

Home x Datascience-Session44-Assign x New Tab x +

localhost:8888/notebooks/Datascience-Session44-Assignment1.ipynb

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```
In [1]: # Python program to display the Fibonacci sequence up to n-th term using recursive functions

def recur_fibo(n):
    """Recursive function to
    print Fibonacci sequence"""
    if n <= 1:
        return n
    else:
        return(recur_fibo(n-1) + recur_fibo(n-2))

# Change this value for a different result
nterms = 10

# check if the number of terms is valid
if nterms <= 0:
    print("Please enter a positive integer")
else:
    print("Fibonacci sequence:")
    for i in range(nterms):
        print(recur_fibo(i))

Fibonacci sequence:
0
1
1
2
3
5
8
13
21
34

In [2]: # Program make a simple calculator that can add, subtract, multiply and divide using functions
```

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```
In [2]: # Program make a simple calculator that can add, subtract, multiply and divide using functions

# This function adds two numbers
def add(x, y):
    return x + y

# This function subtracts two numbers
def subtract(x, y):
    return x - y

# This function multiplies two numbers
def multiply(x, y):
    return x * y

# This function divides two numbers
def divide(x, y):
    return x / y

print("Select operation.")
print("1.Add")
print("2.Subtract")
print("3.Multiply")
print("4.Divide")

# Take input from the user
choice = input("Enter choice(1/2/3/4):")

num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))

if choice == '1':
    print(num1,"+",num2,"=", add(num1,num2))

elif choice == '2':
    print(num1,"-",num2,"=", subtract(num1,num2))

elif choice == '3':
    print(num1,"*",num2,"=", multiply(num1,num2))

elif choice == '4':
    print(num1,"/",num2,"=", divide(num1,num2))
```

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Datascience-B5-4372...

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```
elif choice == '3':
    print(num1,"*",num2,"=", multiply(num1,num2))

elif choice == '4':
    print(num1,"/",num2,"=", divide(num1,num2))
else:
    print("Invalid input")

Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4):3
Enter first number: 10
Enter second number: 23
10 * 23 = 230
```

In [3]: #Computes gcd by checking if the number inputed is divistble by a same number in both the cases

```
def computeGCD(x, y):

    if x > y:
        small = y
    else:
        small = x
    for i in range(1, small+1):
        if((x % i == 0) and (y % i == 0)):
            gcd = i

    return gcd
```

In [4]: #Computes GCD by sending two numbers

```
computeGCD(5,6)
```

Out[4]: 1

11:16 AM

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```
for i in range(1, small+1):
    if((x % i == 0) and (y % i == 0)):
        gcd = i |

    return gcd
```

In [4]: #Computes GCD by sending two numbers

```
computeGCD(5,6)
```

Out[4]: 1

In [5]: #Price for courses identified for each argument send as course name usig dictionary

```
def priceforcourses(argument):
    courseprice = {
        "Android": 12999,
        "BigDataDevelopment":17999,
        "Spark":19999
    }
    print(courseprice.get(argument, "Invalid Course"))
```

In [6]: priceforcourses("Android")

12999

In [7]: priceforcourses("dddf")

Invalid Course

In []:

11:17 AM