# Introduction (T1)

In [33]:
```
print(3 + 2)
print(3 - 2)
print(3 * 2)
print(3 / 2)
print(3 ** 2)
print(3 % 2)
print(3 // 2)
```

```
5
1
6
1.5
9
1
1
```

In [34]:
```
print(type(10))
print(type(3.14))
print(type(1 + 3j))
```

```
<class 'int'>
<class 'float'>
<class 'complex'>
```

In [35]:
```
print(type('VaishnaviChandore'))
print(type([1, 2, 3]))
print(type({'name':'Vaishnavi'}))
```

```
<class 'str'>
<class 'list'>
<class 'dict'>
```

In [4]:
```
print(type({9.8, 3.14, 2.7}))
print(type((9.8, 3.14, 2.7)))
print(type(3 == 3))
print(type(3 >= 3))
```

```
<class 'set'>
<class 'tuple'>
<class 'bool'>
<class 'bool'>
```

In [ ]:
```

```

# String (T2)

In [6]:
```
letter = 'P'
print(letter)
print(len(letter))
```

```
P
1
```

In [7]:
```
greeting = 'Hello, World!'
print(greeting)
print(len(greeting))
```

```
Hello, World!
13
```

In [11]:
```
sentence = "The best adventures begin when expectation is abandoned and the he
print(sentence)
```

```
The best adventures begin when expectation is abandoned and the heart is finall
y listening.
```

In [12]:
```
multiline_string = '''I am Final year Student.
Persuing B.tech Degree in Computer Engineering.
Currently I'm Learning python.'''
print(multiline_string)
```

```
I am Final year Student.
Persuing B.tech Degree in Computer Engineering.
Currently I'm Learning python.
```

In [13]:
```
multiline_string = """I am Final year Student.
Persuing B.tech Degree in Computer Engineering.
Currently I'm Learning python."""
print(multiline_string)
```

```
I am Final year Student.
Persuing B.tech Degree in Computer Engineering.
Currently I'm Learning python.
```

# String Concatenation

In [14]:
```
first_name = 'Vaishnavi'
last_name = 'Chandore'
space = ' '
full_name = first_name  +  space + last_name
print(full_name)
```

```
Vaishnavi Chandore
```

In [15]:
```
print(len(first_name))
print(len(last_name))
```

```
9
8
```

In [16]:
```
print(len(first_name) > len(last_name))
print(len(full_name))
```

```
True
18
```

In [20]:
```
language = 'Python'
a,b,c,d,e,f = language
print(a)
print(b)
print(c)
print(d)
print(e)
print(f)
```

```
P
y
t
h
o
n
```

# Accessing characters in strings by index

In [21]:
```
language = 'Python'
first_letter = language[0]
print(first_letter)
```

```
P
```

In [22]:
```
second_letter = language[1]
print(second_letter)
```

```
y
```

In [23]:
```
last_index = len(language) - 1
last_letter = language[last_index]
print(last_letter)
```

```
n
```

In [24]:
```
language = 'Python'
last_letter = language[-1]
print(last_letter)
second_last = language[-2]
print(second_last)
```

```
n
o
```

# Slicing

In [25]:
```
language = 'Python'
first_three = language[0:3]
last_three = language[3:6]
print(last_three)
```

```
hon
```

In [26]:
```
last_three = language[-3:]
print(last_three)
```

```
hon
```

In [27]:
```
last_three = language[3:]
print(last_three)
```

```
hon
```

In [28]:
```
anguage = 'Python'
pto = language[0:6:2]
print(pto)
```

```
Pto
```

In [29]:
```
print('I hope every one enjoying the python challenge.\nDo you ?')
```

```
I hope every one enjoying the python challenge.
Do you ?
```

In [30]:
```
print('Days\tTopics\tExercises')
```

```
Days        Topics        Exercises
```

In [31]:
```
print('Day 1\t3\t5')
```

```
Day 1        3        5
```

In [32]:
```
print('This is a back slash  symbol (\\)')
```

```
This is a back slash  symbol (\)
```

## String Methods

## capitalize(): Converts the first character the string to Capital Letter

In [36]:
```
challenge = 'thirty days of python'
print(challenge.capitalize())
```

```
Thirty days of python
```

In [37]:
```
challenge = 'thirty days of python'
print(challenge.count('y'))
print(challenge.count('y', 7, 14))
print(challenge.count('th'))
```

```
3
1
2
```

In [38]:
```
challenge = 'thirty days of python'
```

```
print(challenge.endswith('on'))
print(challenge.endswith('tion'))
```

```
True
False
```

In [39]:
```
challenge = 'thirty\tdays\tof\tpython'
print(challenge.expandtabs())
print(challenge.expandtabs(10))
```

```
thirty  days    of      python
thirty    days      of        python
```

In [40]:
```
challenge = 'thirty days of python'
print(challenge.find('y'))
print(challenge.find('th'))
```

```
5
0
```

In [42]:
```
first_name = 'Nick'
last_name = 'Chrcho'
job = 'Student'
country = 'Germany'
sentence = 'I am {} {}. I am a {}. I live in {}.'.format(first_name, last_name
print(sentence)
```

```
I am Nick Chrcho. I am a Student. I live in Germany.
```

In [43]:
```
radius = 10
pi = 3.14
area = pi
result = 'The area of circle with {} is {}'.format(str(radius), str(area))
print(result)
```

```
The area of circle with 10 is 3.14
```

In [44]:
```
challenge = 'thirty days of python'
print(challenge.find('y'))
print(challenge.find('th'))
```

```
5
0
```

In [45]:
```
challenge = 'ThirtyDaysPython'
print(challenge.isalnum())
```

```
True
```

In [46]:
```
challenge = '30DaysPython'
print(challenge.isalnum())
```

```
True
```

In [47]:
```
challenge = 'thirty days of python'
print(challenge.isalnum())
```

```
False
```

In [48]:
```
challenge = 'thirty days of python 2019'
print(challenge.isalnum())
```

```
False
```

In [50]:
```
challenge = 'thirty days of python'
print(challenge.isalpha())
num = '123'
print(num.isalpha())
```

```
False
False
```

In [51]:
```
challenge = 'thirty days of python'
print(challenge.find('y'))
print(challenge.find('th'))
```

```
5
0
```

In [52]:
```
challenge = 'Thirty'
print(challenge.isdigit())
```

```
False
```

In [53]:
```
challenge = '30'
print(challenge.digit())
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[53], line 2
      1 challenge = '30'
----> 2 print(challenge.digit())

AttributeError: 'str' object has no attribute 'digit'
```

In [54]:
```
num = '10'
print(num.isdecimal())
num = '10.5'
print(num.isdecimal())
```

```
True
False
```

In [55]:
```
challenge = '30DaysOfPython'
print(challenge.isidentifier())
challenge = 'thirty_days_of_python'
print(challenge.isidentifier())
```

```
False
True
```

In [56]:
```
challenge = 'thirty days of python'
print(challenge.islower())
```

```
challenge = 'Thirty days of python'
print(challenge.islower())
```

```
True
False
```

In [57]:
```
challenge = 'thirty days of python'
print(challenge.isupper())
challenge = 'THIRTY DAYS OF PYTHON'
print(challenge.isupper())
```

```
False
True
```

In [58]:
```
num = '10'
print(num.isnumeric())
print('ten'.isnumeric())
```

```
True
False
```

In [59]:
```
web_tech = ['HTML', 'CSS', 'JavaScript', 'React']
result = '#, '.join(web_tech)
print(result)
```

```
HTML#, CSS#, JavaScript#, React
```

In [60]:
```
challenge = ' thirty days of python '
print(challenge.strip('y'))
```

```
 thirty days of python
```

In [61]:
```
challenge = 'thirty days of python'
print(challenge.replace('python', 'coding'))
```

```
thirty days of coding
```

In [62]:
```
challenge = 'thirty days of python'
print(challenge.split())
```

```
['thirty', 'days', 'of', 'python']
```

In [63]:
```
challenge = 'thirty days of python'
print(challenge.title())
```

```
Thirty Days Of Python
```

In [64]:
```
challenge = 'thirty days of python'
print(challenge.swapcase())
```

```
THIRTY DAYS OF PYTHON
```

In [65]:
```
challenge = 'Thirty Days Of Python'
print(challenge.swapcase())
```

```
tHIRTY dAYS oF pYTHON
```

In [67]:
```
challenge = 'thirty days of python'
```

```
print(challenge.startswith('thirty'))
```

```
True
```

In [68]:
```
challenge = '30 days of python'
print(challenge.startswith('thirty'))
```

```
False
```

In [ ]:
```

```

In [ ]:
```

```

In [ ]:
```

```