TP3

This project aims to introduce some network science tools, used for understanding complex systems properties as well as important processes that run over these networks.

The tool that we will explore is:

- **NetLogo** (https://ccl.northwestern.edu/netlogo/): NetLogo is a multi-agent programmable modeling environment. It is used by tens of thousands of students, teachers and researchers worldwide. It also powers HubNet participatory simulations. It is authored by Uri Wilensky and developed at the CCL.

NetLogo: From the set of implemented models found in NetLogo:

a) Consider the Small-World model (File → Models Library → Networks → Small World). Consider a network with 40 nodes. Choose a set of rewiring probability values and report the values for its diameter and clustering coefficient properties. Give a description of the results you found.

b) Consider the spreading model for the AIDS (File → Models Library → Social Science → AIDS) disease. Verify how the people behavior can impact the disease diffusion time (in terms of total of people infected). Choose a set of values for the possible overlapped relationships as well as the period of time of the relationships. Give a description of the results you found.

c) Consider the epidemiological model (File → Models Library → Networks →Virus on Network). Run the simulation with different degree node values and give a description of the results you found.