Problem Statement : -

Write a function to find moving average in an array over a window:

Test it over [3, 5, 7, 2, 8, 10, 11, 65, 72, 81, 99, 100, 150] and window of 3. ¶

In [1]:
```
import numpy as np
def moving_average(a, n) :
    #print(n)
    sumVal = np.cumsum(a, dtype=float)
    #print(sumVal)
    sumVal[n:] = sumVal[n:] - sumVal[:-n]
    #print(sumVal[4:])
    movingAverage = sumVal[n - 1:] / n
    return movingAverage
```

In [2]:
```
a= [3, 5, 7, 2, 8, 10, 11, 65, 72, 81, 99, 100, 150]
```

In [3]:
```
moving_average(a,3)
```

Out[3]:
```
array([  5.        ,   4.66666667,   5.66666667,   6.66666667,
         9.66666667,  28.66666667,  49.33333333,  72.66666667,
        84.        ,  93.33333333, 116.33333333])
```

In [4]:
```
b = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
```

In [5]:
```
moving_average(b,4)
```

Out[5]:
```
array([25., 35., 45., 55., 65., 75., 85.])
```