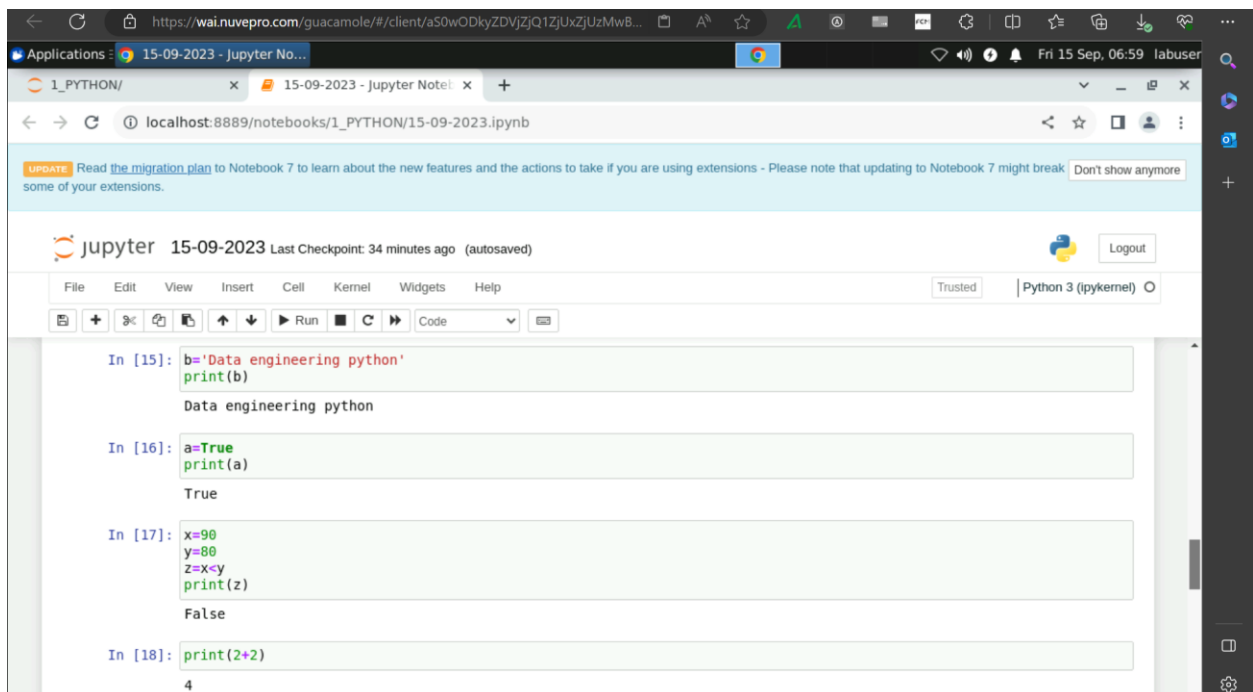


# PYTHON

## Python Hands-on

- Data types
- Logical operators
- Indexing
- Slicing
- List
- Tuple
- Formatted string
- Set
- Dictionary
- Membership operator
- Zip



The screenshot shows a Jupyter Notebook interface in a web browser. The browser address bar shows the URL: `https://wainuapro.com/guacamole/#/client/a50wODkyZDVjZjQ1ZjUxZjUzMwB...`. The notebook title is "15-09-2023 - Jupyter Note...". The notebook content shows four code cells:

```
In [15]: b='Data engineering python'
         print(b)
         Data engineering python

In [16]: a=True
         print(a)
         True

In [17]: x=90
         y=80
         z=x<y
         print(z)
         False

In [18]: print(2+2)
         4
```

Applications: 15-09-2023 - Jupyter No... | 1\_PYTHON/ | 15-09-2023 - Jupyter Note... | + | localhost:8889/notebooks/1\_PYTHON/15-09-2023.ipynb

UPDATE Read the migration plan to Notebook 7 to learn about the new features and the actions to take if you are using extensions - Please note that updating to Notebook 7 might break some of your extensions. Don't show anymore

jupyter 15-09-2023 Last Checkpoint: an hour ago (unsaved changes) Logout

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```
Out[31]: 'xyz'

In [32]: s[0:-1]
Out[32]: 'abcdefghijklmnopqrstuvwxy'

In [33]: s[0:]
Out[33]: 'abcdefghijklmnopqrstuvwxyz'

In [34]: s[-1:]
Out[34]: 'z'

In [35]: s[-1:0]
Out[35]: ''
```

Applications: 15-09-2023 - Jupyter No... | 1\_PYTHON/ | 15-09-2023 - Jupyter Note... | + | localhost:8889/notebooks/1\_PYTHON/15-09-2023.ipynb

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File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```
In [38]: s[-1::-1]
Out[38]: 'zyxwvutsrqponmlkjihgfedcba'

In [39]: a=10
          b=20
          print(a+b)
          print(a-b)
          print(a*b)
          print(a/b)
          print(a//b)

          30
          -10
          200
          0.5
          0

In [ ]:
```

Applications: 15-09-2023 - Jupyter No... 15-09-2023 - Jupyter Note... Fri 15 Sep, 08:16 labuser

1\_PYTHON/ 15-09-2023 - Jupyter Note... localhost:8889/notebooks/1\_PYTHON/15-09-2023.ipynb

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File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```
In [34]: s[-1:]
Out[34]: 'z'

In [35]: s[-1:0]
Out[35]: ''

In [36]: s[ : 14]
Out[36]: 'abcdefghijklmn'

In [37]: s[-1:-1]
Out[37]: ''

In [38]: s[-1::-1]
Out[38]: 'zyxwvutsrqponmlkjihgfedcba'
```

Applications: 15-09-2023 - Jupyter No... 15-09-2023 - Jupyter Note... Fri 15 Sep, 08:20 labuser

1\_PYTHON/ 15-09-2023 - Jupyter Note... https://wai.nuvepro.com/guacamole/#/client/a50wODkyZDVjZjQ1ZjUxZjUzMWwB... localhost:8889/notebooks/1\_PYTHON/15-09-2023.ipynb

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File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```
2.0

In [42]: print(a%b)
10

In [43]: print(b%a)
0

In [44]: a=True
         b=False
         print (a and b)
False

In [45]: print (a or b)
True
```

← ↻ 🔒 https://wai.nuvepro.com/guacamole/#/client/aS0wODkyZDVjZjQ1ZjUxZjUzMwBjAG51d... Applications: 15-09-2023 - Jupyter No... 15-09-2023 - Jupyter Note... Fri 15 Sep, 08:37 labuser

1\_PYTHON/ x 15-09-2023 - Jupyter Note... +

← → ↻ 🔒 localhost:8889/notebooks/1\_PYTHON/15-09-2023.ipynb

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File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

In [47]:

```
is_geological_survey_complete = True
is_environmental_clearance_received = True
is_market_demand_high = False
```

In [49]:

```
should_start_drilling = is_geological_survey_complete and is_environmental_clearance_received and is_market_demand_high
print(should_start_drilling)
```

False

In [50]:

```
HasExplorationPermit = True
HasDrillingRights = True
HasEnvironmentalApproval = False
HasOilDiscovery = True
```

In [51]:

```
IsExplorationAllowed = HasExplorationPermit and HasDrillingRights and not HasEnvironmentalApproval
IsDiscoveryProfitable = HasOilDiscovery and (HasExplorationPermit or HasDrillingRights)
print(IsExplorationAllowed)
print(IsDiscoveryProfitable)
```

True

← ↻ 🔒 https://wai.nuvepro.com/guacamole/#/client/aS0wODkyZDVjZjQ1ZjUxZjUzMwBjAG51d... Applications: 15-09-2023 - Jupyter No... 15-09-2023 - Jupyter Note... Fri 15 Sep, 09:33 labuser

1\_PYTHON/ x 15-09-2023 - Jupyter Note... +

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File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

print(s)

Job Title Senior Geologist

In [67]:

```
s=(f"Name = {name}")
print(s)
```

Name = John Doe

In [73]:

```
s=(f"Name={name}" f"\nJob Title = {job_title}")
print(s)
```

Name=John Doe  
Job Title = Senior Geologist

In [ ]:

Applications: 15-09-2023 - Jupyter No...  
1\_PYTHON/ x 15-09-2023 - Jupyter Note... x +  
localhost:8889/notebooks/1\_PYTHON/15-09-2023.ipynb

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jupyter 15-09-2023 Last Checkpoint: 3 hours ago (unsaved changes) Logout

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```
print(s)
Job Title Senior Geologist

In [67]: s=(f"Name = {name}")
print(s)

Name = John Doe

In [73]: s=(f"Name={name}" f"\nJob Title = {job_title}")
print(s)

Name=John Doe
Job Title = Senior Geologist

In [ ]:
```

Applications: 15-09-2023 - Jupyter No...  
1\_PYTHON/ x 15-09-2023 - Jupyter Note... x +  
localhost:8889/notebooks/1\_PYTHON/15-09-2023.ipynb

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jupyter 15-09-2023 Last Checkpoint: a minute ago (unsaved changes) Logout

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```
['John Doe, Senior Geologist, Geology, johndoe@email.com, 123-456-7890', 'Jane Smith, Drilling Engineer, Drilling, janesmith@email.com, 987-654-3210', 'Bob Johnson, Reservoir Engineer, Reservoir Engineering, bobjohnson@email.com, 456-789-0123', 'Alice Brown, Petrophysicist, Petrophysics, alicebrown@email.com, 789-012-3456', 'Eva Green, Drilling Technician, Drilling, evagreen@email.com, 111-222-3333', 'Eva Green, Drilling Technician, Drilling, evagreen@email.com, 111-222-3333']

In [101]: low_fuel_threshold=1000
critical_fuel_threshold=500
current_fuel_level=int(input("Enter Value: "))

if(current_fuel_level<critical_fuel_threshold):
    print("Critical Fuel Level Reached. Take Immediate Action")
elif (current_fuel_level<low_fuel_threshold):
    print("Send_fuel_low alter")
else:
    print("continue fueling")

print(current_fuel_level)

Enter Value: 600
Send_fuel_low alter
600
```

Applications: 15-09-2023 - Jupyter No... 15-09-2023 - Jupyter Note... 15-09-2023 - Jupyter No...

1\_PYTHON/ 15-09-2023 - Jupyter Note... localhost:8889/notebooks/1\_PYTHON/15-09-2023.ipynb

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jupyter 15-09-2023 Last Checkpoint: a few seconds ago (autosaved) Logout

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

In [104]:

```
n=range(9)
for i in n:
    print(i)
```

0  
1  
2  
3  
4  
5  
6  
7  
8

In [106]:

```
for i in range(5,11,5):
    print(i)
```

5  
10

Applications: 15-09-2023 - Jupyter No... 15-09-2023 - Jupyter Note... 15-09-2023 - Jupyter No...

1\_PYTHON/ 15-09-2023 - Jupyter Note... localhost:8889/notebooks/1\_PYTHON/15-09-2023.ipynb

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File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3 (ipykernel)

In [107]:

```
l1=[1,2,3]
l2=['IT','Finance','CEO']
l=zip(l1,l2)
print(l)
```

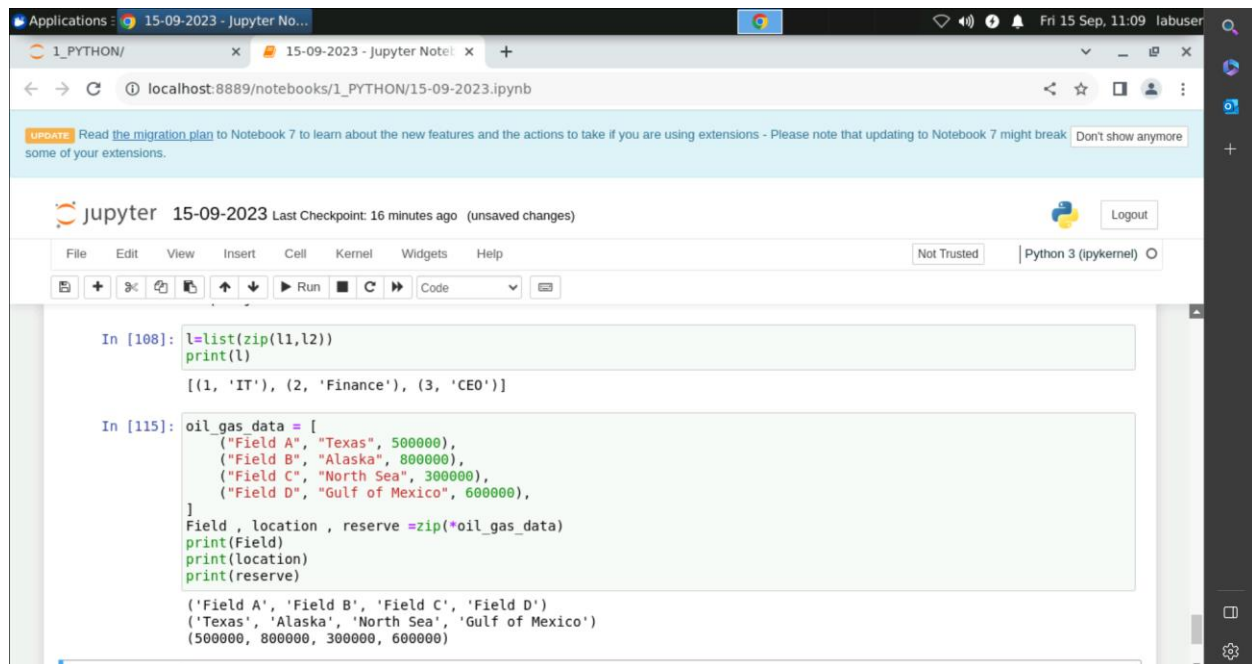
<zip object at 0x7efe78644700>

In [108]:

```
l=list(zip(l1,l2))
print(l)
```

[(1, 'IT'), (2, 'Finance'), (3, 'CEO')]

In [ ]: |

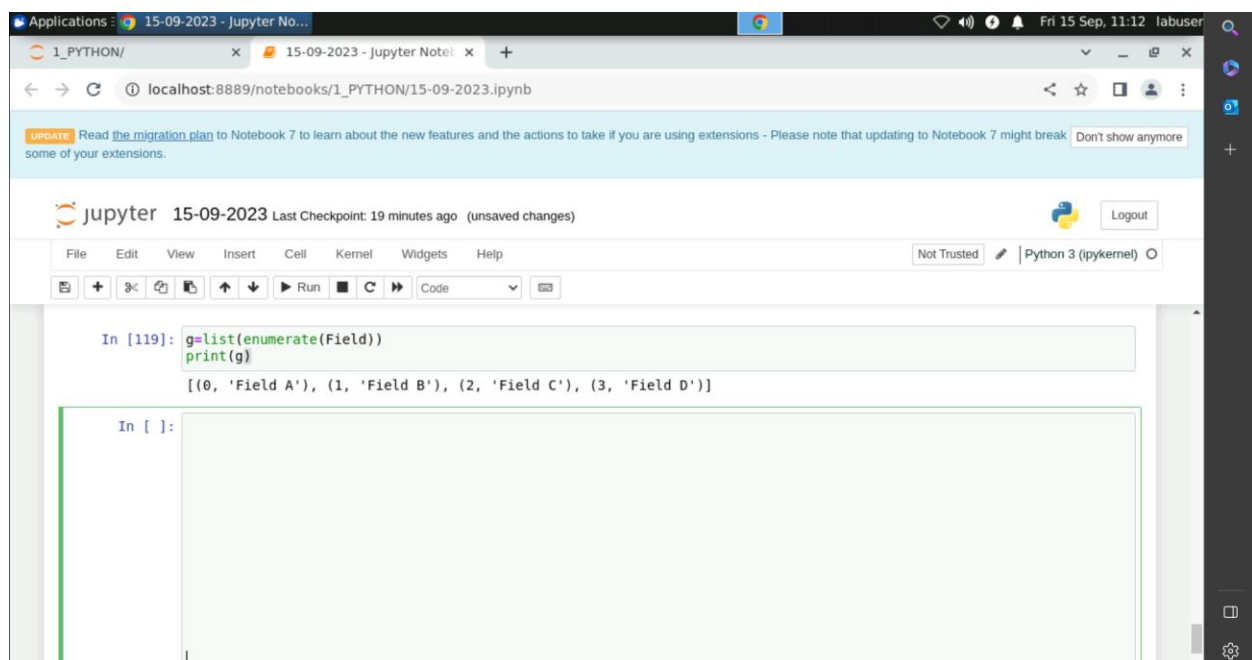


```
In [108]: l=list(zip(l1,l2))
          print(l)

          [(1, 'IT'), (2, 'Finance'), (3, 'CEO')]

In [115]: oil_gas_data = [
          ("Field A", "Texas", 500000),
          ("Field B", "Alaska", 800000),
          ("Field C", "North Sea", 300000),
          ("Field D", "Gulf of Mexico", 600000),
          ]
          Field , location , reserve =zip(*oil_gas_data)
          print(Field)
          print(location)
          print(reserve)

          ('Field A', 'Field B', 'Field C', 'Field D')
          ('Texas', 'Alaska', 'North Sea', 'Gulf of Mexico')
          (500000, 800000, 300000, 600000)
```



```
In [119]: g=list(enumerate(Field))
          print(g)

          [(0, 'Field A'), (1, 'Field B'), (2, 'Field C'), (3, 'Field D')]

In [ ]:
```

```
for index, field_data in enumerate(oil_gas_data):
    field_name, location, reserve = field_data
    print(f"Field {index+1}: {field_name} is located in {location} with reserves of {reserve} barrels.")
```