TestGenExact

February 21, 2025

0.1 Import notebook functions

[1]:
```
from notebookfuncs import *
```

[2]:
```
from GenExact import *
import numpy as np
```

[3]:
```
# Define a vector of means and a matrix of covariances
mean = np.array([3, 3])
Sigma = np.array([[1, 0.70],
           [0.70, 1]])
```

[3]:
```
array([[1. , 0.7],
       [0.7, 1. ]])
```

[4]:
```
rng = np.random.RandomState(0)
x1 = gen_exact(mean=mean,sigma=Sigma,size=(100),rng=rng);
```

[5]:
```
np.cov(x1,rowvar=False,bias=True)
```

[5]:
```
array([[1. , 0.7],
       [0.7, 1. ]])
```

[6]:
```
np.mean(x1)
```

[6]:
```
3.0
```

[7]:
```
rng = np.random.RandomState(0)
x2 = gen_inexact(mean=mean,sigma=Sigma,size=(100),rng=rng);
```

[8]:
```
np.cov(x2,rowvar=False,bias=True)
```

[8]:
```
array([[1. , 0.7],
       [0.7, 1. ]])
```

[9]:
```
np.mean(x2)
```

[9]:
```
2.936323586052903
```

[10]:
```
np.allclose(x1,x2)
```

[10]:
```
False
```

[11]:
```
allDone();
```

```
<IPython.lib.display.Audio object>
```