In [1]:

```
pip install numpy
```

Requirement already satisfied: numpy in c:\users\poorn\appdata\local\progr
ams\python\python311\lib\site-packages (1.24.3)Note: you may need to resta
rt the kernel to use updated packages.

In [2]:

```
pip install pandas
```

Requirement already satisfied: pandas in c:\users\poorn\appdata\local\prog
rams\python\python311\lib\site-packages (2.0.1)
Requirement already satisfied: python-dateutil>=2.8.2 in c:\users\poorn\ap
pdata\local\programs\python\python311\lib\site-packages (from pandas) (2.
8.2)
Requirement already satisfied: pytz>=2020.1 in c:\users\poorn\appdata\loca
l\programs\python\python311\lib\site-packages (from pandas) (2023.3)
Requirement already satisfied: tzdata>=2022.1 in c:\users\poorn\appdata\lo
cal\programs\python\python311\lib\site-packages (from pandas) (2023.3)
Requirement already satisfied: numpy>=1.21.0 in c:\users\poorn\appdata\loc
al\programs\python\python311\lib\site-packages (from pandas) (1.24.3)
Requirement already satisfied: six>=1.5 in c:\users\poorn\appdata\local\pr
ograms\python\python311\lib\site-packages (from python-dateutil>=2.8.2->pa
ndas) (1.16.0)
Note: you may need to restart the kernel to use updated packages.

In [3]:

```
import numpy as np
import pandas as pd
```

In [1]:

```
df=pd.read_csv(r"C:\Users\poorn\Downloads\NPTEL REGISTRATION DETAILS (Responses) (1).csv
df
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call las
t)
Cell In[1], line 1
----> 1 df=pd.read_csv(r"C:\Users\poorn\Downloads\NPTEL REGISTRATION DETAI
LS (Responses) (1).csv")
      2 df

NameError: name 'pd' is not defined
```

In [1]:

```python
df=pd.read_csv(r"C:\Users\poorn\Downloads\NPTEL REGISTRATION DETAILS (Responses) (1).csv
df
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call las
t)
Cell In[1], line 1
----> 1 df=pd.read_csv(r"C:\Users\poorn\Downloads\NPTEL REGISTRATION DETAI
LS (Responses) (1).csv")
      2 df

NameError: name 'pd' is not defined
```

In [2]:

```python
pip install pandas
```

```
Requirement already satisfied: pandas in c:\users\poorn\appdata\local\prog
rams\python\python311\lib\site-packages (2.0.1)
Requirement already satisfied: python-dateutil>=2.8.2 in c:\users\poorn\ap
pdata\local\programs\python\python311\lib\site-packages (from pandas) (2.
8.2)
Requirement already satisfied: pytz>=2020.1 in c:\users\poorn\appdata\loca
l\programs\python\python311\lib\site-packages (from pandas) (2023.3)
Requirement already satisfied: tzdata>=2022.1 in c:\users\poorn\appdata\lo
cal\programs\python\python311\lib\site-packages (from pandas) (2023.3)
Requirement already satisfied: numpy>=1.21.0 in c:\users\poorn\appdata\loc
al\programs\python\python311\lib\site-packages (from pandas) (1.24.3)
Requirement already satisfied: six>=1.5 in c:\users\poorn\appdata\local\pr
ograms\python\python311\lib\site-packages (from python-dateutil>=2.8.2->pa
ndas) (1.16.0)
Note: you may need to restart the kernel to use updated packages.
```

In [1]:

```python
import numpy as np
import pandas as pd
df=pd.read_csv(r"C:\Users\poorn\Downloads\NPTEL REGISTRATION DETAILS (Responses) (1).csv
df
```

```python
import numpy as np
import pandas as pd
df=pd.read_csv(r"C:\Users\poorn\Downloads\NPTEL REGISTRATION DETAILS (Responses) (1).csv
df
```

```
---------------------------------------------------------------------
-
FileNotFoundError                          Traceback (most recent call las
t)
Cell In[1], line 3
      1 import numpy as np
      2 import pandas as pd
----> 3 df=pd.read_csv(r"C:\Users\poorn\Downloads\NPTEL REGISTRATION DETAI
LS (Responses) (1).csv")
      4 df

File ~\AppData\Local\Programs\Python\Python311\Lib\site-packages\pandas\io
\parsers\readers.py:912, in read_csv(filepath_or_buffer, sep, delimiter, h
eader, names, index_col, usecols, dtype, engine, converters, true_values,
false_values, skipinitialspace, skiprows, skipfooter, nrows, na_values, ke
ep_default_na, na_filter, verbose, skip_blank_lines, parse_dates, infer_da
tetime_format, keep_date_col, date_parser, date_format, dayfirst, cache_da
tes, iterator, chunksize, compression, thousands, decimal, lineterminator,
quotechar, quoting, doublequote, escapechar, comment, encoding, encoding_e
rrors, dialect, on_bad_lines, delim_whitespace, low_memory, memory_map, fl
oat_precision, storage_options, dtype_backend)
    899 kwds_defaults = _refine_defaults_read(
    900     dialect,
    901     delimiter,
  (...)
    908     dtype_backend=dtype_backend,
    909 )
    910 kwds.update(kwds_defaults)
--> 912 return _read(filepath_or_buffer, kwds)

File ~\AppData\Local\Programs\Python\Python311\Lib\site-packages\pandas\io
\parsers\readers.py:577, in _read(filepath_or_buffer, kwds)
    574 _validate_names(kwds.get("names", None))
    576 # Create the parser.
--> 577 parser = TextFileReader(filepath_or_buffer, **kwds)
    579 if chunksize or iterator:
    580     return parser

File ~\AppData\Local\Programs\Python\Python311\Lib\site-packages\pandas\io
\parsers\readers.py:1407, in TextFileReader.__init__(self, f, engine, **kw
ds)
   1404     self.options["has_index_names"] = kwds["has_index_names"]
   1406 self.handles: IOHandles | None = None
-> 1407 self._engine = self._make_engine(f, self.engine)

File ~\AppData\Local\Programs\Python\Python311\Lib\site-packages\pandas\io
\parsers\readers.py:1661, in TextFileReader._make_engine(self, f, engine)
   1659     if "b" not in mode:
   1660         mode += "b"
-> 1661 self.handles = get_handle(
   1662     f,
   1663     mode,
   1664     encoding=self.options.get("encoding", None),
   1665     compression=self.options.get("compression", None),
   1666     memory_map=self.options.get("memory_map", False),
   1667     is_text=is_text,
   1668     errors=self.options.get("encoding_errors", "strict"),
   1669     storage_options=self.options.get("storage_options", None),
   1670 )
   1671 assert self.handles is not None
   1672 f = self.handles.handle
```

```
  File ~\AppData\Local\Programs\Python\Python311\Lib\site-packages\pandas\io
\common.py:859, in get_handle(path_or_buf, mode, encoding, compression, me
mory_map, is_text, errors, storage_options)
    854 elif isinstance(handle, str):
    855     # Check whether the filename is to be opened in binary mode.
    856     # Binary mode does not support 'encoding' and 'newline'.
    857     if ioargs.encoding and "b" not in ioargs.mode:
    858         # Encoding
--> 859         handle = open(
    860             handle,
    861             ioargs.mode,
    862             encoding=ioargs.encoding,
    863             errors=errors,
    864             newline="",
    865         )
    866     else:
    867         # Binary mode
    868         handle = open(handle, ioargs.mode)

FileNotFoundError: [Errno 2] No such file or directory: 'C:\\Users\\poorn
\\Downloads\\NPTEL REGISTRATION DETAILS (Responses) (1).csv'
```

In [2]:

```python
from numpy.random import randn
from numpy.random import seed
#seed random number generator
seed(1)
#prepare data
data 1 = 20*randn(1000)+100
data 2 = data 1+(10*randn(1000)+50)
corr,-Pearsonr(data 1, data 2)
print('Pearsonr correlation:%.3f'%corr)
```

```
  Cell In[2], line 6
    data 1 = 20*randn(1000)+100
         ^
SyntaxError: invalid syntax
```

In [18]:

```python
from numpy.random import randn
from numpy.random import seed
from scipy.stats import spearmanr
seed(1)
data1 = 20 * randn(1000)+100
data2 = data1 +(10*randn(1000)+50)
corr,_= spearmans(data1, data2)
print(' spearmans correlation;%.3f'%corr)
```

```
---------------------------------------------------------------------------
ModuleNotFoundError                       Traceback (most recent call las
t)
Cell In[18], line 3
      1 from numpy.random import randn
      2 from numpy.random import seed
----> 3 from scipy.stats import spearmanr
      4 seed(1)
      5 data1 = 20 * randn(1000)+100

ModuleNotFoundError: No module named 'scipy'
```

In [ ]:

```python
from numpy.random import randn
from numpy.random import seed
from scipy.stats import spearmanr
seed(1)
data1 = 20 * randn(1000)+100
data2 = data1 +(10*randn(1000)+50)
corr,_= spearmans(data1, data2)
print(' spearmans correlation;%.3f'%corr)
```

In [23]:

```python
from numpy.random import randn
from numpy.random import seed
from sc
from numpy import cov
seed(1)
data1 = 20 * randn(1000)+100
data2 = data1 +(10 * randn(1000)+50)
covarience,_= spearmanr(data1,data2)
print(covarience)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call las
t)
Cell In[23], line 7
      5 data1 = 20 * randn(1000)+100
      6 data2 = data1 +(10 * randn(1000)+50)
----> 7 covarience,_= spearmanr(data1,data2)
      8 print(covarience)

NameError: name 'spearmanr' is not defined
```

In [ ]:

In [ ]:

In [ ]: