif ch=='Remove' or ch=='remove':
        key=input("Enter product name:")
        value=int(input("Enter quantity you want to remove :"))
        if key in inventory and inventory [key]> (value-1):
            inventory [key]-=value
        elif key in inventory and inventory [key] <value:
            print ("There are only ", inventory [key]," left in inventory")
        else:
            print("No item with this name found")
    elif ch=='Check' or ch=='check':
        key=input("Enter product name:")
        value=int(input("Enter quantity to check availability :"))
        if key in inventory and inventory [key]>=value:
            print("Product is available in required quantity", key, ", inventory [key])
        elif key in inventory and inventory [key] <value:
            print("Product is present but available quantity is", inventory [key])
        else:
            print("Product is not available")
    elif ch=='Exit' or ch=='exit':
        break
```

```
    else:
        print("Invalid input, proceed again ")
```

OUTPUT :