

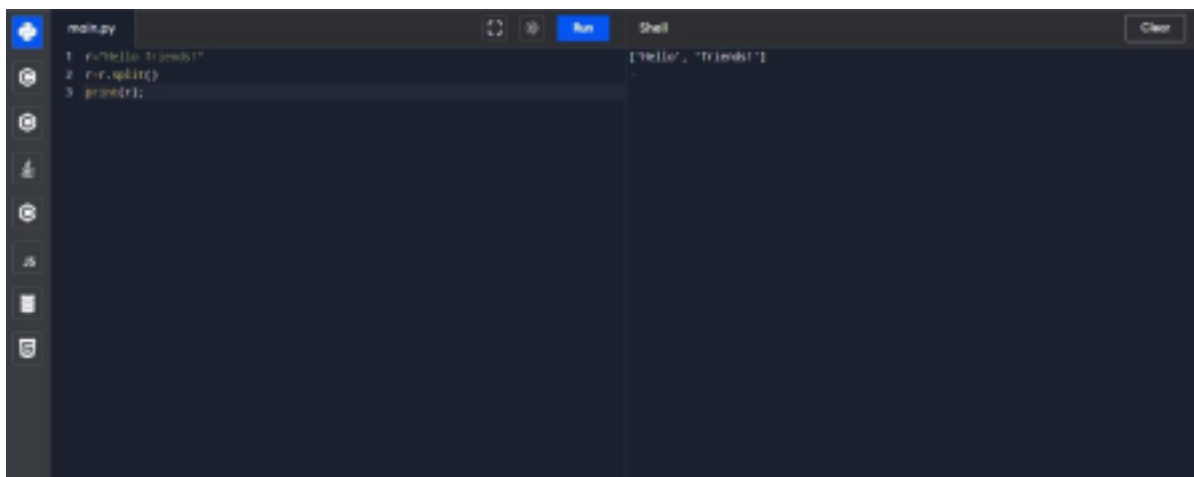
Question-1:

Split this string

Solution: `r="Hello
friends!"` `r=r.split()
print(r);`

#.....#

#.....#

A screenshot of a Python IDE window titled 'main.py'. The editor shows three lines of code: `1 r="Hello Friends!"`, `2 r=r.split()`, and `3 print(r);`. To the right, a 'Shell' window displays the output: `['Hello', 'Friends!']`. The IDE has a dark theme and a sidebar with icons for file explorer, search, and other tools.

Question-2:

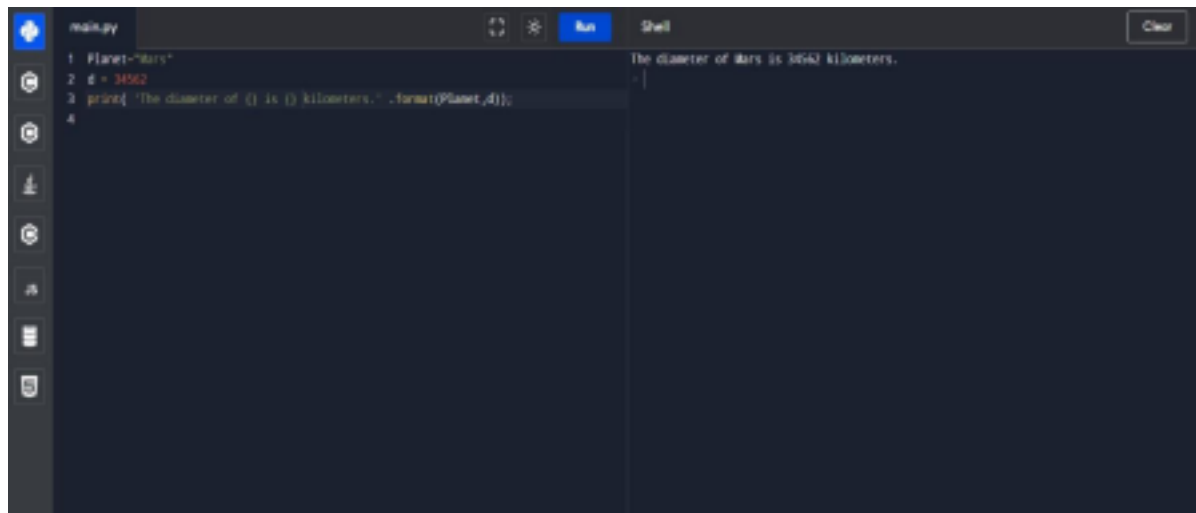
Use `.format()` to print the following string.
Output should be: The diameter of Earth is
12742 kilometers.

Solution:

`Planet="Mars"`
`d`

`= 34562`

`print('The diameter of {} is {}kilometers.'`
`.format(Planet,d));`



```
main.py
1 Planet="Mars"
2 d = 34562
3 print('The diameter of {} is {} kilometers.'.format(Planet,d))
4
```

The diameter of Mars is 34562 kilometers.

Question-3:


In this nest dictionary grab the word "hello"

d =

```
{'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
```

Solution:

```
d={'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
t arget':[1,2,3,'hello']}]}]}
print(d['k1'][3]["tricky"][3]['target'][3])
```



```
main.py
1 d={'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
2 print(d['k1'][3]['tricky'][3]['target'][3])
3
```

hello

Question-4:

Numpy import numpy as np

4.1 Create an array of 10 zeros?

Solution: np.zeros(10)

4.2 Create an array of 10 fives?

Solution: np.ones(10)*5

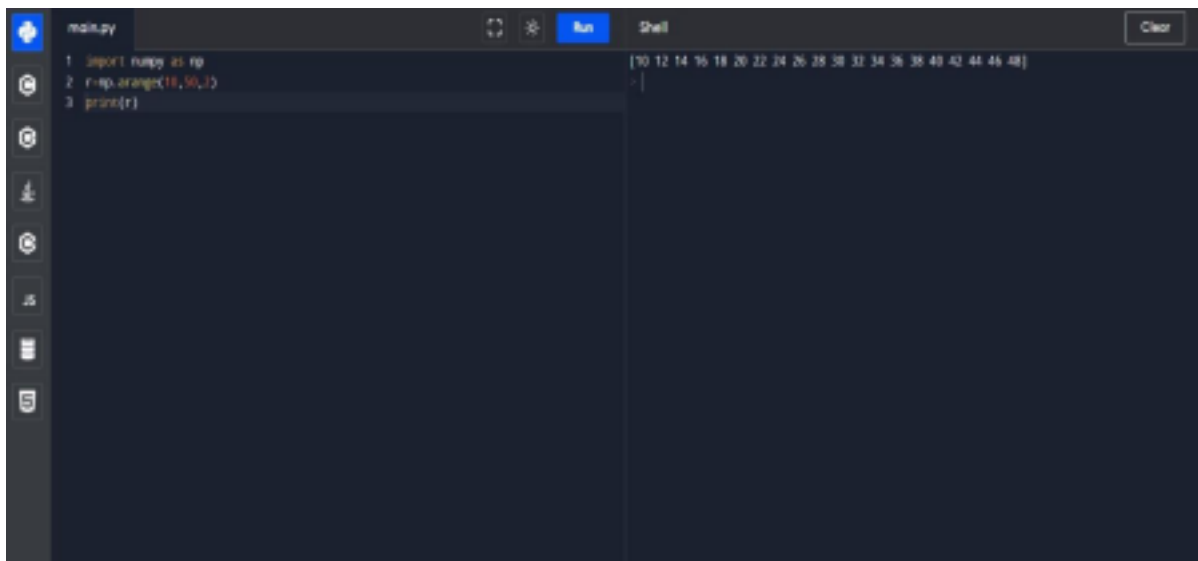
A screenshot of a Jupyter Notebook titled 'Numpy'. It contains two code cells. The first cell has the code 'import numpy as np' and the prompt '4.1 Create an array of 10 zeros?'. The second cell has the code 'np.zeros(10)' and the prompt '4.2 Create an array of 10 fives?'. The output of the first cell is 'array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])'. The output of the second cell is 'array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])'.

Question-5:

Create an array of all the even integers from 20 to 35 Solution:

import numpy as np

r=np.arange(10,50,2) print(r)



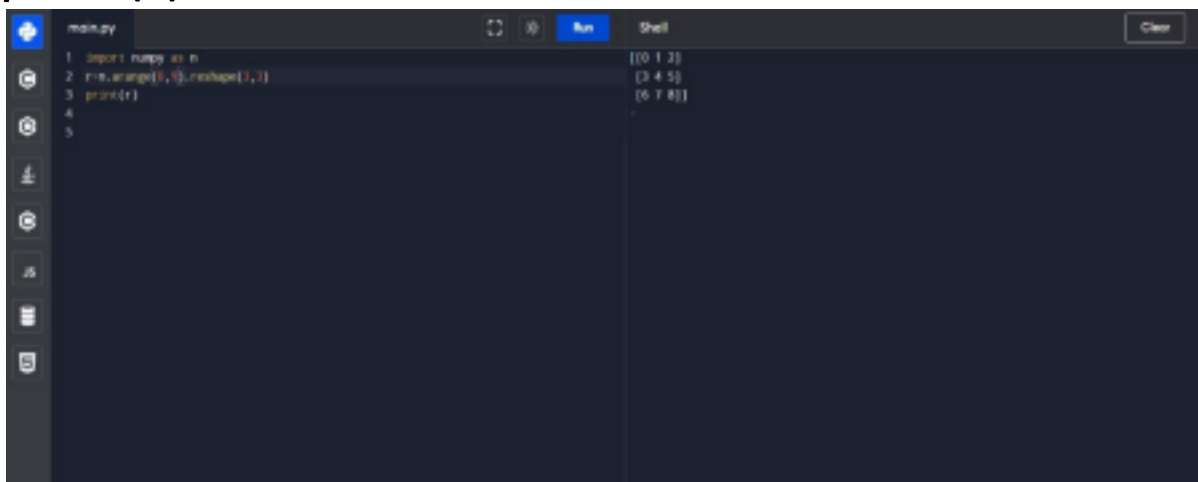
```
main.py  Run Shell Clear
1 import numpy as np
2 r=np.arange(10,50,1)
3 print(r)
```

[10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48]

Question-6:

Create a 3x3 matrix with values ranging from 0 to 8

Solution: import numpy as n
r=n.arange(0,9).reshape(3,3)
print(r)



```
main.py  Run Shell Clear
1 import numpy as n
2 r=n.arange(0,9).reshape(3,3)
3 print(r)
4
5
```

[[0 1 2]
 [3 4 5]
 [6 7 8]]

Question-7: Concatenate x and y x =

```
np.array([1, 2, 3]), y = np.array([4, 5, 6])
```

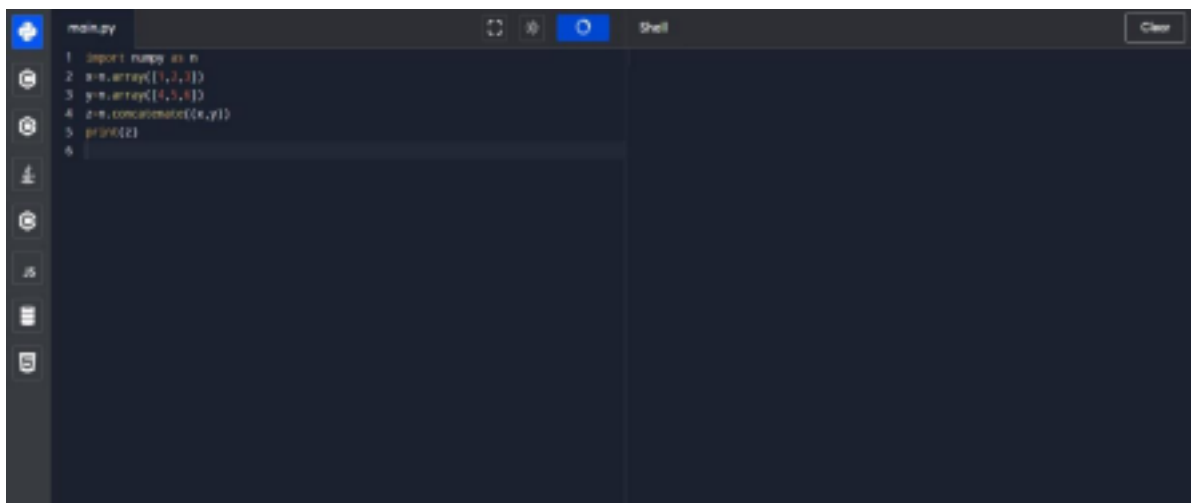
Solution:

```
import numpy as n
```

```
x=n.array([1,2,3])
```

```
y=n.array([4,5,6])
```

```
z=n.concatenate((x,y))print(z)
```

A screenshot of a Jupyter Notebook interface. The left sidebar shows a file explorer with a folder named 'main.py'. The main area displays a code cell with the following Python code:

```
1 import numpy as n
2 x=n.array([1,2,3])
3 y=n.array([4,5,6])
4 z=n.concatenate((x,y))
5 print(z)
6
```

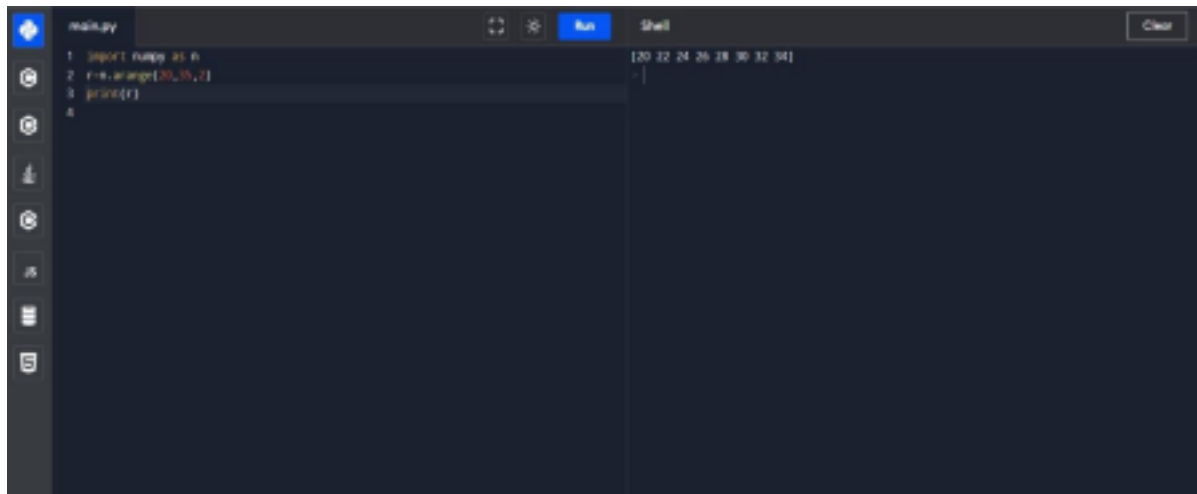
The code is executed, and the output is visible on the right side of the interface.

Pandas

Question-8:

Create a dataframe with 3 rows and 2 columns Solution:

```
import numpy as nr=n.arange(20,35,2)
print(r)
```



```
main.py
1 import numpy as n
2 r=n.arange(30,50,2)
3 print(r)
4
5
```

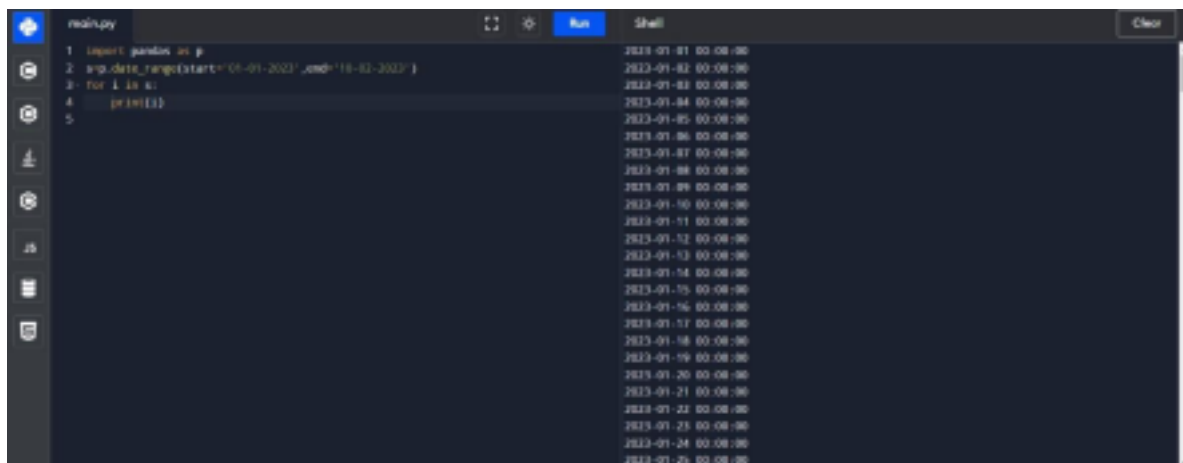
```
[20 22 24 26 28 30 32 34]
```

Question-9:

Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023

Solution:

```
import pandas as p
s=p.date_range(start='01-01-2023',end='10-02-2023')
for i in s:
    print(i)
```



```
main.py
1 import pandas as p
2 s=p.date_range(start='01-01-2023',end='10-02-2023')
3 for i in s:
4     print(i)
5
```

```
2023-01-01 00:00:00
2023-01-02 00:00:00
2023-01-03 00:00:00
2023-01-04 00:00:00
2023-01-05 00:00:00
2023-01-06 00:00:00
2023-01-07 00:00:00
2023-01-08 00:00:00
2023-01-09 00:00:00
2023-01-10 00:00:00
2023-01-11 00:00:00
2023-01-12 00:00:00
2023-01-13 00:00:00
2023-01-14 00:00:00
2023-01-15 00:00:00
2023-01-16 00:00:00
2023-01-17 00:00:00
2023-01-18 00:00:00
2023-01-19 00:00:00
2023-01-20 00:00:00
2023-01-21 00:00:00
2023-01-22 00:00:00
2023-01-23 00:00:00
2023-01-24 00:00:00
2023-01-25 00:00:00
```

```
main.py Run Shell Clear
1 import pandas as p
2 s=p.date_range(start="01-01-2023",end="10-02-2023")
3 for i in s:
4     print(i)
5
```

2023-01-01 00:00:00
2023-01-02 00:00:00
2023-01-03 00:00:00
2023-01-04 00:00:00
2023-01-05 00:00:00
2023-01-06 00:00:00
2023-01-07 00:00:00
2023-01-08 00:00:00
2023-01-09 00:00:00
2023-01-10 00:00:00
2023-01-11 00:00:00
2023-01-12 00:00:00
2023-01-13 00:00:00
2023-01-14 00:00:00
2023-01-15 00:00:00
2023-01-16 00:00:00
2023-01-17 00:00:00
2023-01-18 00:00:00
2023-01-19 00:00:00
2023-01-20 00:00:00
2023-01-21 00:00:00
2023-01-22 00:00:00
2023-01-23 00:00:00
2023-01-24 00:00:00
2023-01-25 00:00:00
2023-01-26 00:00:00
2023-01-27 00:00:00
2023-01-28 00:00:00
2023-01-29 00:00:00
2023-01-30 00:00:00
2023-01-31 00:00:00
2023-02-01 00:00:00
2023-02-02 00:00:00
-

Question-10:

Create 2D list to DataFrame

`l = [[1, 'ppp', 22], [2, 'qqq', 25], [3, 'rrr', 24]]`

Solution:

`import pandas as p`

`l = [[1, 'ppp', 22], [2, 'qqq', 25], [3, 'rrr', 24]]`

`s=p.DataFrame(l,columns=['Tag','PQR','number']) print(s)`

```
main.py Run Shell Clear
1 import pandas as p
2 l = [[1, 'ppp', 22], [2, 'qqq', 25], [3, 'rrr', 24]]
3 s=p.DataFrame(l,columns=['Tag','PQR','number'])
4 print(s)
5
```

	Tag	PQR	number
0	1	ppp	22
1	2	qqq	25
2	3	rrr	24