Exercises

Mastering Python

ألدرس #10

Sympy & Excel

By:

Hussam Hourani

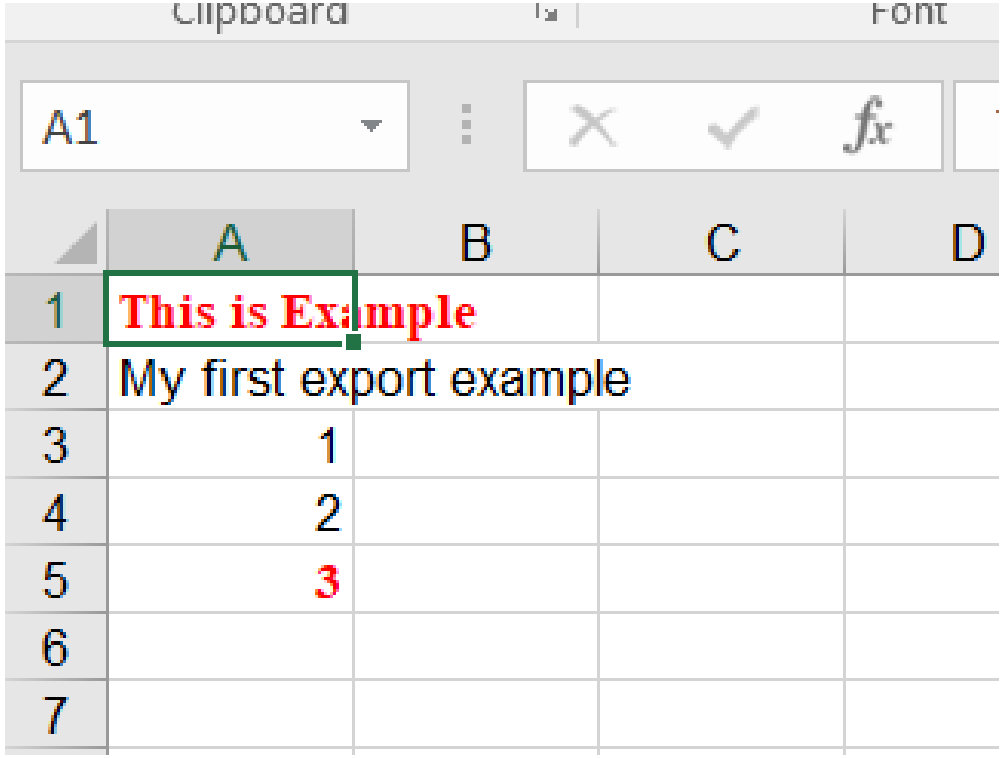
V1.0 - NOV 2019

Agenda

1. Find the following using sympy library :
   a) expr = x**2 + x**3 +21*x**4 + 10*x + 1 , for =7
   b) expand (x + y) ** 2
   c) Simplify (4*x**3 + 21*x**2 + 10*x + 12)
   d) Limit (1 / (x**2), x, sym.oo)
   e) summation(2*i +i- 1, (i, 5, n))
   f) integrate(sin(x) + exp(x)*cos(x) + tan(x), x)
   g) factor(x**3 + 12*x*y*z + 3*y**2*z)
   h) solveset(x-4, x)
   i) Matrix([[5, 12, 40], [30,70, 2]]) * Matrix([2, 1, 0])
   j) Plot x**3+3 , (x, -10, 10)
   k) Plot in 3dimention f=x**2*y**3 , (x, -6, 6), (y, -6, 6))

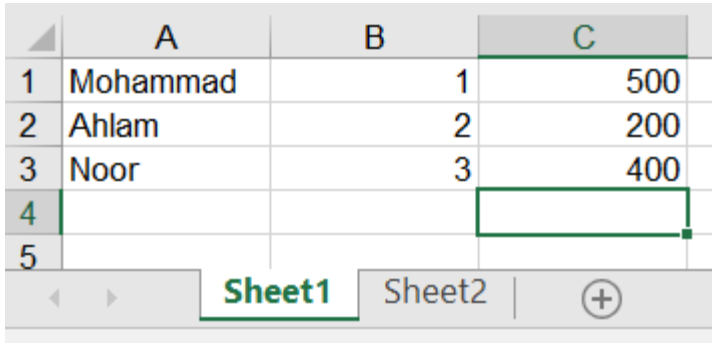
Agenda

2. Write python program to export the following into excel:



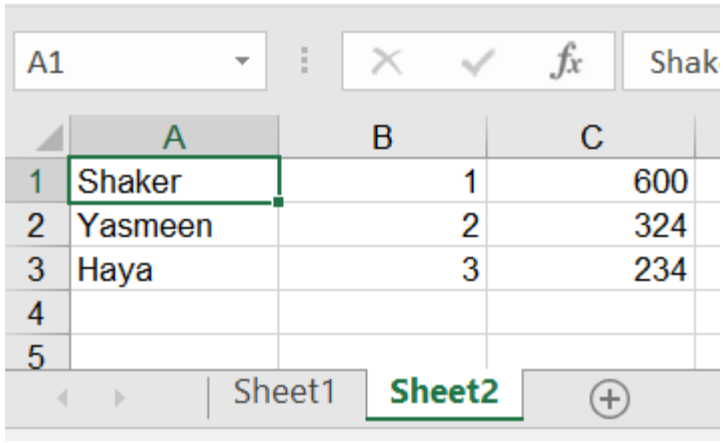
Agenda

3. Write python program to read the following excel(2 sheets) and print it into python consol:



	A	B	C
1	Mohammad	1	500
2	Ahlam	2	200
3	Noor	3	400
4			
5			

Sheet1 Sheet2



A1 Shak

	A	B	C
1	Shaker	1	600
2	Yasmeen	2	324
3	Haya	3	234
4			
5			

Sheet1 Sheet2

```
Sheet: Sheet1
['Mohammad', 1.0, 500.0]
['Ahlam', 2.0, 200.0]
['Noor', 3.0, 400.0]

Sheet: Sheet2
['Shaker', 1.0, 600.0]
['Yasmeen', 2.0, 324.0]
['Haya', 3.0, 234.0]
```

Master in Software Engineering

Hussam Hourani has over 25 years of Organizations Transformation, VROs, PMO, Large Scale and Enterprise Programs Global Delivery, Leadership, Business Development and Management Consulting. His client experience is wide ranging across many sectors but focuses on Performance Enhancement, Transformation, Enterprise Program Management, Artificial Intelligence and Data Science.