 # importing pandas as pd

```
import pandas as pd
```

 # Creating the DataFrame

```
df = pd.DataFrame({"A":[12, 4, 5, None, 1], "B":[7, 2, 54, 3, None],
                   "C":[20, 16, 11, 3, 8], "D":[14, 3, None, 2, 6]})
```

 # Create the index

```
index_ = ['Row_1', 'Row_2', 'Row_3', 'Row_4', 'Row_5']
```

 # Set the index

```
df.index = index_
```

 # Print the DataFrame

```
df
```

[1]:

	A	B	C	D
Row_1	12.0	7.0	20	14.0
Row_2	4.0	2.0	16	3.0
Row_3	5.0	54.0	11	NaN
Row_4	NaN	3.0	3	2.0
Row_5	1.0	NaN	8	6.0

#use DataFrame.transform() function to add 10 to each element of the dataframe.

```
result = df.transform(func= lambda x : x + 10)
```

```
result
```

[2]:

	A	B	C	D
Row_1	22.0	17.0	30	24.0
Row_2	14.0	12.0	26	13.0
Row_3	15.0	64.0	21	NaN
Row_4	NaN	13.0	13	12.0
Row_5	11.0	NaN	18	16.0

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```

 # Create the index

```
index_ = ['Row_1', 'Row_2', 'Row_3', 'Row_4', 'Row_5']
```

 # Set the index

```
df.index = index_
```

 # Print the DataFrame

```
print(df)
```

```
          A     B   C     D
Row_1  12.0   7.0  20  14.0
Row_2   4.0   2.0  16   3.0
Row_3   5.0  54.0  11   NaN
Row_4   NaN   3.0   3   2.0
Row_5   1.0   NaN   8   6.0
```

```
result = df.transform(func = ['sqrt','exp'])
```

```
result
```

	A		B		C		D	
	sqrt	**exp**	**sqrt**	**exp**	**sqrt**	**exp**	**sqrt**	**exp**
Row_1	3.464102	162754.791419	2.645751	1.096633e+03	4.472136	4.851652e+08	3.741657	1.202604e+06
Row_2	2.000000	54.598150	1.414214	7.389056e+00	4.000000	8.886111e+06	1.732051	2.008554e+01
Row_3	2.236068	148.413159	7.348469	2.830753e+23	3.316625	5.987414e+04	NaN	NaN
Row_4	NaN	NaN	1.732051	2.008554e+01	1.732051	2.008554e+01	1.414214	7.389056e+00
Row_5	1.000000	2.718282	NaN	NaN	2.828427	2.980958e+03	2.449490	4.034288e+02

 # Python program to show the working of upper() function

```
text = 'thiS iS aN pYThon cLAsS'
```

 # upper() function to convert string to upper case

```
print("\nConverted String to upper case:")
```

```
print(text.upper())
```

```
# lower() function to convert string to lower case
print("\nConverted String to lower case:")
print(text.lower())
# converts the first character to upper case and rest to lower case
print("\nConverted first letter to upper in every word:")
print(text.title())
#swaps the case of all characters in the string upper case character to lowercase and viceversa
print("\nString Case Swapping:")
print(text.swapcase())
# convert the first character of a string to uppercase
print("\nConverted String first leeer to upper:")
print(text.capitalize())
# original string never changes
print("\nOriginal String")
print(text)
```

```
Converted String to upper case:
THIS IS AN PYTHON CLASS

Converted String to lower case:
this is an python class

Converted first letter to upper in every word:
This Is An Python Class

String Case Swapping:
THIs Is An PytHON ClaSs

Converted String first leeer to upper:
This is an python class

Original String
thiS iS aN pYThon cLAsS
```