```python
#arithmetic operations
a=5
b=3
print("addition:",a+b)
print("subtraction:",a-b)
print("multiplication:",a*b)
print("division:",a/b)
print("floor division:",a//b)
print("modulus:",a%b)
print("exponentiation:",a**b)
```

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 2023, 13:03:39) [MSC v.1935 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>
= RESTART: C:/Users/nandh/AppData/Local/Programs/Python/Python312/arthmetic.py
addition: 8
subtraction: 2
multiplication: 15
division: 1.6666666666666667
floor division: 1
modulus: 2
exponentiation: 125
>> |
```

```python
#string manipulations
full_name="Monvitha"+""+"Sai" #concatenation
first_letter=full_name[0]#indexing
substring=full_name[1:4]#slicing
#string formatting
age=18
formatted_string=f"My name is (full_name) and I am  (age) years old"
print(full_name)
print(first_letter)
print(substring)
print(formatted_string)
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 2023, 13:03:39) [MSC v.1935 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>
= RESTART: C:/Users/nandh/AppData/Local/Programs/Python/Python312/String manipulation.py
MonvithaSai
M
onv
My name is MonvithaSai and I am  18 years old
>>
```

```python
#conditional statements
#if
if 4>3:
    print("true statement")
#if else
if 3>2:
    print("3 is greater")
else:
    print("2 is greater")
#nested if else
a=10
b=5
c=20
if a>b:
    if a>c:
        print("A is big:",a)
    else:
        print("c is big:",c)
else:
    if b>c:
        print("B is big:",b)
    else:
        print("C is big:",c)
#if-elif
a=10
b=5
c=11
if a>b and a>c:
    print("A is big:",a)
elif b>a and b>c:
    print("B is big:",b)
else:
    print("C is big:",c)
```

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 2023, 13:03:39) [MSC v.1935 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/nandh/AppData/Local/Programs/Python/Python312/conditional.py
true statement
3 is greater
c is big: 20
C is big: 11
>>>
```

```python
#creating a list with name 'a'
a=[1,2,67,65]
#add
a.append(1222)
#remove
a.remove(65)
#modifying an element
a[2]=366
#inserting an element
a.insert(3,"python")
print("updated list",a)
#creating a dictionary with name my_dict
my_dict={100:"abc",200:"def",300:"ghi"}
#adding
my_dict[400]="jkl"
#modifying
my_dict[100]="mno"
#removing
my_dict[100]
print("updated dictionary:",my_dict)
#creating a tuple with name my_tuple
my_tuple=(1,2,3,4)
#adding
new_element=5
updated_tuple=my_tuple+(new_element,)
#removing
updated_tuple=my_tuple[:1]+my_tuple[2:]
#modifying
modified_element=6
updated_tuple=my_tuple[:2]+(modified_element,)+my_tuple[3:]
print(updated_tuple)
```

```
File   Edit   Shell   Debug   Options   Window   Help
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 2023, 13:03:39) [MSC v.1935 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>
= RESTART: C:/Users/nandh/AppData/Local/Programs/Python/Python312/MonvithaSai.py
updated list [1, 2, 366, 'python', 1222]
updated dictionary: {100: 'mno', 200: 'def', 300: 'ghi', 400: 'jkl'}
1
4

>>
```