

## CODE:

```
import os as s
again = True

def divide(num = 0, deno = 0):
    print("=====")
    if deno == 0:
        return None
    else:
        return int(num) / int(deno)

def exponent(base = 0, exp = 0):
    print("=====")
    exp = base ** exp
    return exp

def remainder(num = 0, deno = 0):
    rem = 0
    print("=====")
    if deno == 0:
        return None
    else:
        return int(num) % int(deno)

def summation(lr = 0 , up = 0):
    sum = 0
    print("=====")
    if lr > up:
        return None
    else:
        for x in range(lr, up+1):
            sum += x
        return sum

def operation(choice):
    print("=====")
    if choice == "d":
        x = int(input("Enter the First number: \t"))
        y = int(input("Enter the Second number: \t"))
        print("Quotient: \t\t\t{}".format(divide(x, y)))
        s.system("pause")
```

```

        s.system("cls")
    elif choice == "e":
        x = int(input("Enter the First number: \t"))
        y = int(input("Enter the Second number: \t"))
        print("Result: \t\t\t{}".format(exponent(x, y)))
        s.system("pause")
        s.system("cls")
    elif choice == "r":
        x = int(input("Enter the First number: \t"))
        y = int(input("Enter the Second number: \t"))
        print("Remainder: \t\t\t{}".format(remainder(x, y)))
        s.system("pause")
        s.system("cls")
    elif choice == "f":
        x = int(input("Enter the First number: \t"))
        y = int(input("Enter the Second number: \t"))
        print("Summation: \t\t\t{}".format(summation(x, y)))
        s.system("pause")
        s.system("cls")
    elif choice == "x":
        s.system("cls")
        print("Exiting the program...")
        again = False
        exit()

    else:
        print("Invalid choice")

while again == True:
    print("=====")
    print("[D.] - Divide")
    print("[E.] - Exponentiation")
    print("[R.] - Remainder")
    print("[F.] - Summation")
    print("[X.] - Exit")
    print("=====")
    choice = input("Enter your choice: ").lower()
    s.system("pause")
    s.system("cls")
    operation(choice)

```

## OUTPUT:

```
=====
[D.] - Divide
[E.] - Exponentiation
[R.] - Remainder
[F.] - Summation
[X.] - Exit
=====
Enter your choice: D
Press any key to continue . . . █
```

```
=====
Enter the First number:      100
Enter the Second number:    20
=====
Quotient:                    5.0
Press any key to continue . . . █
```

```
=====
Enter the First number:      6
Enter the Second number:    0
=====
Quotient:                    None
Press any key to continue . . . █
```

```
=====
[D.] - Divide
[E.] - Exponentiation
[R.] - Remainder
[F.] - Summation
[X.] - Exit
=====
Enter your choice: e
Press any key to continue . . . █
```

```
=====
Enter the First number:      2
Enter the Second number:    7
=====
Result:                      128
Press any key to continue . . . █
```

```
=====
[D.] - Divide
[E.] - Exponentiation
[R.] - Remainder
[F.] - Summation
[X.] - Exit
=====
Enter your choice: R
Press any key to continue . . . █
```

```
=====
Enter the First number:    10
Enter the Second number:   9
=====
Remainder:                 1
Press any key to continue . . . █
```

```
=====
Enter the First number:    9
Enter the Second number:   0
=====
Remainder:                 None
Press any key to continue . . . █
```

```
=====
Enter the First number:    4
Enter the Second number:   8
=====
Summation:                 30
Press any key to continue . . . █
```

```
=====
Enter the First number:      8
Enter the Second number:    2
=====
Summation:                  None
Press any key to continue . . .
```

```
Invalid choice
Press any key to continue . . .
```

```
=====
[D.] - Divide
[E.] - Exponentiation
[R.] - Remainder
[F.] - Summation
[X.] - Exit
=====
Enter your choice: X
Press any key to continue . . .
```

```
Exiting the program...
PS C:\Users\User\Downloads\Python Code\PYTHON\ACT5>
```