

EXECUTE THE PROGRAMS DISCUSSED ON DAY 2

```
#while
i=0
while i<=10:
    print(i)
    i+=1
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/whileloop
.py
0
1
2
3
4
5
6
7
8
9
10
>>> |
```

```
#if else
n= int(input("enter a num:"))
if n%2==0:
    print("even")
else:
    print("odd")
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/ifelseloo
p.py
enter a num:3
odd
>>>
```

```
a=10
b=20
print(a/b)
print(a-b)
print(a/b)
print(a*b)
```

```
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AMD64)] on win32
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>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/calculato
r.py
0.5
-10
0.5
200
>>> |
```

collection-tuples.py - C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/collection...

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```
#collections
lst = [10,20,30,40,50]
print(lst)
print(type(lst))

#tuple
l=(10,20,30,40,50)
print(l)
print(type(l))

#set
s={100,200,300,400,500}
print(s)
print(type(s))
```

IDLE Shell 3.10.2

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```
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>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/collection-tuples.py
[10, 20, 30, 40, 50]
<class 'list'>
(10, 20, 30, 40, 50)
<class 'tuple'>
{400, 100, 500, 200, 300}
<class 'set'>

>>> |
```

```
#finding data type of a variable
```

```
a=20.5
```

```
print(a)
```

```
print(type(a))
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
```

```
Type "help", "copyright", "credits" or "license()" for more information.
```

```
>>>
```

```
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/datatype.py
```

```
20.5
```

```
<class 'float'>
```

```
>>>
```

```
a=2+7j
print(a)
print(type(a))
```

```
b=True
print(b)
print(type(b))
```

```
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```

>>>

```
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/complex.p
y
(2+7j)
<class 'complex'>
True
<class 'bool'>
```

>>>

```
#multiple variable
a,b,c =10,3,20
print(a)
print(b)
print(c)

del (b)
print(b)
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/multiplev
ariables.py
10
3
20
Traceback (most recent call last):
  File "C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/multiplevari
ables.py", line 8, in <module>
    print(b)
NameError: name 'b' is not defined
>>> |
```



```
#variables
a=10
print(a)
print(id(a))

a=20
print(a)
print(id(a))
b=a
print(b)
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
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>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/variables
.py
10
1782721348112
20
1782721348432
20
>>>
```

PRACTICE PYTHON IN IDLE

*factorial.py - C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/factorial.py...

File Edit Format Run Options Window Help

```
def fact(num):  
    if num == 0:  
        return num  
    else:  
        return num * fact(num - 1)  
print(fact(5))
```

IDLE Shell 3.10.2

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```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>>  
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/factorial  
.PY  
0  
>>>  
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/factorial  
.PY  
120  
>>> |
```

fibonacci.py - C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/fibonacci.p...

File Edit Format Run Options Window Help

```
a = int(input('enter the first element'))
b = int(input('enter the second element'))
n = int(input('enter the number of elements '))
print(a,b, end=" ")
```

```
while n-2:
    c = a + b
    a = b
    b = c
    print(c, end=" ")
    n = n-1
```

IDLE Shell 3.10.2

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>>>

= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/fibonacci.py

enter the first element1
enter the second element1
enter the number of elements 5
1 1 2 3 5

>>>

```
year = int(input('enter year'))
if year % 400 == 0:
    print('it is a leap year')
elif year % 4 == 0:
    print('it is a leap year')
elif year % 100 == 0:
    print('not a leap year')
else:
    print('not a leap year')
```

```
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>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/leap year
.py
enter year2022
not a leap year
>>> |
```

```
string=input(("Enter a letter:"))
if(string==string[::-1]):
    print("The letter is a palindrome")
else:
    print("The letter is not a palindrome")
```

```
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AMD64)] on win32
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>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/palindrom
e.py
Enter a letter:malayalam
The letter is a palindrome
>>> |
```

```
num = int(input("Enter a number: "))
sum = 0
temp = num
while temp > 0:
    digit = temp % 10
    sum += digit ** 3
    temp //= 10
if num == sum:
    print(num, "is an Armstrong number")
else:
    print(num, "is not an Armstrong number")
```

```
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AMD64)] on win32
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>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/armstrong
.py
Enter a number: 369
369 is not an Armstrong number
>>>
= RESTART: C:/Users/azain/OneDrive/Desktop/IBM PROJECT/Python Programs/armstrong
.py
Enter a number: 407
407 is an Armstrong number
>>>
```