EXECUTE THE PROGRAMS DISCUSSED ON DAY 2

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

```
Python 3.9.0 (tags/v3.9.0:9cf6752, Oct  5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
0
1
2
3
4
5
6
7
8
9
10
```

Ln: 28 Col: 4

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

```
Python 3.9.0 (tags/v3.9.0:9cf6752, Oct  5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==================== RESTART: F:/IBM project/ifelseloop.py ====================
enter a num:5
odd
>>>
```

File Edit Format Run Options Window Help

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

File Edit Shell Debug Options Window Help

```
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D64)] on win32
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>>>
==================== RESTART: F:/IBM project/calculator.py ====================
0.5
-10
0.5
200
>>> |
```

```python
#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))
```

```
File  Edit  Shell  Debug  Options  Window  Help
Python 3.9.0 (tags/v3.9.0:9cf6752, Oct  5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
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>>>
================= RESTART: F:/IBM project/collection-tuples.py =================
[10, 20, 30, 40, 50]
<class 'list'>
(10, 20, 30, 40, 50)
<class 'tuple'>
{400, 100, 500, 200, 300}
<class 'set'>
>>>
```

File Edit Format Run Options Window Help
```
#finding data type of a variable
a=20.5
print(a)
print(type(a))
```

File Edit Shell Debug Options Window Help
```
Python 3.9.0 (tags/v3.9.0:9cf6752, Oct  5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
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>>>
==================== RESTART: F:/IBM project/datatype.py ====================
20.5
<class 'float'>
>>>
```

```
File  Edit  Format  Run  Options  Window  Help
a=2+7j
print(a)
print(type(a))

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

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

del(b)
print(b)
```

```
Python 3.9.0 (tags/v3.9.0:9cf6752, Oct  5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
================= RESTART: F:/IBM project/multiplevariables.py =================
10
3
20
Traceback (most recent call last):
  File "F:/IBM project/multiplevariables.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 3.9.0 (tags/v3.9.0:9cf6752, Oct  5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
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>>>
==================== RESTART: F:/IBM project/variables.py ====================
10
2854387149392
20
2854387149712
20
>>>
```

File   Edit   Format   View   Help

PRACTICE PYTHON IN IDLE

```
File  Edit  Format  Run  Options  Window  Help
def fact(num):
    if num==0:
        return num
    else:
        return num*fact(num-1)
print(fact(5))
```

```
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 element'))
print(a,b,end=" ")

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

```
File  Edit  Format  Run  Options  Window  Help
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')
```

```
File  Edit  Shell  Debug  Options  Window  Help
Python 3.9.0 (tags/v3.9.0:9cf6752, Oct  5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
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>>>
==================== RESTART: F:/IBM project/leap year.py ====================
enter year2022
not a leap year
>>>
```

```
File   Edit   Format   Run   Options   Window   Help
string=input(("enter the letter:"))
if(string==string[::-1]):
    print("the letter is a palindrome")
else:
    print("the letter is not a palindrome")
```

```
File   Edit   Shell   Debug   Options   Window   Help
Python 3.9.0 (tags/v3.9.0:9cf6752, Oct  5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==================== RESTART: F:/IBM project/palindrome.py ====================
enter the 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")
```

File Edit Shell Debug Options Window Help

Python 3.9.0 (tags/v3.9.0:9cf6752, Oct 5 2020, 15:34:40) [MSC v.1927 64 bit (AM
D64)] on win32
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>>>
==================== RESTART: F:/IBM project/armstrong.py ====================
enter a number:369
369 is not an armstrong number
>>>
==================== RESTART: F:/IBM project/armstrong.py ====================
enter a number:407
407 is an armstrong number
>>> |