CUETO, ALEXA JOYCE G.

TW23

ACTIVITY 5: FUNCTION

Source Code:

```
#CUETO, ALEXA JOYCE G

#TW23

#FUNCTION


def mainMenu(): #Function to display menu
    while True:
        print("\n\t\t--MENU--")
        print("\t\t[D] Divide")
        print("\t\t[E] Exponentiation")
        print("\t\t[R] Remainder")
        print("\t\t[F] Summation")
        print("\t\t[X] Exit")

        choice =input("\t\tEnter your choice: ")

        if choice == "D" or choice == "d":
            division()
        elif choice == "E" or choice == "e":
            exponentiation()
        elif choice == "R" or choice == "r":
            remainder()
        elif choice == "F" or choice =="f":
            summation()
```

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        elif choice =="X" or choice == "x":

            print("\t\tThank you for using the program!")

            break

        else:

            print("\t\tInvalid choice. Try again")


def division():

    firstNumber = input("\n\t\tEnter your first numer: ")

    secondNumber = input("\t\tEnter your second number: ")


    if secondNumber == "0": #Error Handling

        print("\t\tThe second number must not be equal to
zero.")

        return None

    else:

        result = int(firstNumber) / int(secondNumber)

        print(f"\n\t\tThe result of {firstNumber} divided by
{secondNumber} is {result}")

        return result



def exponentiation():

    baseNumber = input("\n\t\tEnter your base number: ")

    exponentNumber = input("\t\tEnter your exponent number: ")


    if exponentNumber < "0" and baseNumber == "0" : #Error
Handling

        print("\t\tThe base number must not be equal to zero if
the exponent is less than zero.")

        return None
```

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    else:

        result = int(baseNumber) ** int(exponentNumber)

        print(f"\n\t\tThe result of {baseNumber} raised to the
power of {exponentNumber} is {result}")

        return result



def remainder():

    firstNumber = input("\n\t\tEnter your first number: ")

    secondNumber = input("\t\tEnter your second numer: ")


    if secondNumber == "0": #Error Handling

        print("\t\tThe second number must not be equal to
zero.")

        return None

    else:

        result = int(firstNumber) % int(secondNumber)

        print(f"\n\t\tThe remainder of {firstNumber} divided by
{secondNumber} is {result}")

        return result



def summation():

    firstNumber = input("\n\t\tEnter your first number: ")

    secondNumber = input("\t\tEnter your second number: ")


    if secondNumber <= firstNumber: #Error Handling

        print("\t\tThe second number must be greater than the
first number.")

        return None

    else:
```

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        result = sum(range(int(firstNumber), int(secondNumber) +
1))

        print(f"\n\t\tThe sum of {firstNumber} to {secondNumber}
is {result}")

        return result


mainMenu()
```

Screenshots of results:


```
\it0011_CUETO> & "C:/Users/Alexa Cueto/AppData/Local/Programs/Pythor
t0011_CUETO/ACT5_FUNCTION/Function.py

        --MENU--
        [D] Divide
        [E] Exponentiation
        [R] Remainder
        [F] Summation
        [X] Exit
        Enter your choice: D

        Enter your first numer: 20
        Enter your second number: 5

        The result of 20 divided by 5 is 4.0

        --MENU--
        [D] Divide
        [E] Exponentiation
        [R] Remainder
        [F] Summation
        [X] Exit
        Enter your choice: d

        Enter your first numer: 20
        Enter your second number: 0
        The second number must not be equal to zero.

        --MENU--
        [D] Divide
        [E] Exponentiation
        [R] Remainder
        [F] Summation
        [X] Exit
        Enter your choice: E

        Enter your base number: 4
        Enter your exponent number: 5

        The result of 4 raised to the power of 5 is 1024
```

```
    --MENU--
    [D] Divide
    [E] Exponentiation
    [R] Remainder
    [F] Summation
    [X] Exit
    Enter your choice: e

    Enter your base number: 0
    Enter your exponent number: -2
    The base number must not be equal to zero if the exponent is less than zero.

    --MENU--
    [D] Divide
    [E] Exponentiation
    [R] Remainder
    [F] Summation
    [X] Exit
    Enter your choice: R

    Enter your first number: 10
    Enter your second numer: 20

    The remainder of 10 divided by 20 is 10
```

```
--MENU--
[D] Divide
[E] Exponentiation
[R] Remainder
[F] Summation
[X] Exit
Enter your choice: r

Enter your first number: 10
Enter your second numer: 0
The second number must not be equal to zero.
```

```
    --MENU--
    [D] Divide
    [E] Exponentiation
    [R] Remainder
    [F] Summation
    [X] Exit
    Enter your choice: F

    Enter your first number: 4
    Enter your second number: 8

    The sum of 4 to 8 is 30
```

```
    --MENU--
    [D] Divide
    [E] Exponentiation
    [R] Remainder
    [F] Summation
    [X] Exit
    Enter your choice: f

    Enter your first number: 6
    Enter your second number: 2
    The second number must be greater than the first number.

    --MENU--
    [D] Divide
    [E] Exponentiation
    [R] Remainder
    [F] Summation
    [X] Exit
    Enter your choice: X
    Thank you for using the program!
CUETO> 
```