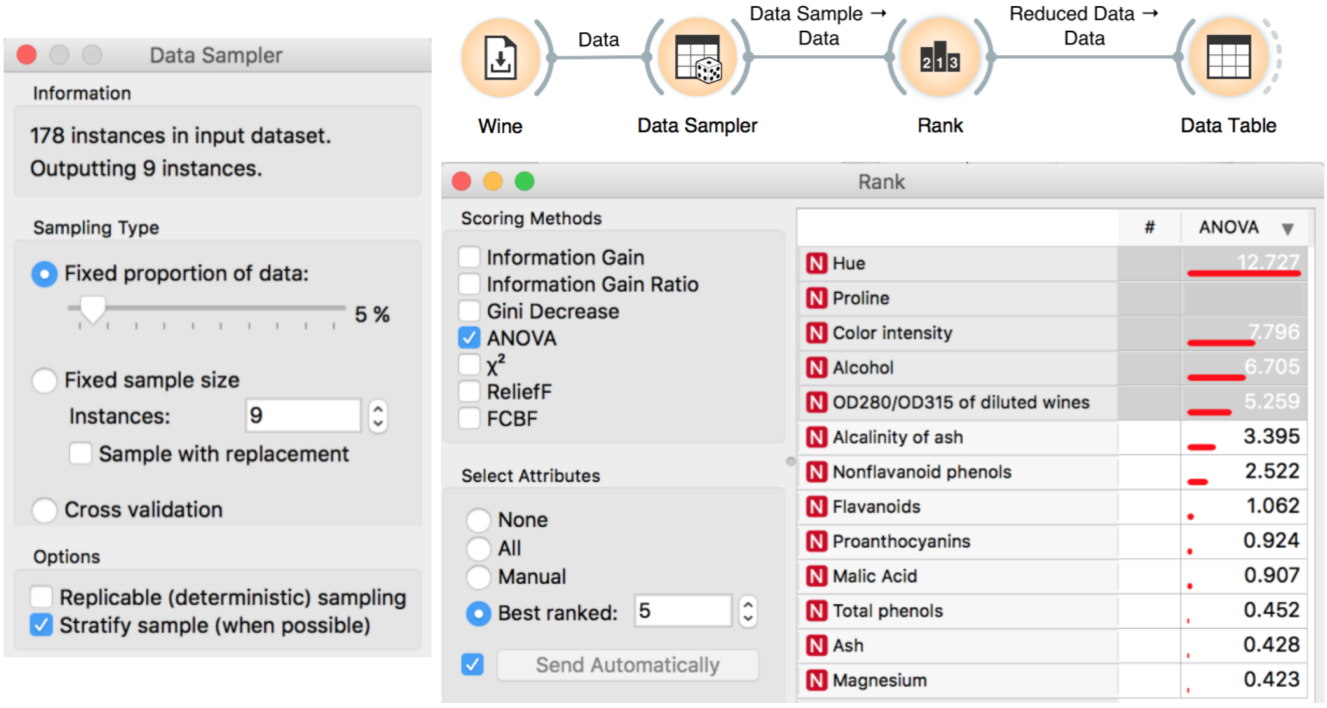
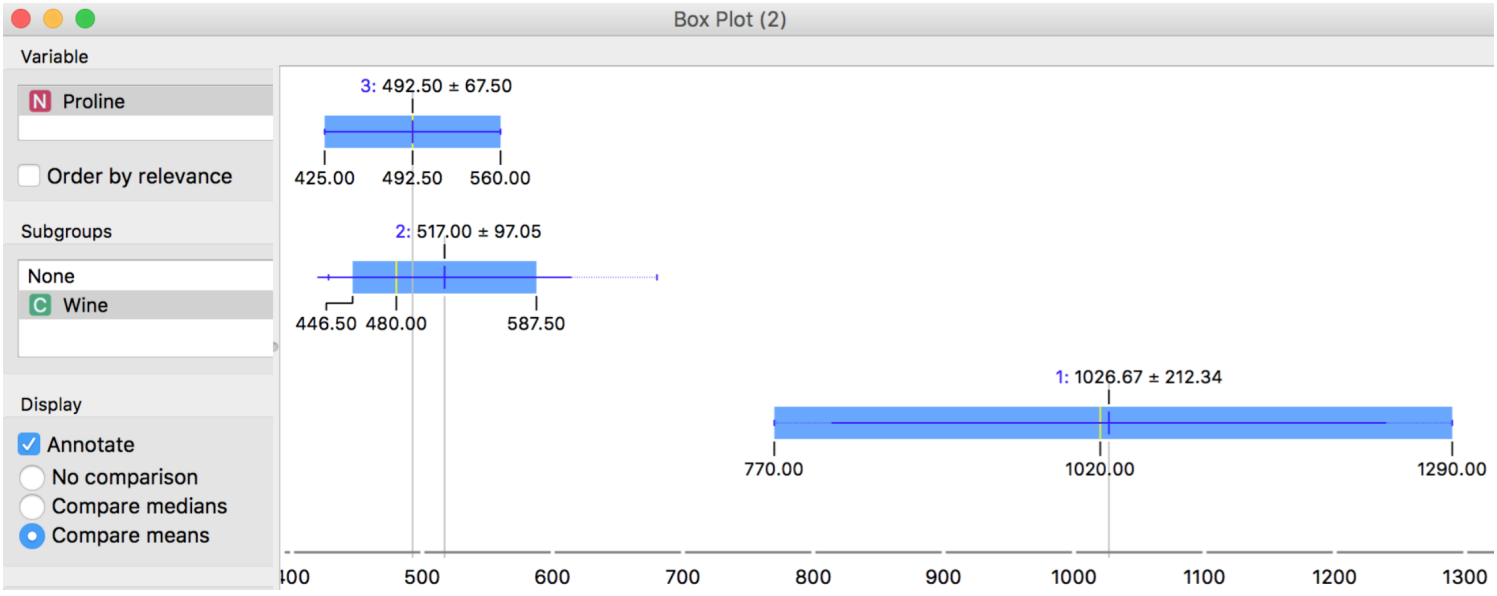
Exercice 1

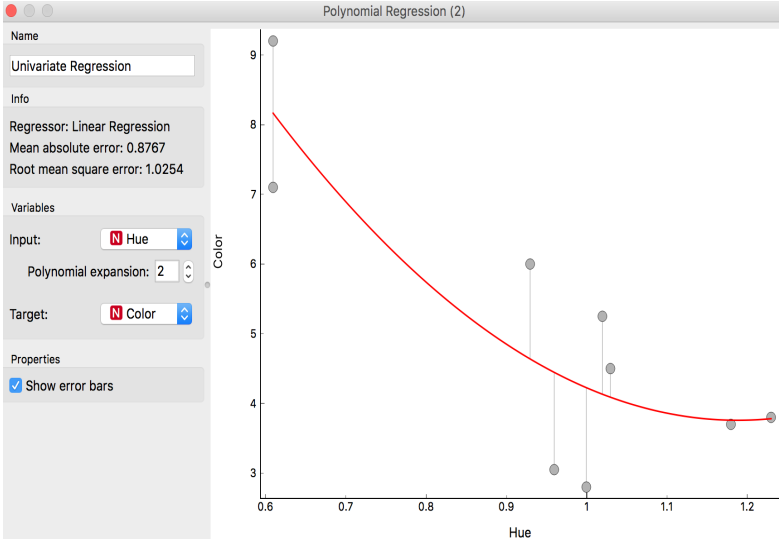


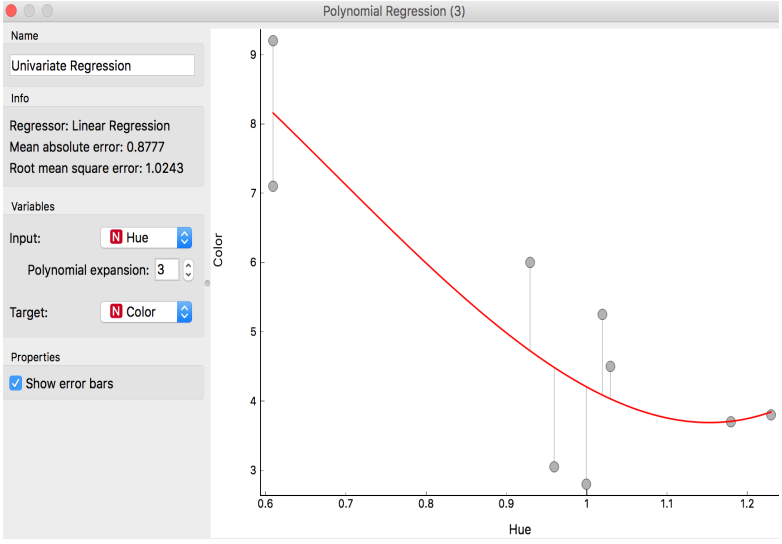
Exercice 2

2) *canvas*



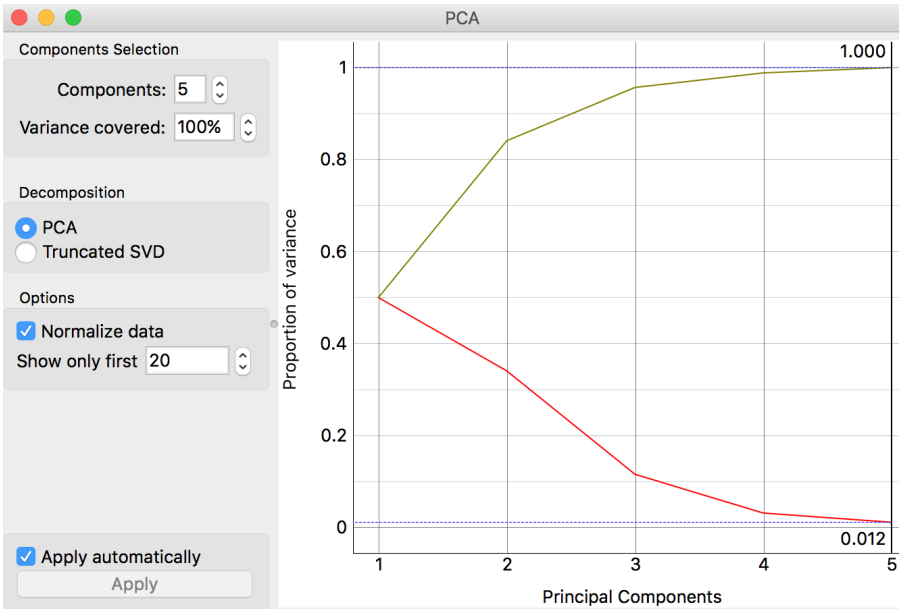
4) modèle (2) et modèle (3)

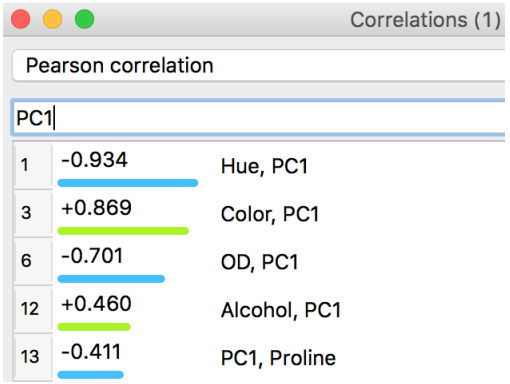


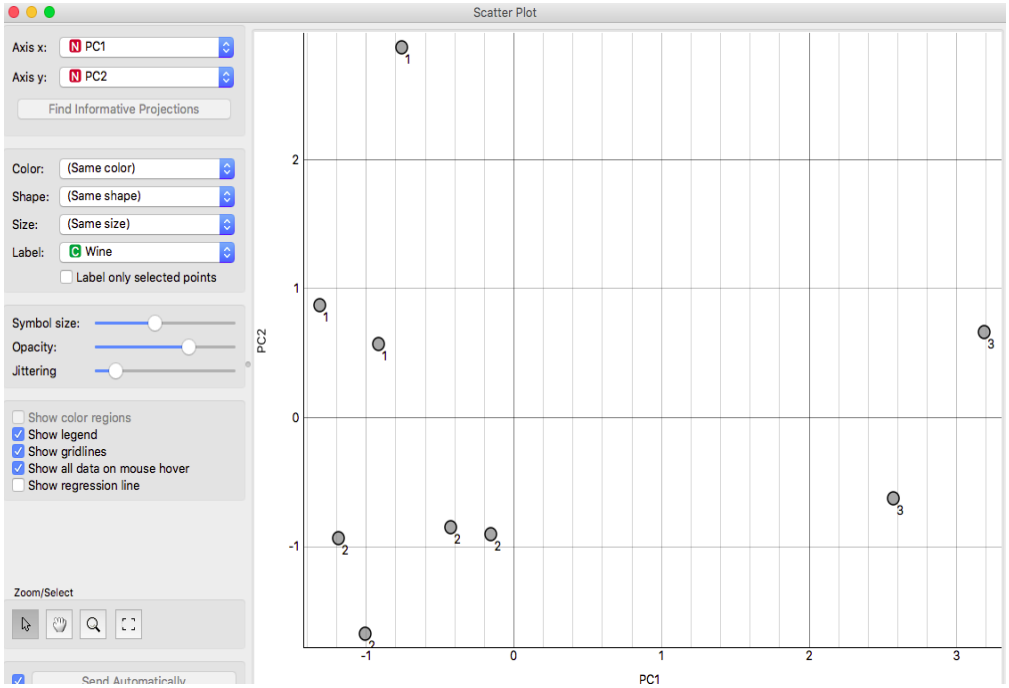


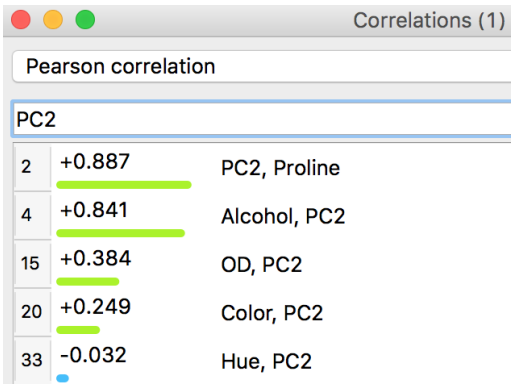
Exercice 3

1) ACP

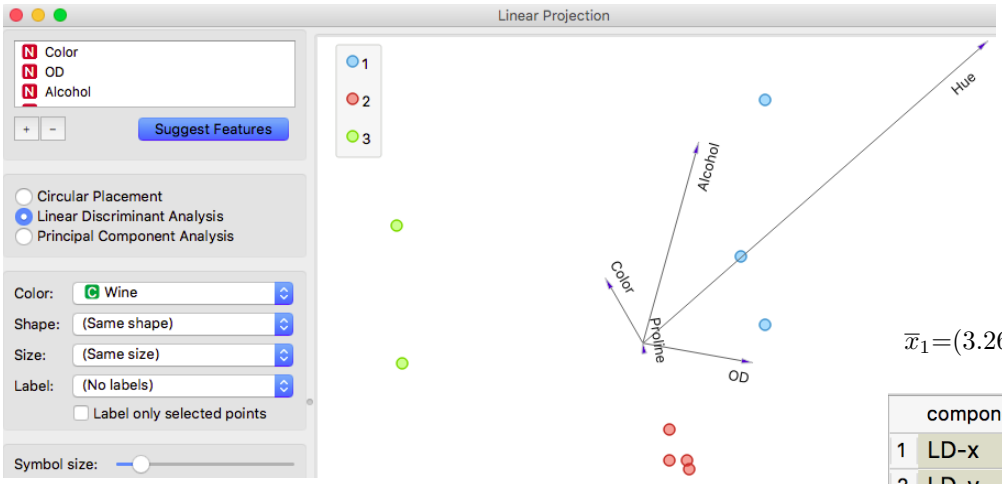








2)3)4) AFD

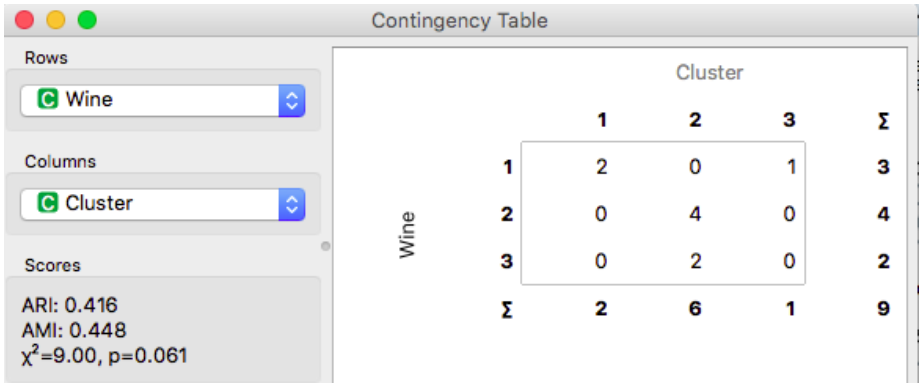


	Wine	LD-x	LD-y
1	2	2.98	8.78
2	2	3.04	8.78
3	1	3.29	11.83
4	2	2.98	9.05
5	2	3.05	8.71
6	1	3.21	10.51
7	1	3.29	9.93
8	3	2.11	9.6
9	3	2.1	10.77

$\overline{x}_1$=(3.26, 10.76) $\overline{x}_2$=(3.01, 8.83) $\overline{x}_3$=(2.1, 10.18)

	component	Hue	Proline	Color	Alcohol	OD
1	LD-x	0.94	-0.0	-0.10	0.15	0.30
2	LD-y	0.82	0.0	0.18	0.54	-0.05

Exercice 4



Exercice 5